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Proceedings of the Sixth Agricultural and Food Policy Systems Information Workshop

TRADE LIBERALIZATION UNDER NAFTA: REPORT CARD ON AGRICULTURE

Edited by

R.M.A. Loyns
Karl Meilke
Ronald D. Knutson
Antonio Yunez-Naude

January 2001

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EXECUTIVE SUMMARY

TRADE LIBERALIZATION UNDER NAFTA-REPORT CARD ON AGRICULTURE

This workshop was designed to evaluate the progress made in agricultural trade under NAFTA since its inception. The program included sessions on development in trade flows and policy, mechanisms to resolve trade disputes and case study of trade disputes. Disputes in wheat and durum, avocado, cattle/beef, sugar, and dairy were analyzed and discussed. The attendees of the workshop filled out a report card on Trade Liberalization under NAFTA and the results were presented as a wrap-up session.

The first session analyzed the effects on trade flows. An Economic Research Service (ERS/USDA) study reported by Praveen Dixit concluded that the most striking development in the composition of U.S. agricultural exports to Canada during the CUSFTA/NAFTA era has been the rapid export growth of high value processed products. From a Mexican perspective, the largest increase in exports has been the growth in fruit and vegetables to both the United States and Canada. The greatest increase in exports to Mexico from the United States has been corn and soybeans.

A principal workshop conclusion was that NAFTA is moving the three countries in the direction of a single market. Andrés Rosenzweig, a key negotiator for SAGAR/Mexico, pointed out that the underlying hypothesis during

the NAFTA negotiations in agriculture was that Mexico, the United States and Canada are complementary to a large extent in overall agricultural production. He concluded that evidence after five years of implementation seems to confirm that. Thomas Hertel, a Purdue University trade analyst, presented results of a quantitative study that confirmed Rosenzweig's observation. He found a strong increase in the intensity of farm and food exports from the NAFTA member countries to NAFTA as a whole since the mid-1980s. This finding provides strong evidence of falling transactions costs and increasing integration within the North American market. The recent free trade agreements have most certainly played an important role in this process.

Michele Veeman, a noted trade analyst from the University of Alberta, concluded that NAFTA has been very effective as a vehicle to promote trade liberalization and has contributed to reducing trade disputes. She summed up the NAFTA report card as making good progress but requiring extra effort to keep on working for even better achievements.

A U.S.-Canadian team of government analysts, Mary Burfisher, Terry Norman and Renée Schwartz described the dispute resolution instruments that exist in the agri-food industry. They concluded that informal linkages among participants in the NAFTA countries offer the greatest opportunity to prevent misunderstandings from occurring and developing into sensitive, high-level disputes that require formal settings to be resolved. They observed that by fostering greater communication among parties engaged in trade, informal mechanisms might help prevent trade disputes from occurring. Informal discussions of the type represented by these workshops were concluded to be critically important to both preventing and settling disputes. When they work, they are more effective and less costly than formal government settlement mechanisms.

Julian Alston and Daniel Sumner from UC-Davis, and Richard Gray from the University of Saskatchewan, noted that when U.S. farmers look North, they cannot help but suspect some trade effects of the Canadian Wheat Board (CWB). They also observed a growing awareness that termination of the CWB's monopoly position might increase, rather than reduce, grain flows into the United States. This is what happened when Canada's western grain transportation sub-

sidy was removed in 1995; this result was predicted in the first of this workshop series six years earlier, before termination of the program. From the Canadian perspective, the authors also pointed out that when Canadian farmers look South, they cannot help but envy payments made to farmers or former farmers under various U.S. government programs.

An insightful Kansas wheat farmer, Alan States, observed that while the CWB is a trade irritant, the elimination of its monopoly powers could be "a nightmare come true" for U.S. wheat producers. His argument is that Canadian wheat farmers may be more competitive than their U.S. counterparts. States argued that U.S. farm programs which support income, in turn, drive up the price of land, and ultimately drive up production costs making the U.S. producers noncompetitive.

Turning to cattle/beef trade, Al Loyns, a consultant and farmer, Linda Young, from Montana State University, and Colin Carter from UC-Davis, concluded that the most likely winners from the R-CALF dispute in cattle in 1998-99 (live cattle exports from Canada) were Canadian packers and consumers. That was not the intended outcome of the action. The authors noted that it is difficult to identify any significant benefits to offset the considerable costs incurred by the parties to the R-CALF dispute, and Canadian producers bore the costs of the antidumping margin through reduced prices. This case supported the earlier observation by Burfisher, Norman and Schwartz that informal mechanisms may be more effective, and certainly more efficient, than formal mechanisms in settling disputes. In discussion of the R-CALF case, Ron Knutson (Texas A&M University), indicated that anti-dumping provisions of U.S. trade remedy policy might be counterproductive when applied to agriculture. He observed that because of the unstable nature of agriculture, it could readily be anticipated that sales below cost will inevitably occur on a periodic basis. In this economic environment, it is essential to develop the appropriate mechanisms for sorting out when charges of dumping really make sense.

In the case of sugar, Lynn Kennedy from LSU, indicated that significant disputes have developed between Mexico and the United States regarding sugar and HFCS trade during the NAFTA transition period. A purpose of this transition period was to gradually ease the Mexican and U.S. sugar industries

into a state of freer trade in sugar. The author expressed doubt as to whether this has been accomplished by observing that these and other disputes related to sugar and HFCA may continue well past the transition period.

Tom Cox, a dairy trade analyst from the University of Wisconsin, Danny LeRoy, from the University of Lethbridge, and Ellen Goddard, from the University of Melbourne, concluded that cross-border university collaboration is particularly well suited to providing economic benchmark analyses within which a more solid understanding of the impacts of trade disputes can be realized. They observed that given the heavy politicizing that distorts many of the cross-border disputes, multi-country third party economic analysis can do much to improve these dialogues.

Mike Gifford, a former trade negotiator with AAFC, pointed out that the NAFTA governments are clearly caught on the horns of a dilemma. They want to give their import sensitive sectors the right to have their day in court, while at the same time preventing their trading partners from using trade remedies as a legitimate form of trade protection and harassment. He went on to note that over time, domestic agricultural policies must be on a converging course if trade frictions and disputes are to be minimized.

ON OVERALL BENEFITS OF NAFTA

There was a consensus of Workshop participants that Mexico and Canada had clearly benefited from NAFTA, that processors of higher valued products in all three countries were the greatest beneficiaries, and that small Mexican producers were the biggest losers. From a U.S. perspective, feed grain and oilseed farmers, and processors of high-valued products have been the greatest beneficiaries. John Schildroth (British Columbia Agriculture, Fisheries and Food), observed that where the agri-food industry has been allowed to adjust, the adjustment has moved the industry toward the market and the consumer. Yet there was agreement that the accomplishments can easily be overstated. It was noted by Loyns that while we talk about trade liberalization under NAFTA, at the end of the day, producer subsidy equivalents in some countries are equal today to the levels of the late 1980s and early 1990s. Gifford made the point that one of the most significant accomplishments of the Canada/U.S. negotia-

tions was the path breaking agreement on sanitary and phytosanitary measures, which provided a blueprint for the Uruguay Round and NAFTA agreements on this issue.

ORDERING THE PUBLICATION

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Several universities, interest group organizations, the private sector, and interested individuals are among our presenters and discussants. We pay a small honorarium for the preparation of main papers but it does not cover the time and effort expended by those researching and writing the papers, let alone resubmitting them after the workshop for publication. These contributions are part of the way this workshop has evolved, and we could not maintain our program without these generous contributions.

This year, the Agriculture and Food Policy Center at Texas A&M University took the lead role in administering the workshop, and finalizing the publication. Rene Ochoa did all the detailed organization before, during, and following the workshop. David Ernstes taped all of the sessions and provided copies for the discussion summaries that are part of this proceedings, and he took the edited papers through Desk Top Publishing to this final output. All of these functions are time consuming tasks, essential to a good workshop, and required for the publication. Within our program, the Coordinating Committee has adopted the rule that good performance is rewarded by a repeat performance. Rene and David are working on the 2001 program.

Finally, we acknowledge the ongoing contribution of Brenda Pitt in AAFC for keeping the committee connected through conference calls, and Lenore Loyns for the “final reads and edits” which are also essential to publication of the proceedings.

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TABLE OF CONTENTS

Executive Summary ..... ***iii***

Acknowledgements ..... ***ix***

Authors and Discussants ..... ***xi***

Table of Contents ..... ***xviii***

Background and Purpose of the Workshop
R.M.A. Loyns, Karl Meilke, Ronald D. Knutson and Antonio Yunez-Naude 1

SECTION 1: DEVELOPMENTS IN TRADE AND TRADE FLOWS **5**

Agricultural Trade Liberalization Under NAFTA: The Negotiation Process
M.N. Gifford 6

North American Agricultural Trade During 1975-98: A Background Paper on Trade Flows
Steven Zahniser and Mark J. Gehlhar 12

Mexican Agricultural Trade Under NAFTA: An Assessment After Five Years of Implementation
Andrés Rosenzweig Pichardo 43

A Canadian Perspective on North American Agricultural Trade Flows (1998-98)
Brian Rattray 64

A Global Perspective on Regional Integration in North America
Thomas W. Hertel 75

Discussion
ConAgra Foods
Richard Gady 86

Implications of the NAFTA for the North American Food Industry
John Schildroth 88

SECTION 2: POLICY DEVELOPMENTS SINCE NAFTA 97

Policy Developments in United States Agriculture Since 1986
Edwin Young, Frederick Nelson, Praveen Dixit and Neilson Conklin 98

Policy Developments in Canadian Agriculture Since 1986
Jack Gellner and Brian Rattray 105

Discussion
Policy Developments in Canadian Agriculture: Report Card on Trade Liberalization
Michele Veeman 118

General Discussion 127

SECTION 3: CASE STUDY ANALYSIS OF TRADE DISPUTES BETWEEN NAFTA PARTNERS 131

NAFTA Trade Dispute Resolution: What Are the Mechanisms?
Mary Burfisher, Terry Norman and Renée Schwartz 132

Wheat Disputes Under NAFTA
Julian M. Alson, Richard Gray and Daniel A. Sumner 143

Discussion

Kansas Wheat Producer
Alan E. States 164

Manitoba Grain and Livestock Farmer
Owen McAuley 168

Montana Grain Growers Association
Herb Karst 172

What Have We Learned From Cattle/Beef Disputes?
R.M.A. Loyns, Linda M. Young and Colin A. Carter 175

Discussion

Canadian Cattlemen's Association
Dennis Laycraft 208

National Cattlemen's Beef Association
Chuck Lambert 212

Trade Liberalization Under NAFTA: Trade in Avocados
Maury E. Bredahl 218

Disputes in Sugar and Agricultural-Based Sweeteners
P. Lynn Kennedy and Daniel Petrolia 234

Discussion

Sparks Companies, Inc.
James Sullivan 250

Dairy Disputes in North America: A Case Study
Tom L. Cox, Danny G. Le Roy and Ellen W. Goddard 253

Discussion
National Dairy Council of Canada
Kempton Matte 283

General Discussion 288

SECTION 4: WHAT HAVE WE LEARNED? 293

States/Provinces Dialogue on Agricultural Trade and Policy Issues
Nithi Govindasamy and Kevin Dunlevy 294

Discussion
Montana Grain Growers Association
Kerb Karst 309

Trade Liberalization Under NAFTA: Where from Here?
Karl D. Meilke and Karen Huff 312

Looking to the Future: Conflict Avoidance
and Resolution in NAFTA's Agricultural Trade
Linda M. Young 331

Agricultural Trade Liberalization Under NAFTA:
Reporting on the Report Card
Gary F. Fairchild and Pierre Aubin 348

Participants in the Workshop 371

BACKGROUND AND PURPOSE OF THE WORKSHOP
"Trade Liberalization Under NAFTA - Report Card on Agriculture"

R.M.A. Loyns, Karl Meilke, Ronald D. Knutson and Antonio Yunez-Naude

Signing of the North American Free Trade Agreement in November 1993 by President Bush, President Salinas, and Prime Minister Mulroney marked a major turning point in trade relations within North America since that time. The structure and trading patterns of the three economies have undergone significant changes. At the same time trade issues and disputes have increased in number and intensity. This combination of events lead to the initiative in 1995 to conduct a series of workshops on policy and trade stress under NAFTA with the basic purpose of generating hard economic information which might ultimately contribute toward reducing trade tension and costly disputes. The first two workshops were sector specific- - grains and dairy- - and involved only the United States and Canada. The next two workshops dealt with issues of policy harmonization, and extended coverage and participation from Mexico. The fifth workshop, held in Mexico in 1999, dealt with issues of private sector adjustments under NAFTA.

With the approach of a new millennium, emerging discussions on the next round of WTO negotiations and experience with five workshops, the Coordinating Committee undertook to address the important issue of - - *WHAT HAVE WE LEARNED FROM THE EXPERIENCES OF NAFTA?* As a consequence, the program for the sixth workshop was designed around the concept of a ***Report Card on Agriculture under NAFTA.*** The program consisted of

themes which documented trade flow characteristics for each country over the decade, traced policy developments in each country since the mid 1980s, and provided detailed analysis of disputes in five commodity areas. The final morning was used to pull workshop information together under the theme "What Have We Learned" and to discuss a "Report Card" completed by participants. The stated objectives of the NAFTA was the focal point for evaluation:

1. to eliminate barriers to trade in, and facilitate the cross-border movement of goods and services between the territories of the parties (Canada, the United States, Mexico);
2. to promote conditions of fair competition in the free trade area;
3. to increase substantially investment opportunities in their territories;
4. to provide adequate and effective protection and enforcement of intellectual property rights in each party's territory;
5. to create effective procedures for the implementation and application of the agreement, and for its joint administration and the resolution of disputes;
6. to establish a framework for further trilateral, regional, and multilateral cooperation to expand and enhance the benefits of the agreement.

   (Article 102, Objectives, North American Free Trade Agreement, 1993)

Because of time limitations in the program, the subject matter implied by NAFTA objective two in so far as it applies to inter-firm and overall competition between economies, and objective four on intellectual properties, were not directly addressed. Some of that subject matter was held over and will be discussed in the seventh workshop in February 2001.

This workshop was the sixth in the series of Policy System Information Workshops initiated in 1995. A group of agricultural economists from Canadian, Mexican and U.S. universities, and from USDA, SAGAR and AAFC under the name of the *Policy Disputes Information Consortium* conduct this program as a means of producing and distributing economic information on agricultural and food policy and trade. Our objective is to influence decision

makers towards less trade disputes and to improve trade relations in agriculture and food as a means of maximizing benefits from freer trade.

This is certainly an elusive goal. If anything, trade dispute numbers are on the increase. There are many reasons for this situation, not the least of which is the existence of dispute resolution mechanisms. Readers will observe in the papers that follow, claims on both sides of the argument that the free trade agreements generate, and they decrease, trade stress. In fact, the evidence indicates that both are true. Burfisher, Schwartz and Norman indicate that negotiation and networking (part of the set of "informal" dispute resolution mechanisms) are working to head off more formal disputes. On the other hand, Loyns, Young and Carter point out that many of the disputes are of the "formal" variety and they are played out under domestic trade remedy law which is, functionally, outside of the trade agreements.

Assessed within this framework, it may appear that the workshop series has not met its goals. What we have achieved is a substantial, and growing, body of literature on NAFTA, policy and trade harmony/disputes, and characteristics of evolution of trade within NAFTA. As well, the workshops have established strong networking in several dimensions: a large group of agricultural economists have been drawn together in a common effort that has contributed to other programs such as annual meetings of AAEA and CAES, and conferences in Agriculture departments; working relationships among SAGAR, AAFC and USDA officials have been strengthened; and perhaps most significantly, working relationships with interest groups and the business sector have been developed. It is not possible to place a value on these relationships, but they are positive and useful to the broader purpose of policy and trade harmony.

The next workshop will be held in mid-February 2001 and focuses on structural change in a free trade environment. The purpose of the workshop is to assess how industry structure would change in a North American genuinely free trade context, and to identify the policy and trade stress that would be associated with full free trade.

Section 1

Developments in Trade and Trade Flows

The objective of this section is to review and analyze changes in trade flows since NAFTA was signed.

AGRICULTURAL TRADE LIBERALIZATION UNDER NAFTA: THE NEGOTIATION PROCESS

M. N. Gifford

INTRODUCTION

Most observers accept that regional trade liberalization and multilateral trade liberalization are not necessarily mutually exclusive and, in fact, can be mutually reenforcing. It is also generally recognized that while regional trade agreements are technically easier to negotiate (they certainly do not take as long to finish) and often go deeper and wider in their policy coverage, there are still limits as to how far a regional trade agreement can go when all the major players are not around the same negotiating table.

The NAFTA Agreement, as it relates to agriculture, is a classic example of the opportunities and limitations inherent in a regional free trade agreement. The following negotiating history explains why.

MARKET ACCESS PROVISIONS OF NAFTA

At first glance, the Agricultural Chapter of the NAFTA Agreement is curious. In effect, it stitches together three separate bilateral agreements under a trilateral chapeau. In other words, some of the provisions are asymmetrical between member countries and commodities.

The reason for this outcome can be traced to the first negotiating session of the Canada/U.S. Free Trade Agreement(CUSTA). At this 1986 meeting, both Canada and the United States made it crystal clear that they were proceeding on the premise that while their mutual objective was to try to eliminate all agricultural tariffs, the most sensitive existing quantitative import restrictions would remain. This in fact is what finally occurred. Canada retained its GATT Article XI Import Quotas on dairy, poultry and eggs, while the United States maintained its existing Section 22 Import Quotas on dairy, sugar and peanuts. Both countries agreed, however, to eliminate their respective meat import laws on bilateral trade and Canada agreed to eliminate, on a bilateral basis, its import licenses on wheat, barley and oats once U.S. support levels fell to those of Canada.

The Canada/U.S. negotiations were ultimately successful in eliminating all normal agricultural tariffs but the most sensitive import quotas remained. This was the deal which emerged in 1987 and this is the deal which a NAFTA panel subsequently confirmed when the United States tried to argue later that the Uruguay Round obligation to convert quotas into tariff equivalents could not apply bilaterally because of the original FTA obligation to eliminate all (ordinary) tariffs.

The NAFTA negotiations were different from the original Canada/U.S. negotiations. Early in the NAFTA negotiations, the United States and Mexico agreed to tariffy all import quotas and phaseout all ordinary tariffs and tariff equivalents. Why? My own assessment is that both the United States and Mexico quickly recognized that if Mexico tried to protect its most sensitive sectors(corn and dried beans), the United States would be under extreme pressure to protect tomatoes, sugar and any other product a politically influential group wanted to add. The bottom line was that it was easier for the United States and Mexico to negotiate and sell a noexceptions market access result than to try to negotiate and contain a list of exceptions.

Because the NAFTA negotiations were concluding before the end of the Uruguay Round, the U.S./Mexico “No Exceptions” Agreement put Canada in a box. Canada did not want to prejudice its GATT negotiating position on “strengthening and clarifying Article XI.” If you recall your Uruguay Round

negotiating history, Canada did not agree to tariffication until December 1993, well after the conclusion of the NAFTA negotiations. Consequently, Canada and the United States decided to simply incorporate the original Canada/U.S. Agricultural Agreement into NAFTA without changes and to negotiate separate bilateral agreements with Mexico. Following conclusion of the Uruguay Round, the practical market access obligations between Canada and Mexico are nearly identical to the Canada/U.S. situation, i.e., agreement to phaseout all import duties except those on dairy, poultry, eggs and sugar.

In summary, while 100 percent of U.S./Mexico agricultural trade is scheduled to become duty free, Canada/U.S. and Canada/Mexico agricultural trade is still subject to tariffs or tariff rate quotas on a relatively short list of sensitive commodities. Of course, the vast bulk of trade is duty free or in the process of becoming duty free.

So far the discussion has dealt with only the market access provisions of NAFTA. However, it is worth noting what happened in other key areas, particularly, export subsidies, domestic support and sanitary and phytosanitary measures.

OTHER KEY AREAS

Export Subsidies. The NAFTA produced a mixture of bilateral and trilateral obligations. Export subsidies are prohibited in Canada/U.S. agricultural trade but are permitted vis-à-vis Mexico. The reason for this was that the United States wanted to reserve the right to use export subsidies vis-à-vis Mexico in order to meet subsidized European competition.

Domestic Subsidies. With respect to domestic subsidies, it was agreed in the Canada/U.S. negotiations and confirmed in the NAFTA negotiations that disciplines on domestic support (like export subsidies to third countries) were best left to multilateral negotiations where the European Union (EU) subsidy practices would also be on the table.

Sanitary and Physosanitary (SPS) Measures. I think it is fair to say that one of the most significant accomplishments of the Canada/U.S.

negotiations was the path breaking agreement on sanitary and phytosanitary(SPS) measures, which provided a blueprint for the Uruguay Round and NAFTA Agreements on this issue. Throughout all three negotiations, there was an explicit recognition that tariff liberalization must not be circumvented by the inappropriate use of SPS measures while upholding the right to take legitimate measures to protect human, plant and animal health.

Of course, duty free trade does not mean that import duties or quotas cannot be reintroduced under specified circumstances. Under NAFTA the three members retain their WTO rights to apply anti-dumping, countervailing or safeguard duties and, in the case of safeguards, import quotas. This to my mind is one of the key differences between Europe and North America. In the EU there is no provision for the use of trade remedies on intra-European trade. Common agricultural and competition policies have enabled Europe to forego the use of trade remedies. They are, however, still a factor, and unfortunately, a growing factor in intra-North American trade, particularly with respect to anti-dumping investigations.

In all three trade remedy situations, provisional import measures may be applied pending a final determination of injury. Thus, for the NAFTA members, trade remedy measures are two-edged swords. They can be used to protect domestic industries; and, they can also be used to impair access to export markets.

The recent anti-dumping actions on live cattle from Canada to the United States and beef from the United States to Mexico clearly indicate the vulnerability of highly integrated sectors to the various weapons in the trade remedy arsenal. Of particular concern to exporting sectors is the increasing tendency for the anti-dumping authorities to use constructed costs of production in determining whether dumping is occurring. Given the elimination of import duties, it is not very often that one can demonstrate export sales at below domestic prices. However, it is sometimes all too easy to demonstrate, in the case of agricultural products (which are subject to major seasonal or cyclical price fluctuations), that export prices are below some calculated cost of production.

The NAFTA governments are caught on the horns of a dilemma. They want to give their import sensitive sectors the right to have their day in court while at the same time preventing their trading partners from using trade remedies as a "legitimate" form of trade protection and harassment. This a debate which has only started but I predict it will become an increasingly contentious issue in NAFTA agricultural trade relations.

A CUSTOMS UNION AND A FREE TRADE AREA

One of the key differences between a customs union and a free trade area is that common policies are not a feature of the latter while they are of the former. However, the experience of the NAFTA Agreements suggests that, while members can maintain national policies, they should be reasonably compatible with one another.

Some policies are clearly incompatible. For example, although it was not an explicit part of the Canada/U.S. Agreement, Canada's two-price policy for wheat could not continue in the face of duty free entry of flour, bread and biscuits. Thus, before the bilateral agreement came into force Canada had no choice but to eliminate this policy if it wanted to retain its milling and baking industry.

Of course, changes to domestic policies which are taken mainly for national and/or multilateral reasons can sometimes have effects on regional trade patterns. For example, the elimination of Canada's grain transportation subsidies (something U.S. grain interests had complained about for years), had the effect of lowering grain prices in the Prairies. This not only stimulated livestock production in Western Canada, it made the U.S. market relatively more attractive as a market for Canadian unprocessed grain and oilseed exports.

I realize I am starting to stray into the area of the impact of NAFTA trade flows and that is the topic of a number of papers which follow, but it is necessary to emphasize the linkage between domestic policies and trade, and the impact this has had on the structure of existing trade agreements as well as

the direct and indirect constraints that trade agreements are having on domestic policies.

NAFTA has left each country with a right to develop domestic agricultural policies which best suit their respective social, economic and political imperatives. However, as a practical matter, this policy freedom can be constrained by the regional trade agreement within which our respective agricultural economies operate. I have already referred to Canada's necessity to eliminate its two-price wheat policy. Another example, would be the difficulty the United States would face if it reintroduced wheat export subsidies. This would have the practical effect of sucking more wheat imports into the United States from Canada.

Growing differences in domestic support levels in one country relative to its trading partners are bound to cause trade relation problems. Demands for support parity and/or trade remedy import protection are the natural consequences of major divergencies in support levels. Over time, therefore, domestic agricultural policies in NAFTA must be on a converging course if trade frictions are to be minimized.

CONCLUSION

When all is said and done, trade policy is a means to a domestic end. All NAFTA members share a common goal of facilitating the growth of their respective agricultural sectors. One means of achieving this goal is to negotiate improvements in the regional and multilateral trading environments. We have come a long way regionally. We still have a much longer journey to go multilaterally. However, the NAFTA Agreements demonstrate what can be achieved when countries choose to reduce trade barriers and facilitate trade. I will leave it to the papers that follow to quantify the effects. However, as an unabashed biased observer, I do not have to be convinced that NAFTA is operating to the overall benefit of agricultural producers and processors in each of the three member countries.

NORTH AMERICAN AGRICULTURAL TRADE DURING 1975-98: A BACKGROUND PAPER ON TRADE FLOWS

Steven Zahniser and Mark J. Gehlhar[1]

INTRODUCTION

Agricultural trade within North America and between North America and the rest of the world experienced many changes during the last quarter of the 20th Century. Some of these changes are due to the North American Free Trade Agreement (NAFTA), which was put into action on January 1, 1994 by the governments of Canada, Mexico, and the United States, and its predecessor, the Canada-U.S. Free Trade Agreement (CUSFTA), implemented on January 1, 1989.

This background paper offers a broad profile of North American agricultural trade during 1975-98, with special emphasis on developments that took place following the implementation of CUSFTA and NAFTA. The year 1975 is selected as the beginning of the period examined in order to provide a more complete picture of Canada-U.S. trade before CUSFTA and to take full account of the changes in Mexican trade that accompanied that country's economic restructuring, beginning in the mid-1980s.

[1]The authors gratefully acknowledge comments and feedback from William T. Coyle, John Schildroth, and Ronald Trostle.

With the exception of U.S. agricultural exports to Canada, this paper utilizes trade data from the International Bilateral Agricultural Trade (IBAT) Database. The IBAT Database is a synthesis of trade statistics reported by member countries to the United Nations. With access to literally a world of trade data, the IBAT database reflects the implementation of a decision rule to select a single set of figures from each pair of reporting countries. Given trade statistics of two reporting countries for a particular year, the IBAT Database includes the figures from the reporting country with the larger share of reported trade that matches the reported trade of its trading partners. This evaluation is performed at the 4- and 5-digit SITC level.

However, an evaluation of U.S. agricultural exports to Canada before and after the implementation of CUSFTA is complicated by a reform in the preparation of Canada-U.S. trade statistics. Starting in January 1990, the governments of Canada and the United States began to officially exchange their bilateral trade statistics. U.S. statistics are used to measure Canadian agricultural exports to the United States, while Canadian statistics are used to measure U.S. agricultural exports to Canada[2]. Thus, it is possible that the data collected since 1990 are not strictly comparable to pre-1990 data. Although the IBAT Database's time series for Canadian agricultural exports to the United States does not seem to reflect an unusual change in 1990, the same cannot be said for U.S. agricultural exports to Canada. According to the IBAT Database, this time series appears to undergo an almost parallel shift in 1990, with a one-year increase in trade of 51 percent. For this reason, we rely entirely on the statistics reported by Canada to describe U.S. agricultural exports to Canada.

This paper is divided into three parts. The first part describes agricultural trade at the aggregate level among the three NAFTA countries and between these countries and the rest of the world. All trade figures in this paper are expressed in U.S. dollars. The second part examines bilateral agricultural trade among the NAFTA countries in greater detail. The IBAT database divides agricultural trade into four broad categories: bulk commodities, processed

[2]See U.S. Department of Agriculture, Economic Research Service, "Outlook for U.S. Exports," May 30, 1990, p.7.

intermediates, produce and horticultural products, and high-value processed products.[3]

AN AGGREGATE PERSPECTIVE

Agricultural trade among the three NAFTA countries has continued to expand since the implementation of CUSFTA and NAFTA. Within the NAFTA region, agricultural exports have increased from an annual average of (U.S.) $8.4 billion during 1984-88 (the last 5 years before CUSFTA) to $22.7 billion during 1994-98 (the first 5 years of NAFTA). Obviously, this general increase is partially due to factors other than the two trade agreements, including population growth and economic expansion in each NAFTA country. Thus, one important question regarding the two accords is the extent to which they have affected the growth and direction of agricultural trade in North America.

This section presents aggregate trade statistics for the three NAFTA countries during 1975-98, emphasizing changes that took place following the implementation of CUSFTA and NAFTA. It also identifies several possible turning points in North American agricultural trade during this time period. As we shall see, many of the apparent turning points do not neatly coincide with the implementation of either trade agreement. Finally, the section examines changes in the NAFTA countries' share of North American agricultural trade.

Canada-U.S. Trade

At the aggregate level, Canada-U.S. agricultural trade has expanded without interruption since the implementation of CUSFTA. Between 1988 and 1998, Canada's agricultural exports to the United States increased from $2.5 billion to $8.1 billion, while U.S. agricultural exports[4] to Canada climbed from $3.4 billion to $6.9 billion (Appendix Table 1 and Figure 1).

Aggregate trade figures suggest that Canadian agricultural exports to the United States entered a period of more rapid growth, not in 1989 with the implementation of CUSFTA, but instead in 1992. Between 1991 and 1998, these exports grew at a compound annual rate of 13 percent, compared with 9

[3]A detailed list of the commodities in each category is available from the authors.
[4]The Appendix contains data for North American agricultural imports.

Figure 1: Canada-U.S. Agricultural Trade, 1975-1998.

percent over 1984-91. Years with particularly large annual increases in exports include 1992 (22 percent) and 1996 (21 percent).

Since 1986, U.S. agricultural exports to Canada have experienced successive annual increases. These increases surpassed 10 percent during 1987-89 and in 1997. Overall, U.S. agricultural exports to Canada increased at a faster annual rate (7 percent, compounded) over 1989-98 than over 1980-89 (5 percent, compounded).

Mexico-U.S. Trade

Mexico-U.S. agricultural trade has continued to expand under NAFTA. Mexican agricultural exports to the United States increased from $2.7 billion in 1993 to $4.9 billion in 1998, while U.S. agricultural exports to Mexico grew from $3.8 billion to $6.4 billion (Figure 2). This upward trend predates NAFTA by at least several decades. During the 24 years from 1976 to 1998, Mexican agricultural exports to the United States experienced year-to-year decreases in only 8 calendar years: 1980, 1982, 1984, 1987, 1988, 1991, 1992, and 1997. Similarly, U.S. agricultural exports to Mexico have been on the rise in general since 1986, decreasing only in 1990, 1993, 1995, and 1997.

Figure 2: Mexico-U.S. Agricultural Trade, 1975-1998.

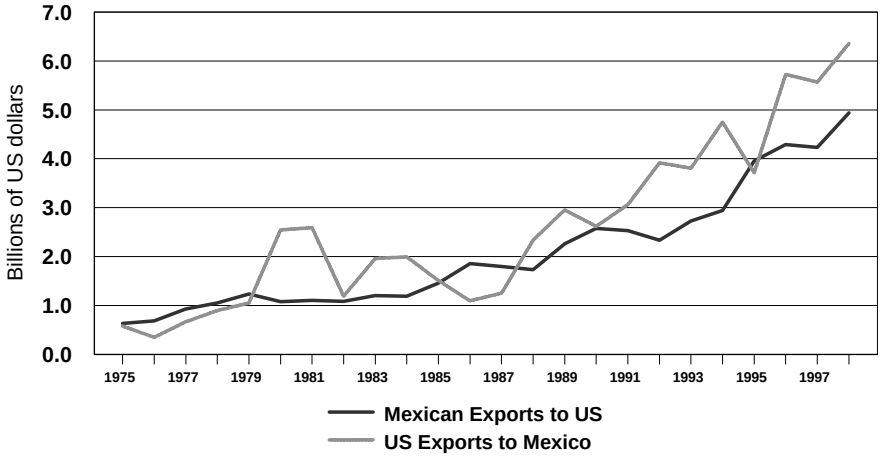
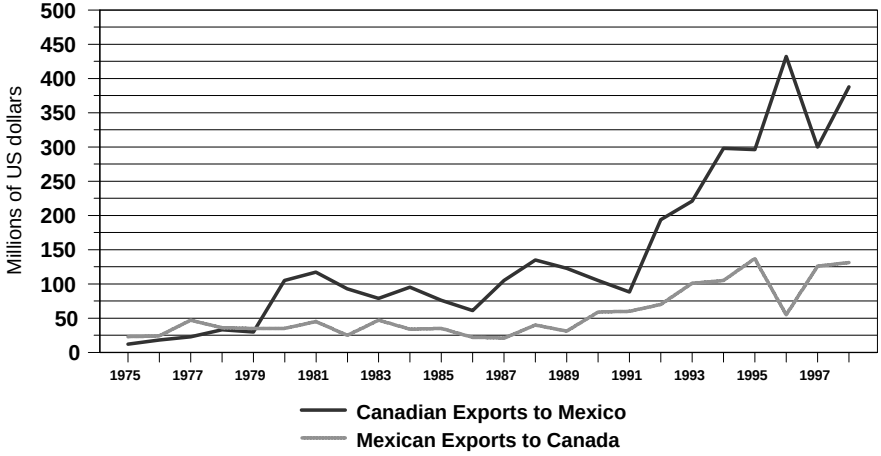


Figure 3: Canada-Mexico Agricultural Trade, 1975-1998.



Since 1993, Mexican agricultural exports to the United States have grown at a brisk pace. This trade increased at a compound annual rate of 13 percent between 1992 and 1998, compared with 9 percent between 1975 and 1991. In addition, the pattern exhibited during 1993-98 differs from that of

1986-88 and 1989-92, when exports initially surged and then declined. The growth of U.S. agricultural exports to Mexico appears to be closely linked to the performance of the Mexican economy, as evidenced by the economic crisis of the 1980s and the recession of 1995. The abatement of the former crisis around 1988 seems to mark a turning point in U.S. agricultural exports to Mexico. Between 1987 and 1998, this trade grew at a compound annual rate of 16 percent. In sharp contrast, these exports averaged only $1.5 billion during 1982-87, compared with an average of $2.6 billion during the petro-boom of 1980 and 1981 and $2.3 billion in 1988.

The peso devaluation and recession that accompanied Mexico's financial crisis of late 1994 affected U.S. agricultural exports to Mexico in a similar fashion as the crisis of the 1980s. Between 1994 and 1995, exports dropped from $4.8 billion to $3.7 billion. With the recovery of the Mexican economy, this trade rebounded to $5.7 billion in 1996 and $5.6 billion in 1997.

Canada-Mexico Trade

Although small relative to Canada-U.S. and Mexico-U.S. flows, trade between Canada and Mexico is an increasingly prominent aspect of North American agricultural trade. Under NAFTA, Canadian agricultural exports to Mexico have increased from $221 million in 1993 to $388 million in 1998, while Mexican agricultural exports have expanded from $101 million to $131 million (Figure 3).

The year 1990 roughly marks the beginning of more than half a decade of rapid growth in Canada-Mexico agricultural trade. During 1991-96, Canadian agricultural exports to Mexico grew at a compound annual rate of 37 percent, achieving an all-time high of $432 million in 1996. Similarly, Mexican agricultural exports to Canada expanded at a compound annual rate of 28 percent during 1989-95, reaching a record $137 million in 1995. Canada-Mexico agricultural trade may have entered a new phase in 1996, as Mexican exports plummeted to $55 million before rebounding to $126 million in 1997. In a possibly related development, Canadian agricultural exports to Mexico decreased sharply in 1997 but recovered in 1998.

Trade Shares

As a general rule, agricultural trade among the three NAFTA countries accounts for a larger share of total North American agricultural trade than before NAFTA. With respect to imports, this change is most notable for the United States. Canada and Mexico were the origin of 32 percent of U.S. agricultural imports during 1994-98, compared with 26 percent in 1989-93 and 18 percent in 1984-88 (Appendix Table 2). For Mexico, imports from Canada and the United States increased from 71 percent in 1989-93 to 80 percent during 1994-98. However, imports from Canada and the United States accounted for 78 percent of Mexico's total agricultural imports during 1984-88, thus raising doubts about whether a long-term change in trade share is taking place in Mexico's agricultural imports. Canada also experienced a shift in trade share following the implementation of CUSFTA and NAFTA. The NAFTA countries were the origin of 66 percent of Canadian agricultural imports during 1994-98, up from 64 percent during 1989-93 and 60 percent during 1984-88.

With respect to exports, NAFTA countries are the destination for a larger proportion of total agricultural exports for both Canada and the United States. During 1994-98, Mexico and the United States purchased 53 percent of Canada's agricultural exports, compared with 41 percent during 1989-93 and 30 percent during 1984-88 (Appendix Table 3). For the United States, the NAFTA countries accounted for 20 percent of total agricultural exports during 1994-98, up from 18 percent during 1989-93 and 14 percent during 1984-88. Part of this shift is linked not to NAFTA but instead to the sharp reduction in U.S. and Canadian exports to countries outside NAFTA that coincided with the Asian financial crisis. Between 1996 and 1998, U.S. agricultural exports to the rest of the world fell from $50.7 billion to $40.1 billion, while Canadian agricultural exports to countries outside NAFTA declined from $7.2 billion to $6.0 billion.

The notable exception to this pattern concerns Mexican agricultural exports. Since the implementation of NAFTA, the combined U.S. and Canadian share of Mexico's total agricultural exports has actually declined, from an average of 83 percent during 1989-93 to 77 percent during 1994-98, which is also comparable to the 1984-88 share of 76 percent. This experience suggests that further economic integration with Canada and the United States has not

prevented Mexico from increasing exports to other countries and may have even supported efforts in this area.

SECTORAL TRADE FLOWS

Canadian Exports to the United States

High-value processed products constitute the largest component of Canadian agricultural exports to the United States (Appendix Table 4). In 1998, this category's exports were valued at $4.0 billion, accounting for 50 percent for total agricultural exports. The next largest categories are processed intermediates (32 percent of the total) and bulk commodities (10 percent).

Bulk commodities and processed intermediates account for a larger share of Canadian agricultural exports to the United States than they did before CUSFTA. During 1989-98, bulk commodities made up 12 percent of this trade, compared with 8 percent during 1984-88. The share associated with processed intermediates increased from 31 to 36 percent across the same two periods.

Just as 1992 marks a turning point in Canadian agricultural exports to the United States at the aggregate level, it also marks a turning point at the sectoral level (Appendix Table 5 and Figure 4). Exports in each category grew more quickly during 1991-98 than during 1984-91. Produce and horticultural products experienced the strongest export expansion of the four categories during 1991-98, with a compound annual growth rate of 14 percent. The category of bulk commodities was close behind with a rate of 15 percent.

Despite differences in growth rates across categories, each category of Canadian agricultural exports to the United States has participated in the general expansion of trade experienced under CUSFTA and NAFTA. The slowest growing category over 1991-98 was processed intermediates, with a compound annual growth rate of 11 percent. This rate of expansion is just off the 13 percent rate experienced by total agricultural exports.

U.S. Exports to Canada

U.S. agricultural exports to Canada are distributed more evenly across the four categories than Canadian exports to the United States (Appendix Table

Figure 4: Canadian Agricultural Exports to the United States, 1975-1998.

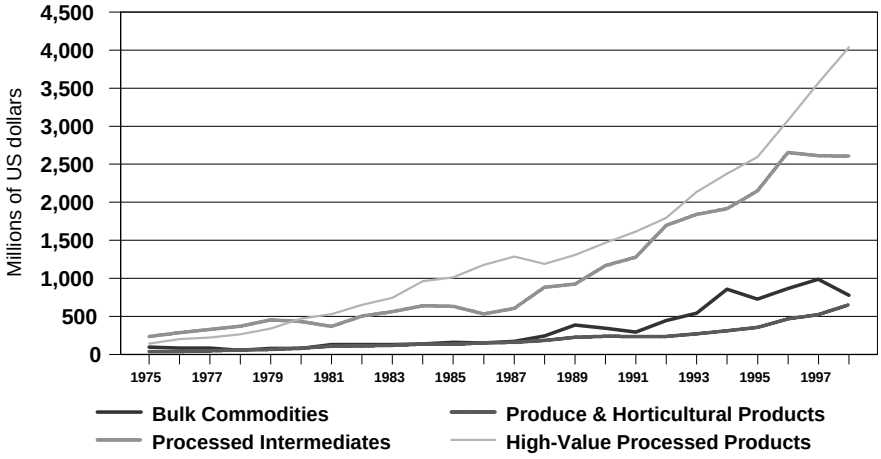
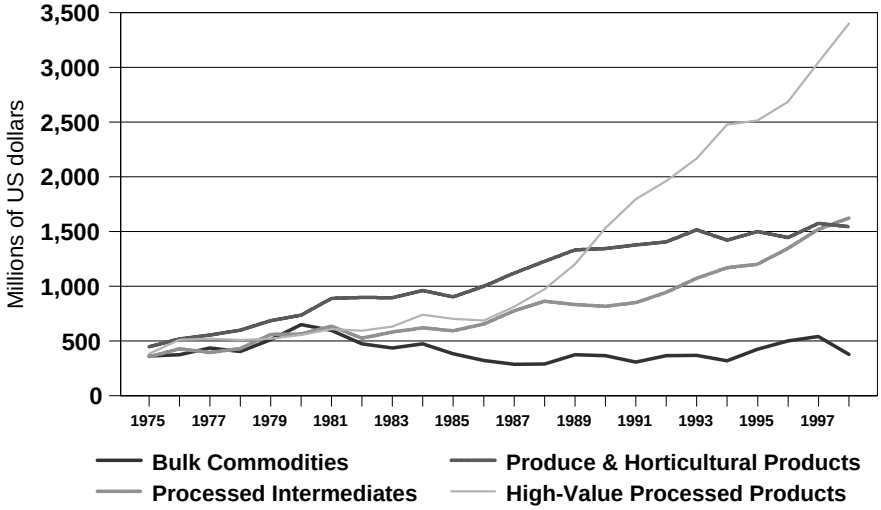


Figure 5: U.S. Agricultural Exports to Canada, 1975-1998.



6). High-value processed products accounted for the largest portion in 1998, with a share of 49 percent. Processed intermediates and produce and horticultural products placed second and third respectively with shares of 23 percent and 22 percent.

Perhaps the most striking development in the composition of U.S. agricultural exports to Canada during the CUSFTA/NAFTA era is the rapid export growth of high-value processed products (Appendix Table 7 and Figure 5). Exports in this category increased at a compound annual rate of 13 percent between 1988 and 1998, compared with 8 percent for total agricultural exports.

Another important development is the limited export growth of bulk commodities. This phenomenon traces its beginnings to the early 1980s, although exports in this category experienced successive years of expansion from 1995 to 1997, before ebbing again in 1998. Bulk-commodity exports reached $540 million in 1997, their highest level since 1981. In contrast, exports of processed intermediates have expanded without interruption since 1991, after several years of contraction. Between 1990 and 1998, these exports increased from $817 million to $1.6 billion.

Mexican Exports to the United States

Of the four categories, produce and horticultural products make up the largest portion of Mexican agricultural exports to the United States (Appendix Table 8). In 1998, this category's exports were valued at $2.4 billion, accounting for 48 percent of the total. The next largest categories were high-value processed products (32 percent) and bulk commodities (12 percent).

Several noteworthy developments have occurred in Mexican agricultural exports to the United States following the implementation of NAFTA (Appendix Table 9 and Figure 6). First, exports of produce and horticultural products have continued to expand at a brisk pace. Between 1993 and 1998, this trade increased from $1.2 billion to $2.4 billion, which corresponds to a compound annual growth rate of 14 percent. Although this trend appears to have started in 1989, it has clearly continued under NAFTA.

Second, exports of high-value processed products increased more rapidly during the first 5 years of NAFTA than during the 6 years before NAFTA. Between 1993 and 1998, this trade increased at a compound annual rate of 19 percent, compared with 6 percent between 1987 and 1993. The share associated with this category also increased over this period, rising from 24 percent in 1993 to 32 percent in 1998.

Figure 6: Mexican Agricultural Exports to the United States, 1975-1998.

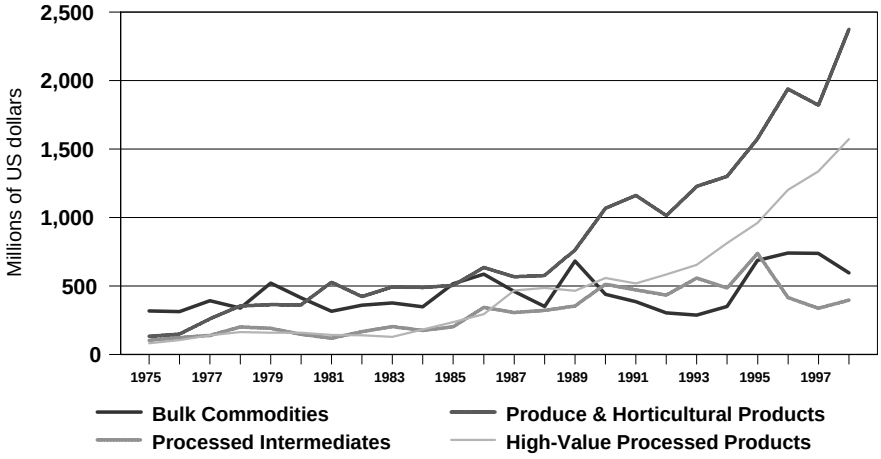
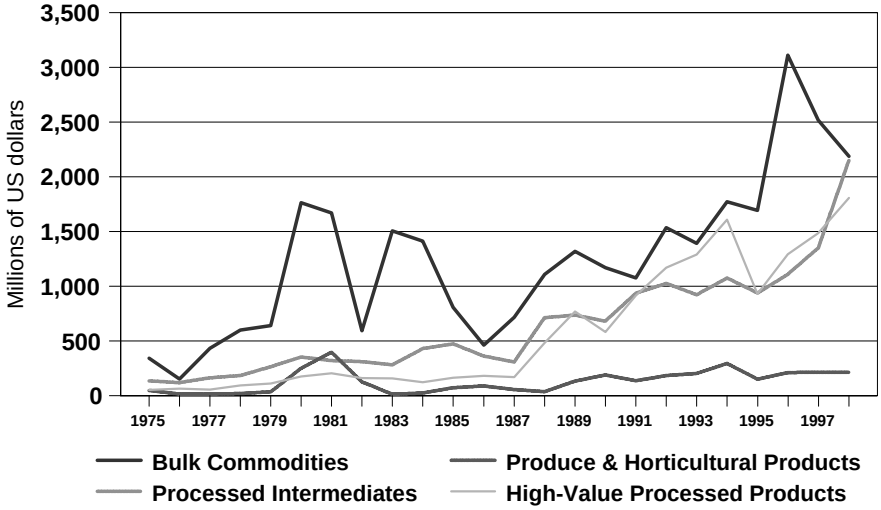
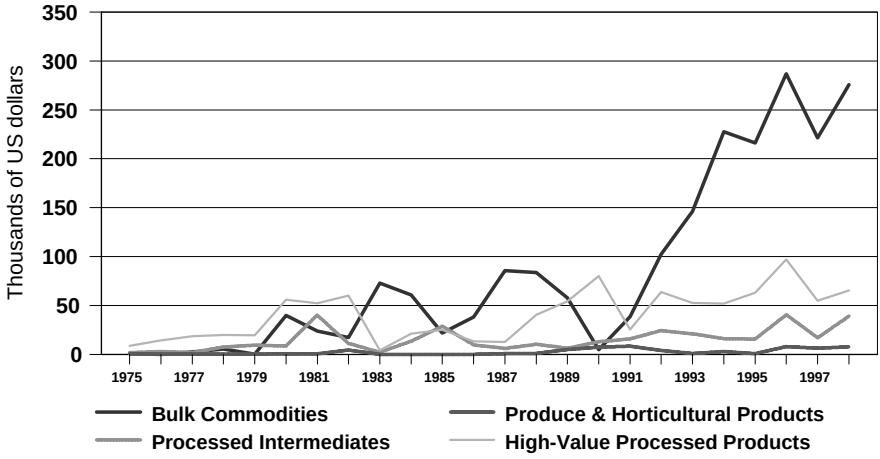


Figure 7: U.S. Agricultural Exports to Mexico, 1975-1998.



Third, after successive annual decreases from 1990 to 1993, exports of bulk commodities have rebounded under NAFTA, from a low of $287 million in 1993 to an average of $721 million during 1995-97. Although this trade

Figure 8: Canadian Agricultural Exports to Mexico, 1975-1998.



declined to $596 million in 1998, this amount is still greater than the annual exports in every year but one (1989) during the 1975-93 period. Fourth, exports of processed intermediates have experienced marked decreases over the last several years. Following an all-time high of $737 million in 1995, these averaged only $383 million during 1996-98. This latter figure is also less than the annual average during the 1990-94 period.

U.S. Exports to Mexico

Bulk commodities constitute the largest portion of U.S. agricultural exports to Mexico (Appendix Table 10). In 1998, exports in this category equaled $2.2 billion, accounting for 34 percent of the total. The next largest categories in 1998 were processed intermediates (34 percent) and high-value processed products (28 percent).

In nominal terms, the years 1996-98 featured the three highest levels ever of bulk-commodity exports to Mexico (Appendix Table 11 and Figure 7). In 1996, this trade reached a record $3.1 billion, accounting for more than half of U.S. agricultural exports to Mexico. In 1997 and 1998, bulk-commodity

exports decreased to $2.5 billion and then $2.2 billion, perhaps due in part to lower commodity prices.

Exports of processed intermediates have experienced the most sustained growth under NAFTA, climbing from $938 million in 1995 to $2.2 billion in 1998. Of the four categories, processed intermediates also experienced the second smallest proportionate reduction in exports during the 1995 recession. Exports of processed intermediates decreased 13 percent in 1995, compared with a 22-percent decline overall.

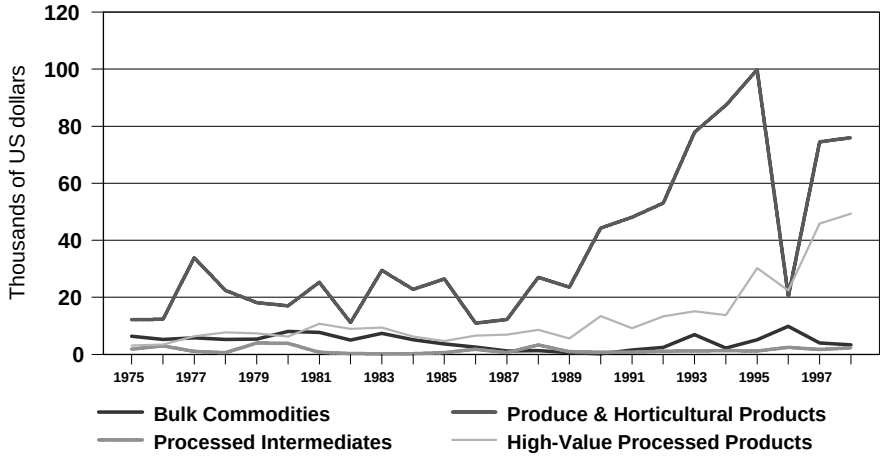
Two categories experienced relatively little export growth between 1993 and 1998: high-value processed products and produce and horticultural products. In response to the 1995 recession, exports of high-value processed products shrank from $1.6 billion to $929 million between 1994 and 1995, a decrease of 42 percent. Since then, this trade has experienced several successive years of growth, climbing to $1.8 billion in 1998. Similarly, exports of produce and horticultural products fell to $151 million in 1995, a decline of 49 percent. In 1996, these exports rebounded to $211 million, and in 1997 and 1998, they reached $215 million.

Canadian Exports to Mexico

Bulk commodities are by far the largest component of Canadian agricultural exports to Mexico (Appendix Table 12). In 1998, the category accounted for 71 percent of this trade, with exports of $276 million. The next largest categories are high-value processed products and processed intermediates, with shares of 17 percent and 10 percent, respectively.

One major development in Canadian agricultural exports to Mexico is the establishment of routine bulk-commodity trade during the 1990s (Appendix Table 13 and Figure 8). Exports in this category fluctuated greatly during 1981-90, ranging from $5 million in 1990 to $86 million in 1987. In contrast, this trade averaged $246 million during the first 5 years of NAFTA, with a low of $216 million in 1995 and a high of $287 million in 1996. Had Canada not participated in NAFTA, it is quite possible that the United States would have supplied some of these exports to Mexico.

Figure 9: Mexican Agricultural Exports to Canada, 1975-1998.



Over the last several years, exports of high-value processed products have followed a similar pattern to exports of processed intermediates. This pattern is characterized by a pronounced increase in 1996, a sharp decrease in 1997 that returned exports to approximately their 1995 level, and then another increase in 1998.

Mexican Exports to Canada

The two largest components of Mexican agricultural exports to Canada are produce and horticultural products, with a 1998 share of 58 percent, and high-value processed products, with 38 percent (Appendix Table 14). Exports in these two categories respectively equaled $76 million and $49 million in 1998.

Similar to developments in Mexico-U.S. trade, Mexican exports of produce and horticultural products to Canada increased substantially during the first half of the 1990s (Appendix Table 15 and Figure 9). Between 1989 and 1995, these exports experienced six successive annual increases, climbing from $24 million to a record $100 million. But in NAFTA's third year (1996), exports of produce and horticultural products decreased sharply, falling to a mere

$20 million. High-value processed products also experienced reduced exports in 1996. Exports in both categories recovered in 1997.

The only category to experience substantially improved export growth under NAFTA is high-value processed products. Exports in this category grew from $15 million in 1993 to $49 million in 1998, a change of 227 percent. In contrast, these exports increased 170 percent between 1989 and 1993.

SUMMARY AND CONCLUSIONS

This background paper has offered a profile of North American agricultural trade during 1975-98 using statistics from the IBAT Database. Although this presentation is not a substitute for a more rigorous analytical exercise, it has uncovered several important trends related to CUSFTA and NAFTA.

First, North American agricultural trade has continued to grow following the implementation of the two agreements. At first glance, this observation may seem too obvious, given that various factors, such as economic expansion and population growth, "build in" trade growth. However, the observation becomes more noteworthy with the recognition that most agricultural sectors within each NAFTA country have experienced increased trade, using the IBAT Database's more detailed sectoral trade figures. Second, agricultural trade among the three NAFTA countries accounts for a larger portion of total North American agricultural trade than it did before NAFTA. This development is part of a long-term trend that spans the entire 1975-98 period, and it has been strengthened temporarily by a decline in agricultural exports to countries outside NAFTA (primarily in Asia) that have grappled with profound economic crises in recent years. Still, it seems likely that CUSFTA and NAFTA have provided additional stimulus to this process.

Third, this paper has identified a number of turning points in North American agricultural trade during 1975-98. Many of these turning points do not coincide with the initial implementation of either CUSFTA or NAFTA. However, some may correspond to the timing of certain elements of the two agreements. In addition, several turning points are likely related to exchange-rate movements. Thus, a complete evaluation of the impact of CUSFTA and NAFTA

would require an analysis of the complex interplay between trade policy, trade flows, and exchange rates.

At the aggregate level, two years (1988 and 1992) stand out as major turning points. The year 1988 is important because it seems to mark the initial impact of Mexico's unilateral trade liberalization on U.S. agricultural exports to Mexico. In addition, the year may be viewed as an approximate end to Mexico's economic crisis of the 1980s. The year 1992 is noteworthy because it is the beginning of a period of heightened growth in Canadian agricultural exports to the United States. This development may be linked both to tariff reductions specified by CUSFTA and to the appreciation of the U.S. dollar relative to the Canadian dollar. Interestingly, some bilateral relationships in North American agricultural trade do not feature dramatic turning points for the simple reason that these flows have been steadily on the rise during much of the 1975-98 period. U.S. agricultural exports to Canada and Mexican agricultural exports to the United States are prominent examples of this sustained trade growth.

Finally, an analytical approach that draws upon a variety of trade theories is needed to explain sectoral developments in North American agricultural trade. For instance, the expansion of Mexican exports of produce and horticultural products to Canada and the United States fits neatly within a Ricardian story of comparative advantage. In contrast, the increase in Canadian bulk-commodity exports to the United States and the concomitant increase in U.S. bulk-commodity exports to Mexico may be explained best by a combination of comparative advantage and geographic proximity. This approach will also require exploration of the complementary relationship between foreign investment and international trade so that we may understand how multinational firms have reorganized their operations in response to the new economic environment presented by NAFTA.

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APPENDIX TABLES 1-15

AGRICULTURAL TRADE DATA OF NAFTA COUNTRIES, 1975-98

Table 1: Agricultural Exports of NAFTA Countries, 1975-98 (in millions of U.S. dollars).

	Canadian Exports to:				*Mexican Exports to:*				*U.S. Exports to:*			
Year	*ROW*	*NAFTA*	*Mexico*	*U.S.*	*ROW*	*NAFTA*	*Canada*	*U.S.*	*ROW*	*NAFTA*	*Canada*	*Mexico*
1975	3,468	521	12	509	409	658	23	634	20,312	2,125	1,546	579
1976	3,415	620	18	602	384	712	24	688	21,240	2,180	1,830	350
1977	3,454	705	23	682	601	977	47	930	21,711	2,570	1,904	666
1978	3,598	781	33	748	666	1,091	36	1,055	26,733	2,837	1,939	898
1979	4,378	969	30	939	829	1,267	35	1,232	32,195	3,327	2,276	1,051
1980	6,103	1,166	105	1,061	761	1,116	35	1,081	37,362	5,050	2,505	2,545
1981	6,478	1,250	117	1,133	605	1,146	45	1,102	39,145	5,322	2,730	2,592
1982	6,720	1,492	93	1,399	468	1,111	25	1,085	33,956	3,680	2,488	1,191
1983	6,537	1,631	79	1,552	392	1,247	47	1,200	32,326	4,503	2,543	1,960
1984	6,470	1,969	95	1,874	518	1,227	34	1,192	33,821	4,790	2,796	1,994
1985	4,826	2,009	76	1,934	399	1,493	35	1,457	26,010	4,096	2,582	1,513
1986	4,250	2,073	61	2,012	545	1,878	22	1,856	23,189	3,755	2,660	1,095
1987	4,704	2,324	105	2,218	459	1,820	21	1,799	26,050	4,244	2,992	1,252
1988	5,520	2,633	135	2,497	667	1,774	40	1,734	33,200	5,689	3,351	2,337
1989	4,856	2,964	123	2,841	648	2,294	31	2,264	36,281	6,694	3,740	2,955
1990	5,467	3,321	105	3,216	391	2,634	59	2,575	33,795	6,677	4,058	2,619
1991	5,785	3,512	88	3,423	591	2,594	60	2,534	32,419	7,392	4,329	3,064
1992	6,215	4,364	194	4,170	478	2,404	70	2,334	35,281	8,596	4,679	3,917
1993	4,691	5,011	221	4,790	484	2,825	101	2,724	35,332	8,930	5,123	3,807
1994	5,288	5,756	298	5,458	746	3,051	105	2,946	37,601	10,137	5,386	4,751
1995	6,544	6,123	296	5,827	1,283	4,097	137	3,960	49,171	9,350	5,637	3,712
1996	7,157	7,494	432	7,062	1,155	4,349	55	4,294	50,746	11,700	5,975	5,725
1997	7,085	7,992	300	7,693	1,651	4,356	126	4,230	46,437	12,248	6,678	5,570
1998	5,987	8,461	388	8,073	1,545	5,068	131	4,937	40,129	13,304	6,945	6,358
Period Averages												
1984-88	5,154	2,202	95	2,107	518	1,638	31	1,608	28,454	4,515	2,876	1,638
1989-93	5,403	3,834	146	3,688	518	2,550	64	2,486	34,621	7,658	4,386	3,272
1994-98	6,412	7,165	343	6,822	1,276	4,184	111	4,073	44,817	11,348	6,125	5,223

ROW = rest of world

Table 2: Origin of Agricultural Imports of NAFTA Countries, 1975-98 (in percent).

	Canadian Imports from:				*Mexican Imports from:*				*U.S. Imports from:*			
Year	*ROW*	*NAFTA*	*Mexico*	*U.S.*	*ROW*	*NAFTA*	*Canada*	*U.S.*	*ROW*	*NAFTA*	*Canada*	*Mexico*
1975	44	56	1	55	37	63	1	62	88	12	5	7
1976	40	60	1	59	34	66	3	63	89	11	5	6
1977	40	60	1	59	22	78	3	75	88	12	5	7
1978	41	59	1	58	20	80	3	77	88	12	5	7
1979	41	59	1	58	20	80	2	78	88	12	5	7
1980	42	58	1	57	24	76	3	73	89	11	6	6
1981	40	60	1	59	25	75	3	71	88	12	6	6
1982	38	62	1	62	33	67	5	62	84	16	9	7
1983	38	62	1	61	17	83	3	79	84	16	9	7
1984	40	60	1	60	23	77	4	74	85	15	9	6
1985	41	59	1	59	29	71	3	68	84	16	9	7
1986	42	58	*	58	23	77	4	73	82	18	9	9
1987	40	60	*	60	17	83	6	76	81	19	10	8
1988	39	61	1	60	19	81	4	76	80	20	12	8
1989	37	63	1	62	24	76	3	73	77	23	13	10
1990	38	62	1	61	41	59	2	57	76	24	14	11
1991	37	63	1	62	30	70	2	68	75	25	15	11
1992	35	65	1	64	26	74	3	70	74	26	17	9
1993	33	67	1	66	26	74	4	70	71	29	19	11
1994	34	66	1	64	23	77	5	72	70	30	20	11
1995	34	66	2	64	19	81	6	75	68	32	19	13
1996	33	67	1	66	19	81	6	75	67	33	21	13
1997	34	66	1	65	20	80	4	76	68	32	21	11
1998	34	66	1	65	17	83	5	78	66	34	21	13
Period Averages												
1984-88	40	60	1	59	22	78	4	73	82	18	10	8
1989-93	36	64	1	63	29	71	3	68	74	26	15	10
1994-98	34	66	1	65	20	80	5	75	68	32	20	12

ROW = rest of world
* indicates a value between zero and 0.5 percent.

Table 3: Destination of Agricultural Exports of NAFTA Countries, 1975-98 (in percent).

	Canadian Exports to:				*Mexican Exports to:*				*U.S. Exports to:*			
Year	*ROW*	*NAFTA*	*Mexico*	*U.S.*	*ROW*	*NAFTA*	*Canada*	*U.S.*	*ROW*	*NAFTA*	*Canada*	*Mexico*
1975	87	13	*	13	38	62	2	59	91	9	7	3
1976	85	15	*	15	35	65	2	63	91	9	8	1
1977	83	17	1	16	38	62	3	59	89	11	8	3
1978	82	18	1	17	38	62	2	60	90	10	7	3
1979	82	18	1	18	40	60	2	59	91	9	6	3
1980	84	16	1	15	41	59	2	58	88	12	6	6
1981	84	16	2	15	35	65	3	63	88	12	6	6
1982	82	18	1	17	30	70	2	69	90	10	7	3
1983	80	20	1	19	24	76	3	73	88	12	7	5
1984	77	23	1	22	30	70	2	68	88	12	7	5
1985	71	29	1	28	21	79	2	77	86	14	9	5
1986	67	33	1	32	22	78	1	77	86	14	10	4
1987	67	33	1	32	20	80	1	79	86	14	10	4
1988	68	32	2	31	27	73	2	71	85	15	9	6
1989	62	38	2	36	22	78	1	77	84	16	9	7
1990	62	38	1	37	13	87	2	85	84	16	10	6
1991	62	38	1	37	19	81	2	80	81	19	11	8
1992	59	41	2	39	17	83	2	81	80	20	11	9
1993	48	52	2	49	15	85	3	82	80	20	12	9
1994	48	52	3	49	20	80	3	78	79	21	11	10
1995	52	48	2	46	24	76	3	74	84	16	10	6
1996	49	51	3	48	21	79	1	78	81	19	10	9
1997	47	53	2	51	27	73	2	70	79	21	11	9
1998	41	59	3	56	23	77	2	75	75	25	13	12
Period Averages												
1984-88	70	30	1	29	24	76	1	74	86	14	9	5
1989-93	59	41	2	40	17	83	2	81	82	18	10	8
1994-98	47	53	3	50	23	77	2	75	80	20	11	9

ROW = rest of world
* indicates a value between zero and 0.5 percent.

Table 4: Composition of Canadian Agricultural Exports to the United States, by Category, 1975-98 (in percent).

Year	*Total Agricultural Products*	*Bulk Commodities*	*Processed Intermediates*	*Produce & Horticultural Products*	*High-Value Processed Products*
1975	100	19	46	7	28
1976	100	13	47	6	33
1977	100	12	48	7	33
1978	100	7	50	8	35
1979	100	8	48	7	36
1980	100	8	41	8	44
1981	100	11	33	9	47
1982	100	9	36	8	47
1983	100	8	36	8	48
1984	100	7	34	7	51
1985	100	8	33	7	52
1986	100	7	27	8	59
1987	100	8	27	7	58
1988	100	10	35	7	48
1989	100	14	32	8	46
1990	100	11	36	7	46
1991	100	9	37	7	47
1992	100	11	41	6	43
1993	100	11	38	6	45
1994	100	16	35	6	44
1995	100	12	37	6	45
1996	100	12	38	7	44
1997	100	13	34	7	46
1998	100	10	32	8	50
Period Averages					
1984-88	100	8	31	7	54
1989-93	100	11	37	7	45
1994-98	100	13	35	7	46
1989-98	100	12	36	7	45

Table 5: Canadian Agricultural Exports to the United States, by Category, 1975-98 (in millions of U.S. dollars).

Year	*Total Agricultural Products*	*Bulk Commodities*	*Processed Intermediates*	*Produce & Horticultural Products*	*High-Value Processed Products*
1975	509	97	235	35	142
1976	602	81	285	37	199
1977	682	84	328	47	224
1978	748	54	371	58	265
1979	939	78	454	65	341
1980	1,061	80	433	81	468
1981	1,133	130	369	108	527
1982	1,399	131	503	112	652
1983	1,552	130	562	118	743
1984	1,874	136	640	135	962
1985	1,934	160	631	132	1,011
1986	2,012	149	533	152	1,178
1987	2,218	171	604	158	1,286
1988	2,497	241	883	183	1,190
1989	2,841	385	923	225	1,308
1990	3,216	345	1,167	238	1,466
1991	3,423	295	1,278	235	1,615
1992	4,170	443	1,697	236	1,794
1993	4,790	540	1,841	271	2,137
1994	5,458	855	1,916	311	2,376
1995	5,827	726	2,150	355	2,595
1996	7,062	864	2,655	467	3,076
1997	7,693	989	2,612	523	3,568
1998	8,073	779	2,605	653	4,036
Period Averages					
1984-88	2,107	171	658	152	1,125
1989-93	3,688	402	1,381	241	1,664
1994-98	6,822	843	2,388	462	3,130
Selected Annual Growth Rates (Compounded)					
1984-91	9%	12%	10%	8%	8%
1991-98	13%	15%	11%	16%	14%

Table 6: Composition of U.S. Agricultural Exports to Canada, by Category, 1975-98 (in percent).

Year	*Total Agricultural Products*	*Bulk Commodities*	*Processed Intermediates*	*Produce & Horticultural Products*	*High-Value Processed Products*
1975	100	23	23	29	25
1976	100	20	23	28	28
1977	100	23	21	29	27
1978	100	21	22	31	26
1979	100	23	25	30	23
1980	100	26	22	29	22
1981	100	22	23	33	22
1982	100	19	21	36	24
1983	100	17	23	35	25
1984	100	17	22	34	26
1985	100	15	23	35	27
1986	100	12	25	38	26
1987	100	10	26	37	27
1988	100	9	26	37	29
1989	100	10	22	36	32
1990	100	9	20	33	38
1991	100	7	20	32	41
1992	100	8	20	30	42
1993	100	7	21	30	42
1994	100	6	22	26	46
1995	100	8	21	27	45
1996	100	8	23	24	45
1997	100	8	23	24	46
1998	100	5	23	22	49
Period Averages					
1984-88	100	12	24	36	27
1989-93	100	8	21	32	39
1994-98	100	7	22	25	46
1989-98	100	8	21	28	43

Table 7: U.S. Agricultural Exports to Canada, by Category, 1975-98 (in millions of U.S. dollars).

Year	*Total Agricultural Products*	*Bulk Commodities*	*Processed Intermediates*	*Produce & Horticultural Products*	*High-Value Processed Products*
1975	1,546	362	355	446	383
1976	1,830	373	428	518	511
1977	1,904	435	395	554	519
1978	1,939	403	430	598	508
1979	2,276	512	559	685	520
1980	2,505	649	563	736	557
1981	2,730	597	635	889	609
1982	2,488	473	525	898	593
1983	2,543	436	582	895	630
1984	2,796	475	620	961	740
1985	2,582	384	593	903	702
1986	2,660	320	655	1,000	686
1987	2,992	286	775	1,119	813
1988	3,351	289	863	1,227	973
1989	3,740	373	832	1,332	1,203
1990	4,058	364	817	1,344	1,533
1991	4,329	306	850	1,377	1,796
1992	4,679	366	944	1,406	1,963
1993	5,123	368	1,073	1,515	2,167
1994	5,386	319	1,169	1,421	2,478
1995	5,637	424	1,200	1,500	2,514
1996	5,975	501	1,346	1,445	2,684
1997	6,678	540	1,520	1,574	3,044
1998	6,945	378	1,623	1,544	3,400
Period Averages					
1984-88	2,876	351	701	1,042	783
1989-93	4,386	355	903	1,395	1,733
1994-98	6,125	432	1,372	1,497	2,824
Selected Annual Growth Rates (Compounded)					
1988-98	8%	3%	7%	2%	13%

Table 8: Composition of Mexican Agricultural Exports to the United States, by Category, 1975-98 (in percent).

Year	*Total Produce & High-Value Agricultural Products*	*Bulk Commodities*	*Processed Intermediates*	*Horticultural Products*	*Processed Products*
1975	100	50	16	21	13
1976	100	45	18	21	15
1977	100	42	15	28	15
1978	100	32	19	34	16
1979	100	42	15	29	13
1980	100	38	14	33	15
1981	100	29	11	48	13
1982	100	33	15	39	13
1983	100	31	17	41	11
1984	100	29	15	41	15
1985	100	35	14	35	16
1986	100	32	18	34	16
1987	100	26	17	32	26
1988	100	20	19	33	28
1989	100	30	16	34	21
1990	100	17	20	41	22
1991	100	15	19	46	20
1992	100	13	19	43	25
1993	100	11	20	45	24
1994	100	12	16	44	28
1995	100	17	19	40	24
1996	100	17	10	45	28
1997	100	17	8	43	32
1998	100	12	8	48	32
Period Averages					
1984-88	100	28	17	35	20
1989-93	100	17	19	42	22
1994-98	100	15	12	44	29

Table 9: Mexican Agricultural Exports to the United States, by Category, 1975-98 (in millions of U.S. dollars).

Year	*Total Agricultural Products*	*Bulk Commodities*	*Processed Intermediates*	*Produce & Horticultural Products*	*High-Value Processed Products*
1975	634	317	103	132	82
1976	688	313	123	148	105
1977	930	393	138	259	139
1978	1,055	338	200	354	164
1979	1,232	520	190	363	158
1980	1,081	413	147	362	159
1981	1,102	316	118	527	141
1982	1,085	359	166	422	139
1983	1,200	375	203	493	129
1984	1,192	347	175	489	181
1985	1,457	515	202	504	236
1986	1,856	586	343	635	293
1987	1,799	460	306	567	466
1988	1,734	351	321	576	486
1989	2,264	682	354	762	465
1990	2,575	439	512	1,066	558
1991	2,534	385	471	1,161	518
1992	2,334	303	433	1,014	583
1993	2,724	287	557	1,227	653
1994	2,946	349	485	1,300	812
1995	3,960	687	737	1,575	960
1996	4,294	740	415	1,938	1,201
1997	4,230	737	337	1,820	1,336
1998	4,937	596	396	2,374	1,572
Period Averages					
1984-88	1,608	452	269	554	332
1989-93	2,486	419	466	1,046	556
1994-98	4,073	622	474	1,801	1,176
Selected Annual Growth Rates (Compounded)					
1987-93	7%	-8%	10%	14%	6%
1993-98	13%	16%	-7%	14%	19%

Table 10: Composition of U.S. Agricultural Exports to Mexico, by Category, 1975-98 (in percent).

Year	*Total Agricultural Products*	*Bulk Commodities*	*Processed Intermediates*	*Produce & Horticultural Products*	*High-Value Processed Products*
1975	100	59	23	8	9
1976	100	43	34	4	18
1977	100	65	24	2	8
1978	100	67	21	2	10
1979	100	61	25	3	11
1980	100	69	14	10	7
1981	100	64	12	15	8
1982	100	50	26	11	13
1983	100	77	14	1	8
1984	100	71	22	1	6
1985	100	53	31	5	11
1986	100	42	33	8	17
1987	100	57	25	4	14
1988	100	47	31	2	21
1989	100	45	25	5	26
1990	100	45	26	7	22
1991	100	35	31	4	30
1992	100	39	26	5	30
1993	100	37	24	5	34
1994	100	37	23	6	34
1995	100	46	25	4	25
1996	100	54	19	4	23
1997	100	45	24	4	27
1998	100	34	34	3	28
Period Averages					
1984-88	100	54	28	4	14
1989-93	100	40	26	5	28
1994-98	100	43	25	4	27

Table 11: U.S. Agricultural Exports to Mexico, by Category, 1975-98 (in millions of U.S. dollars).

Year	*Total Agricultural Products*	*Bulk Commodities*	*Processed Intermediates*	*Produce & Horticultural Products*	*High-Value Processed Products*
1975	579	343	135	48	53
1976	350	152	118	15	64
1977	666	434	163	14	55
1978	898	601	184	20	93
1979	1,051	641	264	35	111
1980	2,545	1,764	354	250	176
1981	2,592	1,668	320	397	206
1982	1,191	594	311	126	161
1983	1,960	1,506	282	13	159
1984	1,994	1,413	431	25	124
1985	1,513	807	473	72	162
1986	1,095	462	362	89	182
1987	1,252	718	308	56	170
1988	2,337	1,107	713	36	481
1989	2,955	1,317	736	133	768
1990	2,619	1,169	681	189	580
1991	3,064	1,077	936	136	914
1992	3,917	1,536	1,026	184	1,171
1993	3,807	1,391	922	203	1,290
1994	4,751	1,772	1,075	294	1,609
1995	3,712	1,694	938	151	929
1996	5,725	3,111	1,110	211	1,293
1997	5,570	2,518	1,352	215	1,485
1998	6,358	2,186	2,150	215	1,807
Period Averages					
1984-88	1,638	901	457	56	224
1989-93	3,272	1,298	860	169	944
1994-98	5,223	2,256	1,325	217	1,425
Annual Growth Rates (Not Compounded)					
1994	25%	27%	17%	45%	25%
1995	-22%	-4%	-13%	-49%	-42%
1996	54%	84%	18%	40%	39%
1997	-3%	-19%	22%	2%	15%
1998	14%	-13%	59%	*	22%

* indicates a value between zero and 0.5 percent.

Table 12: Composition of Canadian Agricultural Exports to Mexico, by Category, 1975-98 (in percent).

Year	*Total Agricultural Products*	*Bulk Commodities*	*Processed Intermediates*	*Produce & Horticultural Products*	*High-Value Processed Products*
1975	100	8	14	6	72
1976	100	*	16	1	82
1977	100	11	8	1	80
1978	100	17	23	*	60
1979	100	1	32	1	66
1980	100	38	8	1	53
1981	100	20	34	1	45
1982	100	18	12	5	65
1983	100	92	3	*	5
1984	100	64	14	*	22
1985	100	29	38	*	33
1986	100	62	16	*	22
1987	100	82	6	1	12
1988	100	62	8	1	30
1989	100	47	5	4	44
1990	100	5	12	7	76
1991	100	44	18	9	29
1992	100	53	13	2	33
1993	100	66	10	*	24
1994	100	76	5	1	17
1995	100	73	5	*	21
1996	100	66	9	2	22
1997	100	74	6	2	18
1998	100	71	10	2	17
Period Averages					
1984-88	100	60	16	*	24
1989-93	100	43	11	5	41
1994-98	100	72	7	1	19

* indicates a value between zero and 0.5 percent.

Table 13: Canadian Agricultural Exports to Mexico, by Category, 1975-98 (in thousands of U.S. dollars).

Year	*Total Agricultural Products*	*Bulk Commodities*	*Processed Intermediates*	*Produce & Horticultural Products*	*High-Value Processed Products*
1975	12,429	1,046	1,751	732	8,899
1976	17,600	63	2,883	193	14,462
1977	23,297	2,481	1,866	256	18,695
1978	32,902	5,444	7,568	129	19,761
1979	29,584	378	9,477	177	19,552
1980	104,642	39,685	8,567	674	55,715
1981	116,971	23,928	40,136	595	52,312
1982	92,950	17,107	11,279	4,472	60,091
1983	79,219	72,928	2,141	31	4,119
1984	95,332	60,836	13,432	36	21,028
1985	75,778	21,779	28,843	25	25,132
1986	61,166	38,182	9,685	57	13,242
1987	105,218	85,782	6,082	802	12,553
1988	135,384	83,517	10,383	1,032	40,452
1989	123,011	57,706	6,300	4,926	54,079
1990	105,190	4,797	12,917	7,378	80,097
1991	88,278	38,518	15,822	8,366	25,572
1992	194,354	102,175	24,416	4,088	63,675
1993	220,912	146,215	21,092	903	52,702
1994	298,472	227,662	16,039	2,922	51,849
1995	295,647	216,246	15,685	802	62,914
1996	432,220	286,809	40,528	7,938	96,945
1997	299,588	221,546	16,876	6,352	54,814
1998	387,892	275,658	39,105	7,708	65,421
Period Averages					
1984-88	94,576	58,019	13,685	390	22,481
1989-93	146,349	69,882	16,110	5,132	55,225
1994-98	342,764	245,584	25,647	5,144	66,389

Table 14: Mexican Agricultural Exports to Canada, by Category, 1975-98 (in thousands of U.S. dollars).

Year	*Total Agricultural Products*	*Bulk Commodities*	*Processed Intermediates*	*Produce & Horticultural Products*	*High-Value Processed Products*
1975	23,463	6,361	1,844	12,149	3,109
1976	24,044	5,288	2,983	12,307	3,466
1977	47,097	5,848	1,038	33,902	6,310
1978	35,935	5,206	592	22,418	7,719
1979	34,893	5,358	4,002	18,165	7,368
1980	35,203	8,010	3,897	16,997	6,300
1981	44,523	7,730	751	25,269	10,774
1982	25,349	5,003	304	11,145	8,897
1983	46,506	7,362	207	29,487	9,450
1984	34,415	5,157	237	22,795	6,225
1985	35,489	3,694	641	26,460	4,694
1986	21,917	2,565	1,820	10,939	6,594
1987	21,058	1,163	670	12,246	6,979
1988	40,165	1,281	3,288	27,016	8,580
1989	30,783	663	966	23,571	5,583
1990	58,688	252	751	44,307	13,378
1991	59,642	1,586	764	48,077	9,215
1992	69,955	2,432	1,115	53,036	13,372
1993	101,014	6,883	1,232	77,825	15,074
1994	104,608	2,223	1,298	87,319	13,768
1995	136,538	5,154	1,213	99,856	30,315
1996	55,168	9,897	2,452	20,407	22,412
1997	126,164	4,065	1,724	74,485	45,890
1998	131,022	3,370	2,318	75,977	49,357
Period Averages					
1984-88	30,609	2,772	1,331	19,891	6,614
1989-93	64,016	2,363	966	49,363	11,324
1994-98	110,700	4,942	1,801	71,609	32,348

Table 15: Agricultural Imports of NAFTA Countries, 1975-98 (in millions of U.S. dollars).

	Canadian Imports from:			*Mexican Imports from:*				*U.S. Imports from:*				
Year	***ROW***	***NAFTA***	***Mexico***	***U.S.***	***ROW***	***NAFTA***	***Canada***	***U.S.***	***ROW***	***NAFTA***	***Canada***	***Mexico***
1975	1,238	1,569	23	1,546	343	591	12	579	8,568	1,143	509	634
1976	1,227	1,854	24	1,830	189	368	18	350	10,008	1,290	602	688
1977	1,298	1,951	47	1,904	197	689	23	666	11,725	1,612	682	930
1978	1,359	1,975	36	1,939	231	931	33	898	13,568	1,803	748	1,055
1979	1,594	2,311	35	2,276	275	1,081	30	1,051	15,370	2,171	939	1,232
1980	1,848	2,540	35	2,505	827	2,650	105	2,545	16,565	2,142	1,061	1,081
1981	1,867	2,775	45	2,730	925	2,709	117	2,592	16,341	2,235	1,133	1,102
1982	1,512	2,514	25	2,488	627	1,284	93	1,191	13,335	2,484	1,399	1,085
1983	1,589	2,590	47	2,543	429	2,039	79	1,960	14,311	2,752	1,552	1,200
1984	1,849	2,831	34	2,796	622	2,089	95	1,994	16,984	3,066	1,874	1,192
1985	1,785	2,618	35	2,582	644	1,589	76	1,513	17,163	3,391	1,934	1,457
1986	1,915	2,682	22	2,660	347	1,156	61	1,095	17,779	3,868	2,012	1,856
1987	2,012	3,013	21	2,992	285	1,358	105	1,252	17,248	4,017	2,218	1,799
1988	2,188	3,392	40	3,351	583	2,473	135	2,337	17,368	4,231	2,497	1,734
1989	2,256	3,771	31	3,740	978	3,078	123	2,955	16,943	5,105	2,841	2,264
1990	2,555	4,117	59	4,058	1,869	2,724	105	2,619	17,906	5,791	3,216	2,575
1991	2,553	4,389	60	4,329	1,367	3,152	88	3,064	17,490	5,957	3,423	2,534
1992	2,565	4,749	70	4,679	1,460	4,112	194	3,917	18,103	6,504	4,170	2,334
1993	2,577	5,224	101	5,123	1,391	4,028	221	3,807	18,116	7,514	4,790	2,724
1994	2,881	5,491	105	5,386	1,507	5,049	298	4,751	19,539	8,404	5,458	2,946
1995	2,970	5,774	137	5,637	965	4,008	296	3,712	21,233	9,787	5,827	3,960
1996	3,021	6,030	55	5,975	1,436	6,157	432	5,725	22,676	11,356	7,062	4,294
1997	3,514	6,805	126	6,678	1,498	5,870	300	5,570	25,316	11,923	7,693	4,230
1998	3,610	7,076	131	6,945	1,414	6,746	388	6,358	25,408	13,009	8,073	4,937
Period Averages												
1984-88	1,950	2,907	31	2,876	496	1,733	95	1,638	17,308	3,715	2,107	1,608
1989-93	2,501	4,450	64	4,386	1,413	3,418	146	3,272	17,711	6,174	3,688	2,486
1994-98	3,199	6,235	111	6,125	1,364	5,566	343	5,223	22,835	10,896	6,822	4,073

ROW = rest of world

MEXICAN AGRICULTURAL TRADE UNDER NAFTA: AN ASSESSMENT AFTER FIVE YEARS OF IMPLEMENTATION

Andrés Rosenzweig Pichardo

INTRODUCTION

This paper analyses the potential of the rural sector in generating foreign exchange, identifies those sectors with higher export potential, describes the evolution of exports and imports of the main agricultural subsectors, and provides some evidence on structural changes in the composition of trade and the impact of trade liberalization in production and investment. Some highlights are provided on whether the changes in the trade pattern are due to the implementation of the NAFTA, the generation of new technologies and product innovation, population and income growth, or shifts in consumption patterns. The period considered is 1990-1998, since large-scale trade liberalization measures were adopted prior to the implementation on the NAFTA. The effects of the agreement will, of course, be emphasized.

MANAGING DATA BASES ON MEXICAN TRADE FLOWS

The analysis is based on official Mexican sources: Banco de México (BANXICO), and the Sistema de Información Comercial de México (SICM), operated by the Ministry for Foreign Trade (SECOFI). BANXICO releases trade data with a lag of less than 3 months and therefore is widely used. Regarding

the agri-food[1] sector, BANXICO provides information on imports and exports under the following headings:

- *Agriculture and Livestock*
- *Processed Food and Beverages.*

The level of disaggregation on a product basis is not large for both headings. The classification of a specific product under each heading follows international conventions, but for the specific purpose of economic analysis of the rural sector there are strong arguments to move some products from one heading to the other. For example, live animals are considered under the first category, but fresh or refrigerated meat cuts belong to the second. It seems that the value added of slaughtering an animal is not high enough to consider meat cuts and carcasses as processed food. Milk powder is considered as processed food, but in the context of the Mexican market, milk powder is a close substitute for fluid milk.

SAGAR and SECOFI are in the process of adjusting the methodology of BANXICO for their own purposes. This review also incorporates products that are treated by BANXICO as industrial products, but are included in the Agricultural Chapter of NAFTA and the WTO. The tariff lines that were classified under each heading are presented in the Appendix. All the analysis for this paper uses the adjusted methodology.

The SICM provides exports and imports for each tariff line, following the *Harmonized Nomenclature System*. The lag in release of SICM is around four months. Each user must arrange the database according to specific needs, a process that might be extremely time consuming. Based on SICM, SAGAR has developed a very simple framework that allows time series for exports, imports and the trade balance for sectors of particular interest to be generated automatically. These sectors are:

- Agriculture
- Livestock
- Processed Food, Beverages and Tobacco (divided into processed agricultural products and processed livestock products).

[1] In this paper the term agri-food includes agriculture, livestock, processed food and beverages and tobacco.

For each tariff line specific codes are allocated. One code identifies the sector to which each tariff line belongs (agriculture, livestock, processed agricultural products or processed livestock products). Each *sector* is divided in different *categories* (e.g. within agriculture, cereals, oilseeds, fruits, and vegetables, among others) and an additional code is included for each tariff line. In additional, within each category, *specific products* of interest are singled out through another code (e.g. regarding cereals, corn, wheat, rice, and oats, among others). Finally, due to the importance of specific products or group of products (e.g. for vegetable oils, sugar containing products, juices, processed meat, dairy products, alcoholic beverages, etc) another code is included.

This extremely simple program is useful to generate quickly time series for the trade balance, imports and exports at different levels: sectors, categories of products within each sector, and specific products. For example, one might be interested in generating the overall livestock sector balance. One might be further interested in disaggregating the livestock sector balance in bovine, pork and poultry. A more precise analysis of the poultry sector would require disaggregating live chickens, poultry meat, and poultry offal.

It is important to notice that this database contains annual trade information from 1990 to1998, in volume and value. Due to changes in the Mexican Import and Export Tariff Nomenclature (Tarifa del Impuesto General de Importaciones y Exportaciones) in several tariff code levels, it was necessary to reallocate the trade figures from some derogated tariff code lines to the new codes where they belong. This database and the relevant codes for operating it will be available in the Web Site of SAGAR soon.

THE PERFORMANCE OF TRADE DURING THE NINETIES

During the period 1990-98 total agri-food exports to NAFTA partners jumped from 2.6 billion U.S. dollars to 5.6 billion U.S. dollars (an average rate of growth of 9.9 percent). On the other hand, total agri-food imports from NAFTA partners amounted 2.9 billion dollars in 1990 and 7.2 billion in 1998 (an average rate of growth of 12.0 percent). The implementation of NAFTA strengthened the increasing trend of exports. During the period 1993-98 the average rate of growth of total agri-food exports to NAFTA partners was 11.6

Table 1: Agri-food Trade Balance Mexico, United States and Canada (Million dollars).

ISSUE/YEAR	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*ARG[1] 90-98*	*ARG[1] 93-98*
Agriculture and Livestock Trade Balance[2]	**107**	**90**	**(613)**	**(250)**	**(1,001)**	**951**	**(1,313)**	**(732)**	**(951)**	**-**	**-**
Exports	2,103	2,240	2,103	2,483	2,559	3,620	3,174	3,400	3,704	7.3	8.3
Imports	1,996	2,150	2,716	2,733	3,560	2,669	4,488	4,132	4,655	11.2	11.2
Processed Food, Beverages and Tobacco Trade Balance[3]	**(395)**	**(403)**	**(797)**	**(934)**	**(1,135)**	**(423)**	**(317)**	**(465)**	**(672)**	**-**	**-**
Exports	523	586	612	750	890	1,103	1,423	1,577	1,883	17.4	20.2
Imports	919	989	1,409	1,685	2,024	1,526	1,740	2,042	2,555	13.6	8.7
Agri-food Trade Balance[4]	**(289)**	**(314)**	**(1,410)**	**(1,185)**	**(2,135)**	**528**	**(1,630)**	**(1,197)**	**(1,623)**	-	-
Exports	2,626	2,826	2,715	3,233	3,449	4,723	4,597	4,977	5,587	9.9	11.6
Imports	2,915	3,140	4,125	4,418	5,584	4,195	6,228	6,173	7,210	12.0	10.3
Total Agri-food Trade in NAFTA	**5,541**	**5,966**	**6,840**	**7,651**	**9,033**	**8,918**	**10,825**	**11,150**	**12,797**	**11.0**	**10.8**

Source: SECOFI

[1] ARG = Average Rate of Growth.

[2] Elaborated with chapters 1 to 10, 12 and 14, and subheadings 1801, 240110, 4101 to 4103, 5001to 5003, 520100, 530110 and 530210. It excludes chapter 3 and the subheadings of the fishing sector, birds and sea mammals and products thereof, from the Mexican General Tariffs of Imports and Exports.

[3] Elaborated with chapters 11, 13 and 15 to 24, subheadings 120810, 120890, 121410, 290543, 290544, 3301, 3501 to 3505, 380910, 382460, 4301, 510130, 510310 to 510330, 5201 to 5203, 5301 and 5302. It excludes fishing products, cocoa beans, tobacco leaves, cotton, raw linen and hemp.

[4] Elaborated with chapters 1 to 24, subheadings 290543, 290544, 3301, 3501 to 3505, 380910, 382460, 4101 to 4103, 4301, 5001 to 5003, 5101 to 5103, 5201 to 5203, 5301 and 5302. It excludes chapter 3 and the subheadings of the fishing sector, birds and sea mammals and products thereof, from the Mexican General Tariffs of Imports and Exports.

percent (1.7 percentage points higher than the figure for 1990-98). The average rate of growth of total agri-food imports during 1993-98 was 10.3 percent (1.7 percentage points lower than the figure for 1990-98).

The upward trend in trade during the nineties was reinforced by NAFTA. During the period of implementation of the Agreement, Mexican exports had a greater rate of growth than imports. The real exchange rate certainly played a role in this performance, but it also seems evident that consumers in Canada and the U.S. are increasingly concerned with quality and food safety, that prices play a diminishing role in consumer choices for some food products (price elasticity of the demand for food probably has decreased), and that Mexican exporters are reliable suppliers and are creating or consolidating a reputation.

The total agri-food trade deficit between Mexico and NAFTA partners shows an increase in absolute terms. During the period 1990-92 the average deficit was 671 million dollars, and 1.5 billion for 1996-98. However, the overall trade deficit in agriculture and livestock as a percentage of the value of agriculture and livestock production has declined, from 3.1 percent in 1998 to 1.6 percent on average during 1994-98. According to FAO, a country with a ratio of less than 25 percent of agri-food imports to total exports is sound in terms of food security. This ratio was 7.8 percent on average during the period 1994-98, whereas it was 12.7 percent during the period 1989-93. The author believes that food security as a policy goal goes well beyond economic considerations since political issues seem to play a larger role.

The performance of the primary sector (agriculture and livestock) in terms of trade and production has not been as good as the processed food and beverages sector. In fact, according to INEGI, the GDP for the primary sector (agriculture, livestock, forestry and fisheries) showed an average rate of growth of 1.2 percent during the period 1993-1998; the corresponding figure for the processed food, beverages and tobacco sector was 3.2 percent. The share of agriculture and livestock deficit in the total agri-food deficit increased from 20.7 percent on average in 1990-92, to 67.3 percent in 1996-98. The share of processed food and beverages deficit in the total agri-food deficit was 79.2 percent on average in 1990-92 and dropped sharply to 32.7 percent on average in 1996-98.

The rate of growth of processed food and beverages was enhanced by foreign direct investment (FDI) in an accumulated amount of 6.4 billion dollars during 1994-1998, whereas FDI in the primary sector has been minimal (an accumulated amount of 87.4 million over the same period). The share of NAFTA countries in FDI in agri-food was 50.2 percent over the period.

Table 2 shows the trade balance for agricultural products only (excluding livestock). Surprisingly Mexico had a surplus with the NAFTA partners of 276 millions in 1998. The deficit in cereals, oilseed, forages, tubers and dried vegetables is more than compensated through a surplus in vegetables, fruits and industrial products (especially coffee and tobacco).

For the period 1996-98 an average deficit of 1.12 billion dollars is registered in the group of cereals, of which 55 percent corresponds to corn and 31 percent to wheat. Corn is the basic foodstaple for the Mexican population. Domestic production is enough to cover human demand. Nevertheless, in the period 1996-1998 the country imported an average 4.5 million tons, 64 percent higher than the NAFTA quotas negotiated for that period. This situation is due to the growth in demand for grains by the livestock sector (especially pork and poultry), and the expansion of other maize processing industries (maize-flour, starch, and fructose, among others).

Regarding oilseeds, production fell sharply in 1995 due to disasters in the Northwest. Efforts are being made to recover production levels in areas with competitive advantage, and to diversify the structure of production of oilseeds. The vegetable oil industry is stimulating the production of soybeans, safflower in the Northeast, and palm oil plantations in the Southeast.

In 1996, Mexico reached a record harvest on basic crops production (31.2 million tons), mainly due to the increase in the production of sorghum (63.3 percent higher than the year before), and in a lesser extend, increased barley and bean production. The fruits and vegetable sector is spread over only 7 percent of agricultural land, but contributes around 15 to 20 percent of the total value of agricultural production. Production of vegetables increased 48.5 percent between 1993 and 1998, and the production of fruit grew 10.6 percent over the same period. Since the intensity of labor is 10 times higher in veg-

Table 2: Agriculture Trade Balance Mexico, United States and Canada (Thousand dollars).

ISSUE/YEAR	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*
Trade Balance	**363,695**	**671,510**	**87,071**	**283,242**	**(130,311)**	**1,051,429**	**(594,043)**	**305,342**	**275,966**
Cereals	(60,567)	(203,125)	(236,736)	(348,771)	(615,185)	(635,988)	(1,564,942)	(773,653)	(1,041,353)
Oilseeds	(208,306)	(344,691)	(541,582)	(595,875)	(714,458)	(687,309)	(1,098,106)	(1,172,907)	(1,034,386)
Vegetables	922,991	821,455	811,393	1,121,827	1,143,190	1,599,243	1,474,444	1,535,676	1,849,026
Fruits	226,411	389,793	314,545	267,989	218,699	418,562	424,869	390,433	501,598
Dried Vegetables	(125,391)	(2,142)	23,646	11,651	(21,432)	24,651	(47,013)	(24,142)	(93,317)
Tubers	(3,332)	(3,614)	(2,639)	(8,267)	(10,499)	(7,033)	(7,518)	(10,089)	(10,880)
Forages	(336,899)	(364,615)	(543,632)	(394,949)	(414,204)	(266,748)	(330,033)	(278,833)	(357,825)
Industrial products	382,168	414,011	292,925	281,304	335,387	650,756	614,133	700,600	538,438
Flowers	14,492	14,141	21,900	2,552	534	5,611	6,630	4,563	8,123
Other agricultural products	(47,871)	(49,701)	(52,748)	(54,217)	(52,343)	(50,316)	(66,507)	(66,307)	(83,457)

Table 3: Basic Crop Production (Thousand of tons).

PRODUCT	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*ARG 1990-98*	*ARG 1993-98*
Maise	14,635.4	14,251.5	16,929.3	18,125.3	18,235.8	18,352.9	18,026.0	17,656.3	18,454.7	2.9	0.4
Beans	1,287.4	1,378.5	718.6	1,287.6	1,364.2	1,270.9	1,349.1	965.1	1,260.7	-0.3	-0.4
Wheat	3,930.9	4,060.7	3,620.5	3,582.5	4,150.9	3,468.2	3,375.0	3,656.6	3,235.1	-2.4	-2.0
Rice	394.4	347.2	394.0	287.2	373.6	367.0	394.1	469.5	458.1	1.9	9.8
Soybeans	575.4	725.0	593.5	497.6	522.6	189.8	56.1	184.5	150.3	-15.4	-21.3
Sesame	59.9	37.0	22.8	22.6	8.9	21.1	47.4	21.5	31.7	-7.7	6.9
Cotton Seed	293.3	307.3	50.4	41.8	187.1	343.9	420.9	347.7	388.0	3.6	56.1
Safflower	159.4	88.2	41.0	63.9	63.9	113.3	181.6	163.4	171.2	0.9	21.8
Sorghum	5,978.2	4,307.8	5,353.2	2,581.1	3,701.1	4,169.9	6,809.5	5,711.6	6,474.8	1.0	20.2
Barley	491.9	580.2	550.0	540.5	307.3	486.6	585.8	470.7	410.8	-2.2	-5.3
Total	**27,806.2**	**26,083.4**	**28,273.4**	**27,030.0**	**28,915.4**	**28,783.5**	**31,245.3**	**29,646.7**	**31,035.3**	**1.4**	**2.8**

Source: Centro de Estadística Agropecuaria, SAGAR.

Table 4: Fruit and Vegetable Prouduction (Thousand of tons)

Product	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*ARG 90-98*	*ARG 93-98*
Oranges	2,220.3	2,369.5	2,541.5	2,913.7	3,191.1	3,571.5	3,984.6	3,943.9	3,329.2	5.2	2.7
Bananas	1,986.4	1,889.3	2,095.4	2,206.9	2,295.5	2,032.7	2,209.6	1,714.5	1,556.6	-3.0	-6.7
Mangoes	1,074.4	1,117.9	1,075.9	1,151.2	1,117.9	1,342.1	1,190.0	1,501.4	1,504.2	4.3	5.5
Limes	685.4	716.5	777.5	725.2	813.3	947.5	1,089.2	1,095.6	1,211.5	7.4	10.8
Apples	456.5	527.4	598.2	537.8	487.7	413.2	426.7	629.3	374.3	-2.5	-7.0
Melons	523.2	645.3	495.7	394.2	446.7	424.0	472.0	590.2	572.7	1.1	7.8
Watermelons	404.1	392.7	499.0	387.6	428.0	484.8	533.6	709.6	649.9	6.1	10.9
Avocados	686.3	780.4	724.5	709.3	799.9	790.1	837.8	762.3	813.9	2.2	2.8
Grapes	428.9	529.6	522.0	466.6	536.9	475.9	408.3	473.3	482.0	1.5	0.7
Tomatoes	1,885.3	1,860.4	1,413.3	1,692.7	1,368.3	1,935.5	1,993.7	1,919.3	2,236.9	2.2	5.7
Green peppers	850.9	921.1	1,275.7	1,219.3	987.5	1,187.4	1,206.1	1,832.1	1,660.3	8.7	6.4
Onions	770.6	810.0	674.4	662.1	667.7	662.2	702.5	814.5	892.0	1.8	6.1
Potatoes	1,285.8	1,211.1	1,212.9	1,133.7	1,167.2	1,269.1	1,282.4	1,316.5	1,272.2	-0.1	2.3
Carrots	198.5	213.3	239.6	264.7	191.8	199.6	219.5	306.8	287.6	4.7	1.7
TOTAL	**13,456.6**	**13,984.4**	**14,145.7**	**14,464.7**	**14,499.4**	**15,735.5**	**16,556.0**	**17,609.3**	**16,843.2**	**2.8**	**3.1**

Source: Centro de Estadística Agropecuaria, SAGAR

Table 5: Main Agricultural Exports to the United States (Thousand of dollars).

Products	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*Growth % 93-98*	*No. Supplier 1993*	*1998*
Asparagus	41	39	69	80	11	143	249	1	1
Garlic	15	8	18	32	25	48	220	2	1
Peppers	163	161	221	176	254	299	83	1	1
Cucumbers	85	137	150	129	108	149	75	1	1
Fresh tomatoes	394	394	583	538	521	636	61	1	1
Limes	32	33	32	36	39	41	28	1	1
Vegetables	115	128	129	133	144	139	21	1	1
Mangoes	106	100	99	127	120	124	17	1	1
Onions	119	138	147	151	134	139	17	1	1
Grapes	36	36	65	52	69	94	161	2	2
Avocados	0	0	0	0	13	23	—	0	2
Dried Vegetables	8	6	7	9	13	13	63	5	3

Source: SECOFI with figures of USDOC

etables than in grains, the sector plays a key role in generating agricultural employment.

The average rate of growth of exports of vegetables to NAFTA countries was 10.2 percent during 1993-98, while exports of fruit increased at an annual rate of 10.5 percent over the same period. Main export products are tomatoes, bell peppers, onions, broccoli, cucumbers, squashes, limes, melons, watermelon, avocados, grapes, bananas, mangoes, grapefruits, etc. It is worth recalling that the United States has increased its exports of vegetables to Mexico during the summer. U.S. exports of apples have performed also dynamically. As a result, the domestic level of production of apples has actually decreased over the period. In fruits and vegetables, Mexico has become or maintained its position as the main supplier for the U.S. market for several relevant products.

NAFTA has opened new markets for Mexican products that didn't have an important market share in the United States. For example, for the period 1993-98 the exports to the United States of asparagus grew 249 percent, grapes 161 percent and strawberries 123 percent, among others.

Table 6 shows a deficit with NAFTA partners in livestock products. More than half of this deficit is explained by cattle and beef products. The

poultry sector ranks second in the contribution to this deficit, followed by pork and milk products.

The bovine sector has suffered from competition of NAFTA partners, and from severe droughts in 1995 and 1996. Nevertheless, meat production has grown on average at a rate of 1.9 percent (carcass weight equivalent) during 1993-98. Modernization of production units is occurring through the improvement of genetics and better practices for management of grasslands. Still, many units have been unable to survive, especially in the grain-fed sector. Before 1995, Mexico exported an average of 1.2 million live animals, but that declined to 458 thousand head in 1996. Since then, Mexican exports have recovered to 714 thousand heads in 1988. This recovery was helped by special programs to recover the herd level that existed before the droughts.

The poultry sector shows a completely different performance. Production has grown on average at a rate of 8.9 percent during 1993-98, even though the trade deficit (in carcass weight equivalents) has increased. Large investments, both domestically and foreign sourced, with state- of-the-art technologies have been made during the period. Sanitary campaigns during the last years eradicated diseases in many areas of the country. In the context of NAFTA rules and disciplines, it is foreseeable in the short run that disease free areas will be recognized by the United States and Canada. The integration of the poultry sector among NAFTA partners will be enhanced by different consumption patterns, since price differentials for chicken, legs, breasts, quads, wings and offal are large. Mexico is currently exporting poultry meat to markets with high quality and safety standards, such as Hong Kong and Japan.

The pork sector has increased production at an average rate of growth of 3.2 percent (carcass weight equivalent) during the period 1993-98. It is foreseeable that domestic demand will remain as the most important factor of dynamism in this sector, since NAFTA countries are net exporters. The United States has already recognized the State of Sonora as a free disease area, and other States are in the process of gaining that status under the rules of the SPS Agreement of NAFTA. Mexico is currently exporting pork to markets with high quality and safety standards, such as the United States and Japan. For the period 1996-98 Mexico’s total average pork exports reached 102.7 million

dollars (73.9 percent to the United States, 16 percent to Japan, and 10.1 percent other countries).

The production of fresh milk grew at an average rate of growth of 3.8 percent during 1990-1998 (2.2 percent for 1993-1998). On a macroeconomic level, the performance of this sector was triggered by a gradual process of elimination of controls on consumer prices for fluid milk that ended in 1996. Since 1995, support to producers was used to enhance productivity through technological transfer, genetic improvement, mechanization, development of prairies, and the reinforcement of sanitary and inspection services. Most milk producers operate under cooperative schemes that allow vertical integration with the pasteurization plants. Under the provisions of the Mexican Law on Standards (Ley de Metrología y Normalización), producer organizations have been active in assuring the enforcement of standard and labeling regulations to improve consumer information.

The United States is the third largest supplier of milk powder to the Mexican market, after the EU and New Zealand. Since 1998 imports of skimmed milk powder from the United States have increased market share, reflecting the recovery of surpluses of milk after the droughts in 1995 and 1996, and a higher degree of integration between the dairy sector in both countries.

Table 8 summarizes processed agricultural products. Animal feeding preparations, vegetable oils, and canned food show a deficit which is largely compensated by a surplus in alcoholic beverages (mainly beer and tequila), and to a lesser extent, by a surplus in juices and sugar containing products. Exports of beer are concentrated in only two firms, while exports of juices come from about eight firms. In preparations of fruits and vegetables, the figures show basically a balanced trade.

Table 9 presents data on the main processed livestock products. As is the case in primary livestock products, Mexico also shows a deficit with its NAFTA partners in these products. Almost one fourth of the deficit is due to processed dairy products, and 45 percent is generated by imports of animal oils and fats (products with low consumer acceptance in the United States but widely used in Mexico). The dairy processing industry showed an average rate of growth

Table 6: Livestock Trade Balance Mexico, United States and Canada (Thousands dollars).

	1990	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*
Trade Balance	**(257,175)**	**(581,939)**	**(700,055)**	**(533,502)**	**(870,423)**	**(100,289)**	**(719,422)**	**(1,037,306)**	**(1,227,184)**
Bovine	70,342	(227,199)	(314,168)	45,653	(238,690)	322,777	(303,290)	(542,527)	(633,724)
Pig	(134,134)	(184,809)	(182,512)	(162,899)	(205,151)	(70,782)	(75,118)	(97,190)	(136,930)
Poultry	(7,687)	(11,736)	(11,010)	(180,797)	(221,463)	(186,378)	(221,789)	(256,647)	(249,734)
Ovine	(23,713)	(33,662)	(35,322)	(28,514)	(26,657)	(10,111)	(9,359)	(10,458)	(10,464)
Goat	(5,300)	(3,063)	(2,309)	(1,743)	(1,971)	(711)	(2,104)	(1,848)	(2,300)
Dairy (milk)	(116,119)	(77,393)	(109,029)	(161,182)	(127,760)	(129,957)	(74,881)	(70,836)	(115,336)
Eggs	(6,679)	(7,920)	(10,669)	(12,705)	(15,303)	(11,766)	(16,140)	(24,966)	(36,742)
Honey	6,153	3,279	2,085	2,330	2,392	2,815	11,100	11,334	4,686
Other livestock products	(40,039)	(39,435)	(37,120)	(33,645)	(35,820)	(16,174)	(27,842)	(44,167)	(46,641)

Source: SECOFI

Table 7: Livestock Production (Thousand of tons).

Product	*1990*	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*	*ARG 90-98*	*ARG 93-98*
Carcass Meat	2,704.4	2,945.1	3,059.6	3,206.3	3,451.0	3,704.9	3,589.5	3,805.7	4,028.7	5.1	4.7
Bovine	1,113.9	1,188.7	1,247.2	1,256.5	1,364.7	1,412.3	1,329.9	1,340.1	1,379.8	2.7	1.9
Swine	757.4	811.9	819.8	821.6	872.9	921.6	910.3	939.2	960.7	3.0	3.2
Poultry	772.3	878.9	921.8	1,058.0	1,144.4	1,303.4	1,284.0	1,460.9	1,619.5	9.7	8.9
Ovine	24.7	26.3	27.9	28.7	30.3	29.9	29.4	30.2	30.5	2.7	1.2
Goat	36.1	39.3	42.9	41.5	38.7	37.7	35.9	35.3	38.2	0.7	-1.6
Milk[1]	6,265.9	6,847.8	7,114.1	7,555.2	7,461.5	7,537.6	7,709.3	7,968.6	8,442.0	3.8	2.2
Eggs	1,009.8	1,141.4	1,161.3	1,233.6	1,246.2	1,242.0	1,235.9	1,328.9	1,461.2	4.7	3.4
Honey	66.5	69.5	63.9	62.0	56.4	49.2	49.2	53.7	56.1	-2.1	-2.0

Source: Centro de Estadística Agropecuaria, SAGAR.

[1] Millions of liters. Includes bovine and goat milk.

Table 8: Agricultural Processed Products Trade Balance (Thousands dollars).

	1990	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*
Trade Balance	**(226,933)**	**(178,080)**	**(474,347)**	**(538,537)**	**(679,996)**	**(66,864)**	**(9,985)**	**(110,234)**	**(260,031)**
Animal feeding preparations	(112,162)	(152,016)	(221,524)	(184,045)	(249,108)	(166,805)	(179,194)	(165,699)	(213,954)
Vegetable oils	(139,884)	(46,811)	(58,352)	(87,403)	(95,819)	(186,558)	(128,918)	(170,015)	(252,709)
Alcoholic beverages	189,562	184,782	202,771	233,560	273,917	348,584	424,203	554,948	730,157
Preparations of fruit, vegetables or other parts of plants	41,816	72,672	38,295	43,972	24,251	82,898	26,173	17,312	(15,734)
Sugar containing products	(37,735)	(60,595)	(79,520)	(88,180)	(81,829)	16,556	44,647	73,124	71,907
Juices	103,253	58,912	19,834	25,723	47,182	86,793	89,639	80,609	112,165
Other agricultural preparations	(271,784)	(235,025)	(375,852)	(482,164)	(598,590)	(248,331)	(286,535)	(500,513)	(691,863)

Source: SECOFI

Table 9: Livestock Processed Products Trade Balance by Cluster (Thousands dollars).

	1990	*1991*	*1992*	*1993*	*1994*	*1995*	*1996*	*1997*	*1998*
Trade Balance	**(168,317)**	**(225,185)**	**(322,311)**	**(395,909)**	**(454,527)**	**(356,075)**	**(307,828)**	**(354,314)**	**(411,502)**
Preparations of livestock products	(2,645)	2,381	(9,138)	(14,091)	(14,669)	(6,041)	(3,172)	(6,389)	(4,603)
Dairy products	(60,049)	(85,677)	(138,956)	(157,969)	(178,062)	(124,872)	(72,992)	(88,970)	(102,484)
Preparations of animal meat	(23,018)	(44,423)	(70,918)	(92,067)	(106,038)	(48,932)	(39,849)	(52,046)	(56,733)
Oils and fats	(65,633)	(79,168)	(78,710)	(106,454)	(126,684)	(148,286)	(149,557)	(155,326)	(185,611)
Other livestock preparations	(16,972)	(18,298)	(24,590)	(25,329)	(29,075)	(27,945)	(42,259)	(51,583)	(62,071)

Source: SECOFI

of 4.9 percent in the period 1994-98. Multinationals play a key role in this market, and are developing new products targeted for different strata of consumers. On the other hand, technological change poses a challenge, since new formulas for the manufacturing of several dairy products have been developed in order to reduce costs. These formulas include whey concentrates, proteins and fats of vegetable origin, mixers and blenders, among other ingredients. These technologies have allowed development of products targeted to low income consumers and are substituting fresh milk and milk powder. Therefore it will be necessary for milk producers and processors in Mexico to develop new strategies to be able to compete in a fast changing business environment.

CONCENTRATION OF MEXICAN AGRICULTURAL TRADE WITH NAFTA PARTNERS

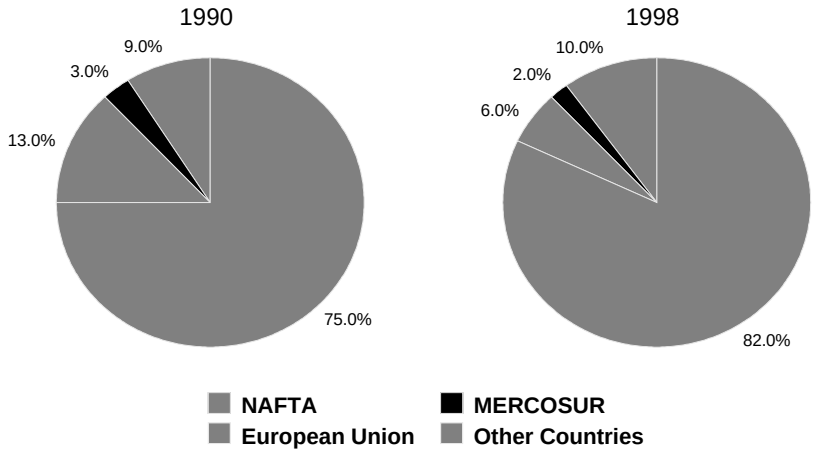
Mexican trade in agriculture, livestock, and processed food and beverages, is heavily concentrated in the NAFTA area. The share of total trade in agri-food with NAFTA partners amounted to 75 percent in 1990 and increased to 82 percent in 1998. The share of the European Union dropped from 13 percent to 6 percent during the same period. Given the terms of the negotiation in agricultural products between Mexico and the EU, it might be expected that the great bulk of imports from NAFTA countries will not be displaced, and that Mexican exports to the EU might increase significantly.

CONCLUDING REMARKS

The underlying hypothesis during the NAFTA negotiations in agriculture was that Mexico, the United States and Canada are complementary at a large extent in overall agricultural production. The evidence after five years of implementation seems to confirm that.

For most sectors in which the trade deficit has increased, domestic production has also increased. In this context, domestic support programs implemented by the Mexican government should not be neglected. Upon implementation of NAFTA, the instruments to support agriculture changed drastically. Guaranteed prices were substituted for direct payments. This

Figure 1: Share of Main Trading Parters in Mexican Agri-Food Trade.



occurred mainly through PROCAMPO, and since 1995, a program known as Alianza para el Campo has fostered competitiveness through the adoption of modern technologies, an efficient use of resources, training in production practices and marketing, and phytosanitary campaigns, among other instruments. Interested readers in recent developments in agricultural policies may consult The Monitoring Outlook of the OECD.

Upon full implementation of the NAFTA, the Trade Agreement with the EU and other preferential trade agreements with several Latin American countries, the real constraint for the expansion of exports of Mexican agri-food will be the country's capacity to overcome structural problems such as infrastructure, technology, the degree of producer organization, lack of knowledge of foreign markets, excessive land fragmentation, and last but not least, the rather low degree of vertical integration between the producer of primary products and food processors.

APPENDIX

AGRICULTURAL SUBSECTOR CLASSIFICATION

Subsector	Chapter	Subchapter	Description
	Cereals		
A	1	1	Maize “corn”
A	1	2	Rice
A	1	3	Wheat
A	1	4	Other cereals
	Oilseeds		
A	2	1	Soya beans
A	2	2	Safflower seeds
A	2	3	Sesame seeds
A	2	4	Chestnuts (peanuts)
A	2	5	Other seeds and oilseed fruits, whether or not crushed
	Vegetables		
A	3	1	Onions
A	3	2	Peas
A	3	3	Cauliflower and broccoli cut, fresh or chilled
A	3	4	Cucumbers and gherkins, fresh or chilled
A	3	5	Tomatoes
A	3	6	Asparagus
A	3	7	Carrots and swedes, fresh or chilled
A	3	8	Peppers
A	3	9	Other vegetables; mixtures of vegetables, dried, cut in pieces or in slices, crushed or powdered
	Fruits		
A	4	1	Fresh avocados
A	4	2	Peaches, including nectarines
A	4	3	Fresh Strawberries
A	4	4	Fresh guavas, mangoes and mangosteens
A	4	5	Lemons and limes
A	4	6	Mandarins (including tangerines and satsumas); clementines, wilkings and similar citrus hybrids
A	4	7	Apples
A	4	8	Pears and quinces
A	4	9	Watermelons, melons and papaws
A	4	10	Fresh or dried oranges
A	4	11	Nuts and other shelled fruits, fresh or dried, whether or not shelled or peeled
A	4	12	Fresh pineapples
A	4	13	Fresh or dried bananas
A	4	14	Fresh grapes
A	4	15	Other fresh fruits

Subsector	Chapter	Subchapter	Description
	Dried Vegetables		
A	5	1	Beans (Vigna spp., Phaseolus spp)
A	5	2	Dried, shelled chickpeas, whether or not skinned or split
A	5	3	Broad beans (Vicia faba var. Major), horse beans (Vicia faba var. Equine and Vicia faba var. Minor)
A	5	4	Dried, shelled lentils, whether or not skinned or split
A	5	5	Other beans, dried, shelled, whether or not skinned or split
	Tubers		
A	6	1	Seeds potatoes
A	6	2	Yams
A	6	3	Other roots and tubers with high starch or inulin content, fresh or dried, whether or not sliced or in the form of “pellets”; sago pith
	Forages		
A	7	1	Sorghum
A	7	2	Other forages (swedes, mangolds, fodder roots, hay, alfalfa, clover, sainfoin, forage kale, altramuces, vetches and similar forage products, whether or not in the form of ‘pellets”)
	Industrial products		
A	8	5	Barley
A	8	1	Coffee
A	8	2	Sugar
A	8	3	Tobacco
A	8	4	Cocoa
A	8	6	Other industrial crops
	Flowers		
A	9	1	Bulbs, corms, tubers, tuberous roots, crowns and rhizomes, in growth or in flower
A	9	2	Unrooted vine cuttings and slips and other parts of plants for growth, unrooted, and grafted cacti
A	9	3	Cut flowers and buds, for bouquets or for ornamental purposes, dyed, bleached, impregnated or otherwise prepared
A	9	4	Foliage, branches and other parts of plants, without flowers or flower buds, grasses, fresh, for bouquets or ornamental purposes, dyed, bleached, impregnated or otherwise prepared
	Other Crops		
A	99	1	Other crops

LIVESTOCK SUBSECTOR CLASSIFICATION

Subsector	Chapter	Subchapter	Description
	Bovine		
P	1	1	Live bovines
P	1	2	Carcasses or half-carcasses of bovine animals
P	1	3	Bovine meat
P	1	4	Bovine offal
	Swine		
P	2	1	Live swine
P	2	2	Carcasses or half-carcasses of swine animals
P	2	3	Swine meat
P	2	4	Swine offal
	Poultry		
P	3	1	Live fowls
P	3	2	Edible meat or meat offal of fowls, not cut in pieces
P	3	3	Pieces and meat offal of fowls
P	3	4	Other pieces and meat offal of fowls
	Ovine		
P	4	1	Live ovines
P	4	2	Carcasses or half-carcasses of ovine animals
P	4	3	Ovine meat
	Goat		
P	5	1	Live goats
P	5	2	Goat meat
	Dairy		
P	6	1	Milk and cream not concentrated, unsweetened, nor otherwise sweetened
P	6	2	Milk and cream concentrated, sweetened, or otherwise sweetened
P	6	3	Other milks and creams
	Egg		
P	7	1	Birds eggs, in shell, fresh, preserved or cooked
P	7	2	Birds eggs not in shell y egg yolks, fresh, dried, cooked by steaming or boiling in water, moulded, frozen or otherwise preserved, whether or not sweetened
	Honey		
P	8	1	Natural honey
	Other livestock		
P	99	1	Other live animals
P	99	2	Other (fresh, chilled or frozen animal meat)
P	99	3	Other animal meat offal

PROCESSED AGRICULTURAL SUBSECTOR CLASSIFICATION

Subsector	Chapter	Subchapter	Description
	Cereal derivatives		
A1	1	1	Of maize “corn”
A1	1	2	Of rice
A1	1	3	Of wheat
A1	1	4	Of other cereals
	Oilseed derivatives		
A1	2	1	Of soya beans
A1	2	2	Of safflower seeds
A1	2	3	Of sesame seeds
A1	2	4	Of chestnuts (peanuts)
A1	2	5	Of other seeds and oilseed fruits, whether or not crushed
	Vegetable derivatives		
A1	3	1	Of onions
A1	3	2	Of peas
A1	3	3	Of cauliflower and broccoli cut, fresh or chilled
A1	3	4	Of cucumbers and gherkins, fresh or chilled
A1	3	5	Of tomatoes
A1	3	6	Of asparagus
A1	3	7	Of carrots and swedes, fresh or chilled
A1	3	8	Of peppers
A1	3	9	Of other vegetables; mixtures of vegetables, dried, cut in pieces or in slices, crushed or powdered
	Fruit derivatives		
A1	4	1	Of fresh avocados
A1	4	2	Of peaches, including nectarines
A1	4	3	Of fresh Strawberries
A1	4	4	Of fresh guavas, mangoes and mangosteens
A1	4	5	Of lemons and limes
A1	4	6	Of mandarins (including tangerines and satsumas); clementines, wilkings and similar citrus hybrids
A1	4	7	Of apples
A1	4	8	Of pears and quinces
A1	4	9	Of watermelons, melons and papaws
A1	4	10	Of fresh or dried oranges
A1	4	11	Of nuts and other shelled fruits, fresh or dried, whether or not shelled or peeled
A1	4	12	Of fresh pineapples
A1	4	13	Of fresh or dried bananas
A1	4	14	Of fresh grapes
A1	4	15	Of other fresh fruits

Subsector	Chapter	Subchapter	Description
	Dried vegetables derivatives		
A1	5	1	Of beans (Vigna spp., Phaseolus spp)
A1	5	2	Of dried, shelled chickpeas, whether or not skinned or split
A1	5	3	Of broad beans (Vicia faba var. Major), horse beans (Vicia faba var. Equine and Vicia faba var. Minor)
A1	5	4	Of dried, shelled lentils, whether or not skinned or split
A1	5	5	Of other beans, dried, shelled, whether or not skinned or split
	Tubers preparations		
A1	6	1	Of seeds potatoes
A1	6	2	Of yams
A1	6	3	Of other roots and tubers with high starch or inulin content, fresh or dried, whether or not sliced or in the form of “pellets”; sago pith
	Feed and Animal food		
A1	7	1	Of sorghum
A1	7	2	Of other forages
	Industrial crops derivatives		
A1	8	1	Of Coffee
A1	8	2	Of sugar
A1	8	3	Of tobacco
A1	8	4	Of cocoa
A1	8	5	Of barley
A1	8	5	Of other industrial crops
	Wines, spirituous and alcoholic beverages		
A1	9	1	Of wines
A1	9	2	Of other alcoholic beverages
	Other preparations based on agricultural raw materials		
A1	99	1	Of other preparations

PROCESSED LIVESTOCK SUBSECTOR CLASSIFICATION

Subsector	Chapter	Subchapter	Description
	Bovine derivatives		
P1	1	1	Of live bovines
P1	1	2	Of carcasses or half-carcasses of bovine animals
P1	1	3	Of bovine meat
P1	1	4	Of bovine offal
	Swine derivatives		
P1	2	1	Of live swine
P1	2	2	Of carcasses or half-carcasses of swine animals
P1	2	3	Of swine meat
P1	2	4	Of swine offal
	Poultry derivatives		
P1	3	1	Of live fowls
P1	3	2	Of edible meat or meat offal of fowls, not cut in pieces
P1	3	3	Of pieces and meat offal of fowls
P1	3	4	Of other pieces and meat offal of fowls
	Ovine derivatives		
P1	4	1	Of live ovines
P1	4	2	Of carcasses or half-carcasses of ovine animals
P1	4	3	Of ovine meat
	Poultry derivatives		
P1	5	1	Of live goats
P1	5	2	Of goat meat
	Dairy derivatives		
P1	6	1	Cheeses, yogurt, and other milkfat
	Other industrial preparations based on livestock products		
P1	99	1	Other preparations

A CANADIAN PERSPECTIVE ON NORTH AMERICAN AGRICULTURAL TRADE FLOWS (1988–98)

Brian Rattray

INTRODUCTION

This paper is designed to outline the Canadian perspective on North American agricultural trade flows. 1988, the year prior to the implementation of the Canada-U.S. Free Trade Agreement (CUSTA) was chosen to provide an indication of the size and composition of Canada/U.S. agricultural trade before the agreement came into effect. CUSTA was designed to foster increased trade and investment between Canada and the United States. The second agreement extending the free trade area to Mexico, the North American Free Trade Agreement (NAFTA) came into force in 1994. Its purpose was to increase trade and investment among the partners by eliminating tariffs and by reducing non-tariff barriers, as well as establishing comprehensive provisions on the conduct of business in the free trade area.

In 1988, the United States and Mexico supplied 55 percent (53.3% and 1.6% respectively) of total Canadian agricultural imports. By 1998, they supplied 64 percent (61.6% and 2.4% respectively), an increase of almost one percent per annum over the past 10 years. It is expected that growth in the share of total Canadian agricultural imports captured by the United States and Mexico will continue.

In this paper and each of the figures, all data are given in Canadian dollars and are derived from the Statistics Canada Merchandise Trade Database.

CANADA/U.S. AGRICULTURAL TRADE FLOWS

Canada/U.S. agricultural trade has continued to expand since 1988. Canadian imports from the United States increased from $ Cdn 4.0 billion in 1988 to $ Cdn 10.12 billion in 1998, or about 150 percent (Figure 1). During the same period, Canadian exports to the United States increased from $3.4 billion to $12.81 billion, or about 275 percent. Two-way agricultural trade between Canada and the United States reached $22.9 billion in 1998. The largest year-over-year increase in Canadian imports from the United States occurred between 1996 and 1997 when they increased 15 percent (from $7.9 billion to $9.1 billion). The largest year-over-year increase in Canadian exports to the United States occurred between 1991 and 1992 when they increased 31 percent (from $4.5 billion to $5.9 billion).

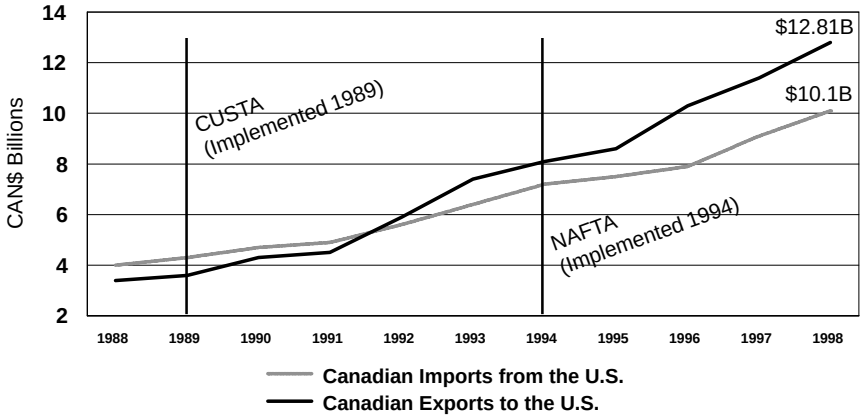
In general, since 1992 agricultural trade flow between Canada and the United States favours Canada, ie., there are more Canadian exports to the United States than Canadian imports from the United States.

CANADA/MEXICO AGRICULTURAL TRADE FLOWS

Although agricultural trade between Canada and Mexico is small relative to the trade between Canada and the United States, it is an increasing aspect of North American agricultural trade. Canadian imports from Mexico increased from $120 million in 1988 to $390 million in 1998, or about 225 percent (Figure 2). During the same period, Canadian exports to Mexico increased from $160 million to $ 580 million, or about 262 percent. Two-way agricultural trade between Canada and Mexico reached almost one billion dollars ($ 970 million) in 1998.

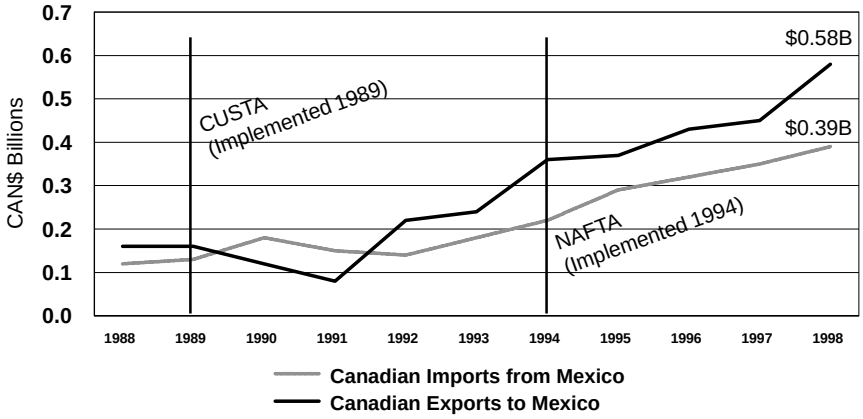
In general, since 1992 agricultural trade flow between Canada and Mexico favours Canada, i.e., there are more Canadian exports to Mexico than imports from Mexico. However, increasing the two-way trade between Canada

Figure 1: Canadian-U.S. Agricultural Trade Flows, 1988-1998.



Source: Statistics Canada Merchandise Trade Database

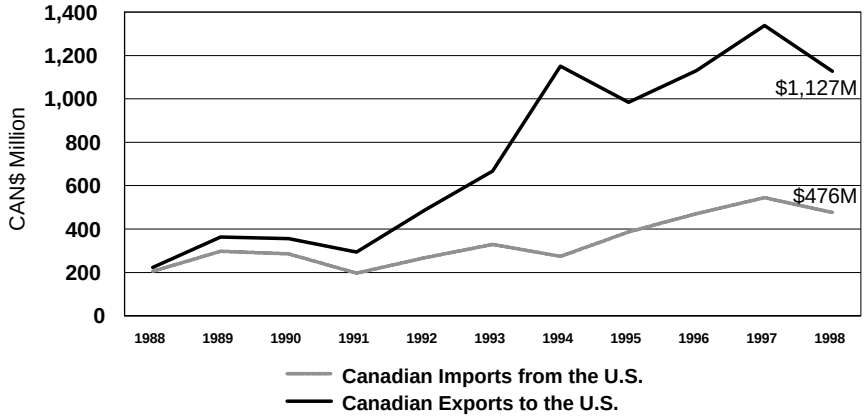
Figure 2: Canada-Mexico Agricultural Trade Flows, 1988-1998.



Source: Statistics Canada Merchandise Trade Database

and Mexico benefits both countries by supplying imports that the importing country is not always able to produce.

Figure 3: Grain and Oilseed Trade Flows, 1988-1998.



Source: Statistics Canada Merchandise Trade Database

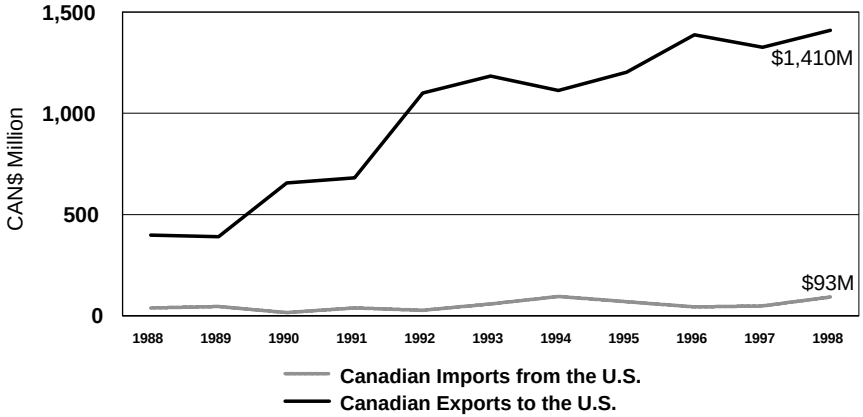
SUB-SECTOR TRADE FLOWS

To give an overview of sub-sector trade flows, five major sub-sectors are considered. The sub-sectors have a combination of bulk commodities and highly processed products, involve a majority of farm produced crops and/or livestock, and generate considerable revenue. They are:

- grains and oilseeds
- cattle and beef
- hogs and pork
- fruit and vegetables
- poultry and eggs.

The first three- -grains and oilseeds, cattle and beef, and hogs and pork- - follow the general pattern of trade flow in which Canadian exports to the United States exceed imports from the United States. The last two sub-sectors have the reverse trade flow- - our imports exceed exports in fruit and vegetables because of climate, and in poultry and eggs because this sub-sector is supply-managed.

Figure 4: Cattle Trade Flows, 1988-1998.



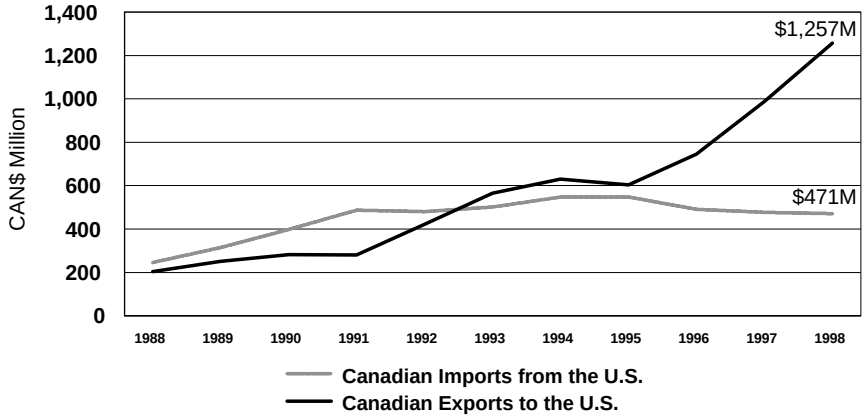
Source: Statistics Canada Merchandise Trade Database

Grains and Oilseeds

In 1998, Canadian imports of grains and oilseeds from the United States totalled $476 million, up 132 percent from $205 million in 1988 (Figure 3). Canadian exports of grains and oilseeds to the United States were $1.127 billion in 1998, down 16 percent from their peak of $1.338 billion in 1997, but up over 400 percent from $224 million in 1988.

It is suggested that three factors account for much of the increasing trade flow and export of Canadian grains and oilseeds to the United States, and indeed, for the other sub-sectors except poultry and eggs. The first factor stems from changes in exchange rates since the early 1990s as the U.S. dollar appreciated vis-à-vis the Canadian dollar. The lower Canadian dollar made Canadian grains and oilseeds less expensive in U.S. markets. The second factor involves changes to Canadian agricultural policies, such as the elimination of transportation subsidies under the Western Grain Transportation Act (WGTA) which, for the most part, had a negative impact on the marketing of Canadian grains and oilseeds. (The Gellner and Rattray paper in the next section summarizes these policy changes). The third factor is the geographical proximity of

Figure 5: Beef Trade Flows, 1988-1998.



Source: Statistics Canada Merchandise Trade Database

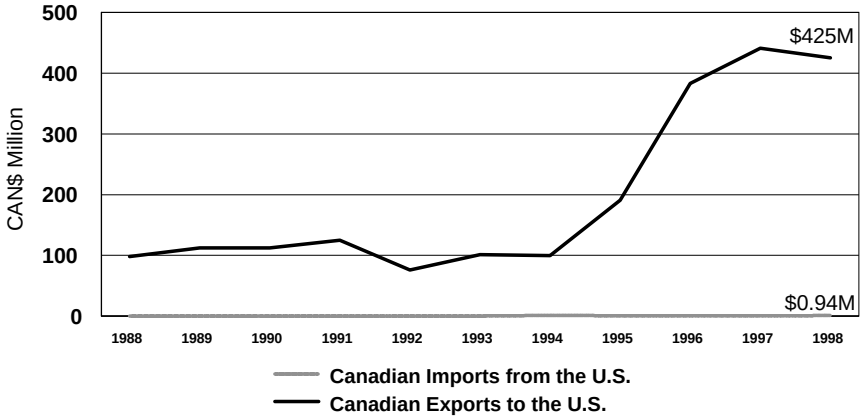
Canada to the affluent and consuming U.S. market which makes it easier for Canada to fill readily the ever-expanding U.S. market.

Cattle and Beef

Canadian imports of U.S. cattle reached $93 million in 1998, a 90 percent increase from 1997 and a 139 percent increase from $39 million in 1988 (Figure 4). Canadian exports of cattle to the United States reached $1.41 billion in 1998, up only six percent from 1997, but up 250 percent from $398 million in 1988.

From Canada's perspective, tariff restrictions for cattle were never an issue between Canada and the United States; quantitative border restrictions were a more important impediment to increased exports to the United States. However, CUSTA and NAFTA provided confidence and security to producers by solidifying access to the United States and by establishing mechanisms for resolution of trade disputes. With more confidence and security through the establishment of trade rules, Canadian producers were able to expand exports to the United States.

Figure 6: Hog Trade Flows, 1988-1998.



Source: Statistics Canada Merchandise Trade Database

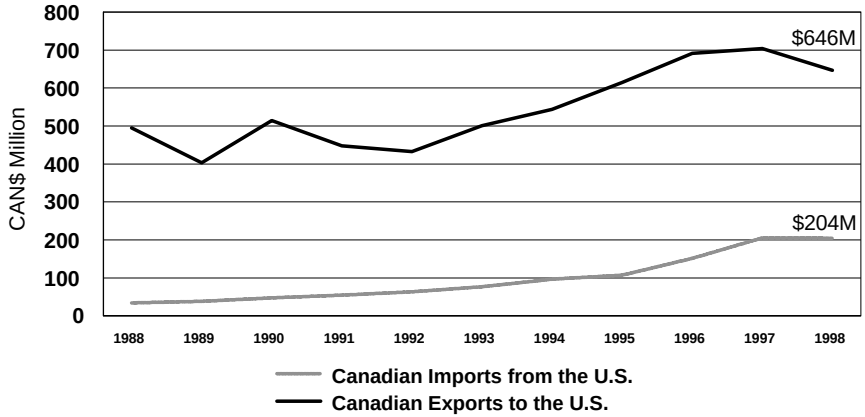
Canadian imports of beef from the United Sates was $471 million in 1998, down 14 percent from the peak of almost $550 million in 1994 and 1995, but up 90 percent from $246 million in 1988 (Figure 5). Canadian exports of beef to the United States have increased steadily and reached $1.257 billion in 1998, up 108 percent from 1995 and up 519 percent from $203 million in 1988.

It is likely that the elimination of the transportation subsidies under the WGTA led some Canadian producers to shift from grain to cattle growing and feeding in Western Canada. As a result, some grain is still exported to the U.S., but now the grain is more likely to be exported in the form of live animals or meat.

Hogs and Pork

Canadian imports of hogs from the United States barely reached one million dollars ($940,000) in 1998, an increase of 27 percent from $0.74 million in 1997 and a 161 percent increase from $0.36 million in 1988 (Figure 6). Canadian exports of hogs to the U.S. totalled $425 million in 1998, down slightly (about four percent) from $441 million in 1997, but up 334 percent from $98 million in 1988.

Figure 7: Pork Trade Flows, 1988-1998.



Source: Statistics Canada Merchandise Trade Database

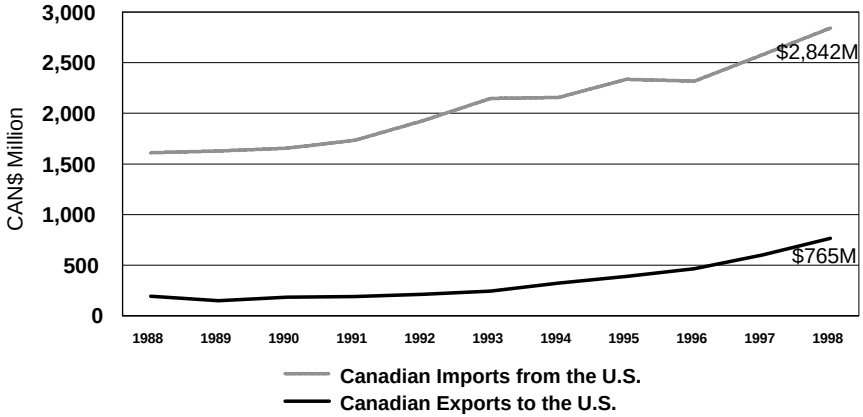
Canadian imports of pork from the United States reached $204 million in 1998, down marginally (less than one percent, about $1 million) from 1997, but up 500 percent from 1988 when pork imports totalled $34 million (Figure 7). By comparison, Canadian exports of pork to the United States reached $646 million in 1998, down eight percent ($58 million) from 1997. Although exports of pork were down in 1997, 1989, 1991 and 1992, overall they increased 30 percent from $495 million in 1988.

Fruit and Vegetables

Canadian imports of fruit and vegetables (excluding potatoes) from the United States reached $2.842 billion in 1998, up 10 percent from $2.579 billion in 1997 and up 76 percent from $1.611 billion in 1988 (Figure 8). Canadian exports of fruit and vegetables to the United States reached $765 million in 1998, up 27 percent from $601 million in 1997, and up 296 percent from $193 million in 1988.

The fruit and vegetable sub-sector has the reverse trade flow from the general agricultural trade flow, i.e., there are more Canadian imports of fruit

Figure 8: Fruit and Vegetable Trade Flows (Excluding Potatoes), 1988-1998.



Source: Statistics Canada Merchandise Trade Database

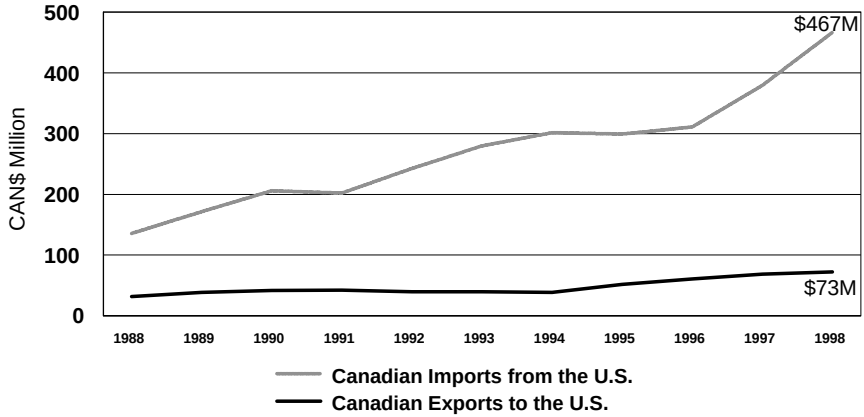
and vegetables from the United States than exports, due partly to the Canadian climate.

It appears that CUSTA and NAFTA benefited both Canadian and U.S. fruit and vegetable growers with the gradual elimination of tariffs and with improved market access. In Canada, much of the progress in the fruit and vegetable industry is attributable to the investment in, and the innovative development of, new technologies such as greenhouses with considerable strides in floriculture, nursery products and tomatoes. In addition, Canadian producers have diversified their production into specialized crops such as Chinese vegetables to target niche markets.

Poultry and Eggs

The United States is virtually the sole supplier of poultry and eggs to Canada and, like the fruit and vegetable sub-sector, Canada imports more from the United States than it exports. Canadian imports of poultry and eggs from the United Staes reached $467 million in 1998, up 23 percent from 1997, but up 243 percent from $136 million in 1988 (Figure 9). Canadian exports to the

Figure 9: Poultry and Egg Trade Flows, 1988-1998.



Source: Statistics Canada Merchandise Trade Database

United States were $73 million in 1998, increasing 128 percent from $32 million in 1988.

Given the sub-sector's supply management structure and its focus on the domestic market, this level of exports and the resultant reverse trade flow is not unexpected. Under NAFTA, U.S. access to Canada's chicken market is based on 7.5 percent of the previous year's Canadian production. During periods when its domestic production is limited, Canada allows supplementary imports from the United States at the free NAFTA rate. Canada also imports large quantities of U.S. whole, liquid and frozen eggs for Canada's processing sector.

SUMMARY

To summarize, Canada is a trading nation and trade yields about 40 cents of every dollar reaching the farm gate. From Canada's perspective, it appears that both CUSTA and NAFTA have had positive effects on producers, processors and consumers of agricultural products. Canadian agricultural producers and agri-food processors are better able under free trade to realize their potential by operating in a larger, more integrated and more efficient North

American economy. Canadian consumers benefit from this heightened competition with better agricultural products and prices. It is expected that wider access to foreign markets through trade agreements will ultimately be the greatest potential for growth in the Canadian agriculture and agri-food industry.

A GLOBAL PERSPECTIVE ON REGIONAL INTEGRATION IN NORTH AMERICA

Thomas W. Hertel

INTRODUCTION

The goal of this paper is to contribute to an evaluation of the degree of regional integration that has taken place in North America in the wake of the North American Free Trade Agreement (NAFTA). The most natural way to do this is to examine what has happened to agricultural trade flows among the three partner countries, before and after implementation of NAFTA on January 1, 1994. In their background paper on North American agricultural trade flows over the 1975-98 period, Steven Zahniser and Mark Gehlhar of the Economic Research Service, USDA, do a nice job reviewing this evidence. The new bilateral trade database developed by Gehlhar, and nicknamed "IBAT", is essential to this exercise. This unique resource reports reconciled bilateral trade flows over time, where the reconciliation is based on a country's historical reliability in reporting bilateral flows for any given commodity (Gehlhar, 1998). Such reconciliation is an essential precondition to any analytic exercise since it is very difficult to come to general conclusions about changes in regional trade flows based on reported bilateral trade data, which often differ dramatically between reporters.

Zahniser and Gehlhar conclude that growth in bilateral agricultural trade flows among the NAFTA partners has indeed accelerated in recent years. How-

ever, the timing of this growth departs quite significantly from the timing of the two free trade accords in the region - - Canada/ United States (CUSFTA) in 1989, and NAFTA in 1994. Indeed, the stronger growth in U.S. exports to Canada dates back to the mid-1980s, while the acceleration in Canada-U.S. exports doesn't kick in until the early 1990's. Acceleration of Mexico-U.S. agricultural exports begins before NAFTA, in 1992, while U.S.-Mexico exports seem to be largely a function of overall growth in the Mexican economy. Clearly these free trade agreements are just one factor determining agricultural trade flows in North America.

In an effort to control for macro-economic fluctuations, which in turn lead to fluctuation in the overall levels of imports and exports, Zahniser and Gehlhar also look at trade shares. For example, even though total agricultural imports into Mexico fell due to the recession in 1995, NAFTA's share of these imports rose from 1994 to 1995. This might be viewed as evidence of NAFTA's success in promoting intra-regional trade. Overall, the authors conclude that intra-NAFTA trade now comprises a larger share of imports into the United States and Canada than it did in the late 1970s and 1980s. However, when averaged over a five-year period, NAFTA's share of Mexican imports in the 1994-98 period was about the same as its share over the 1984-88 period. Furthermore, as the authors point out, some of the recent prominence of intra-NAFTA trade may be due to the diminished attractiveness of the Asia markets as an export destination. These difficulties associated with disentangling the determinants of regional integration provide the starting point for my comments.

DETERMINANTS OF REGIONAL TRADE SHARES

An individual country c's share of exports to a region "r" — $xshr_{cr}$ — can be viewed as the product of four factors (Anderson and Norheim, 1993; Drysdale, 1988):

$$xshr_{cr} = gdpshr_r * openness_r * composition_{cr} * transcostcr \quad (1)$$

The first determinant of export share is the *size of the destination market*, relative to the world economy. When incomes in Southeast Asia fell, following the Asian financial crisis, the *relative size* of the NAFTA market (measured by

GDP) increased. This led to an increase in the NAFTA's relative importance as an export destination for country's within NAFTA. But it also made NAFTA a more important export destination for countries outside the region. In short, some of the increased intra-NAFTA trade following the Asian crisis can be attributable, not to the free trade agreement, but rather to this macroeconomic shock in Asia. The "$gdpshr_r$" term captures this determinant of export shares to region r.

The second determinant of region r's importance as a destination for country c's exports is the *relative openness* of the region. To the extent that Mexico's unilateral reforms in the late 1980s increased Mexico's import/GDP ratio, relative to the world import/GDP ratio, we would expect Mexico to become a more attractive destination for all exporters, not just her NAFTA partners. The openness measure captures this effect, which once again is not attributable to the free trade agreement.

The third determinant of regional export share is also largely independent of the NAFTA accord. It measures the *difference in composition of trade* between country c and region r. If c specializes in exports of products which region r specializes in importing, then we can expect a larger value of the export share, $xshr_{cr}$. Within the agricultural sector, this would be the case for winter vegetables imported by Canada from Mexico. On the other hand, if country c tends to export products that the destination region r also tends to export (e.g., grains exported from Canada to the US), we would expect the export share to be diminished by the composition effect. Of course, by altering relative prices, a free trade agreement such as NAFTA could also change the composition of trade in the region. However, this is a "second-order" effect. Most of the compositional differences will be due to differences in endowments, including climate, which remain unaffected in the wake of the free trade accord.

The final determinant of regional export share is the one that is directly affected by the NAFTA. This captures the *relative transactions costs* associated with delivering products from country c to region r. This is the residual term in relationship (1) and includes the effects of tariffs, non-tariff barriers, and transportation costs. NAFTA aims to reduce these transactions costs on a bilateral basis and, to the extent it is successful, it will increase the share of the NAFTA market in NAFTA countries' exports. Ideally, we would like to isolate

this term and see how it has changed in light of the North American Free Trade Agreement. This could be done by computing the composition effect in (1) and isolating the transactions cost term on the left-hand side of this equation. However, this represents a substantial computational exercise that deserves to be undertaken in the context of an independent research project. For the present, discussion will simply focus on the product of the last two terms in (1), which has been described as the intensity of country c's export trade with region r (Anderson and Norheim, 1993; Brown, 1949). Since the composition of trade tends to change relatively slowly, most of the variation in this index may be attributed to changes in the transactions cost component, which is the main focus of our attention.

Analysis of the Intensity of Intra-NAFTA Trade

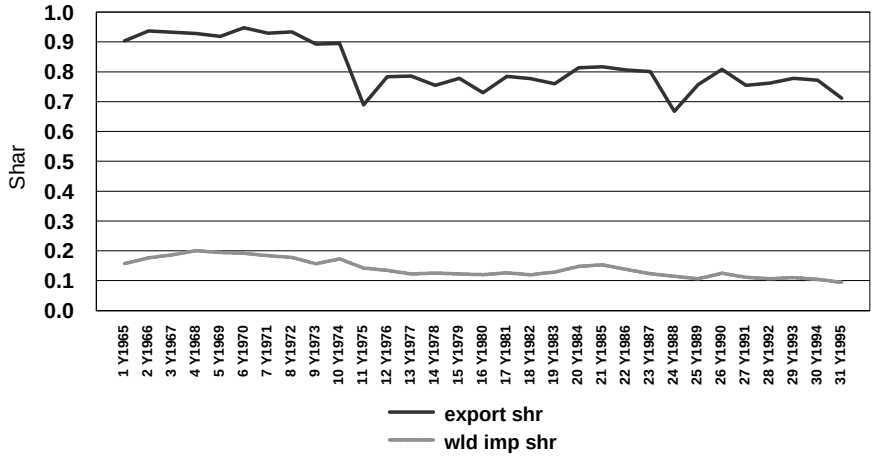
Combining the composition and transactions cost terms from (1) into a single index of the intensity of exports from country c to region r, $I_{cr,}$ canceling the GDP components of the first two terms on the right-hand side of (1), and rearranging terms, we can isolate the intensity of trade as follows:

$$I_{cr} = xshr_{cr} / mshr_{r} \qquad (2)$$

In this expression, $mshr_r$ represents the share of region r in world imports. Thus the index in (2) compares region r as a destination for country c's exports, with region r as an export destination for the world as a whole. In order to ensure that this index equals 1 in the absence of compositional and transactions cost effects, we must remove country c from the computation of world imports in the denominator of $mshr_r$. This is because a country cannot export to itself. Finally, since we are interested in the case where country c (e.g., Mexico) is itself a part of the destination region r (NAFTA), we must also remove c's imports from the numerator of the import share expression. Thus, in computing Mexico's intensity of exports to NAFTA, we would divide the share of Mexico's exports to the United States and Canada by the share of the U.S. and Canada's imports in world imports (the latter being net of Mexico).

Examination of the export intensity index over time is quite instructive, as it reveals the combined effect of changes in the composition of trade as well as transactions costs. Since the composition of trade changes relatively

Figure 1: Determinants of Mexican Export Intensity to NAFTA, Manufactured Food Products, 1965-1995.

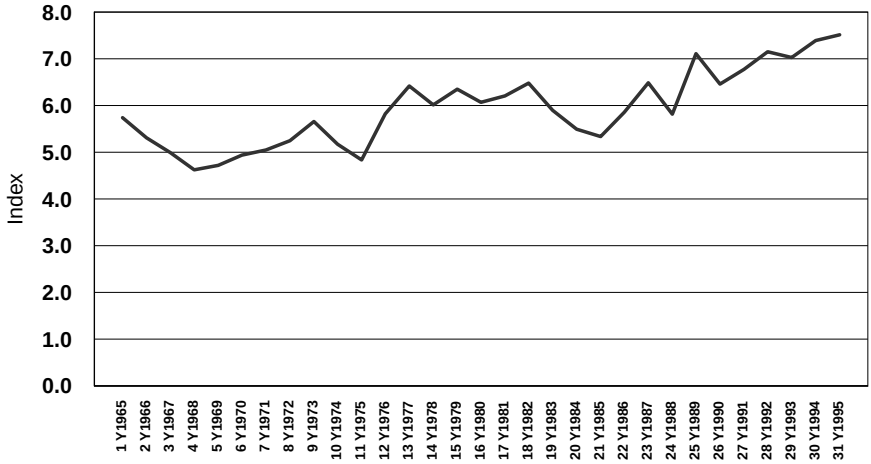


slowly, one would expect most of the change in trade intensity of NAFTA countries with the NAFTA region to be attributable to transactions costs. This is precisely what the NAFTA accord was intended to address, so I_{cr} provides an excellent basis for evaluation of the success of NAFTA, as well as other measures aimed at regional integration. Most importantly, it controls for the relative size and openness effects that trouble Zahniser and Gehlhar (2000) in their analysis of regional integration in NAFTA.

An example will illustrate the difference between the trade share approach and the intensity of trade approach.[1] Consider the case of Mexican food exports. The top line in Figure 1 reports the share of Mexican manufactured food exports destined for NAFTA. This is falling over the entire period, dropping from 90 percent in 1965 to 70 percent in 1995. From this time series, one would conclude that regional integration has been decreasing.

[1]Since I do not have access to the IBAT database, I have instead employed the time series data provided in the publicly available, GTAP version 4 database, also developed by Mark Gehlhar (1998). This is attractive in that it covers both agriculture and non-agriculture trade. However, it only extends through 1995, which limits its usefulness in assessing the impact of NAFTA, since this only encompasses the first two years of the agreement. However, this work could easily be extended when the version 5 data become available.

Figure 2: Mexican Export Intensity to NAFTA: Manufactured Food Products, 1965-1995.



However, one must consider the fact that over this same period, food imports of other regions in the world increased sharply, leading to a decline in the NAFTA (net of Mexico) share in world manufactured food imports (see the lower line in Figure 1). When this factor is taken into account, we see from Figure 2 that the index of export intensity between Mexico and NAFTA has actually risen. Thus there is value in taking a global approach to the evaluation regional integration.

Export Intensity Indexes by Sector and Country

Figures 3 and 4 offer a convenient summary of intra-NAFTA export intensities for the region as a whole.[2] The comparison between non-food manufactures and farm and food products is quite interesting. At the beginning of the period, the intra-NAFTA export intensity for non-food manufactures (3.6) is about double the index for farm (1.4) and food (2.0) products. By the end of the

[2]Here I follow Anderson and Norheim's suggestion of deducting 1/n of NAFTA's imports from the denominator and numerator of the import share term in order to control for the fact that countries cannot export to themselves, but can export to others in the region. In the spirit of the intensity index, this adjustment also gives rise to an index of one when geography places no role in trade.

Figure 3: NAFTA's Intra-regional Export Intensity by Sector, 1965-1995.

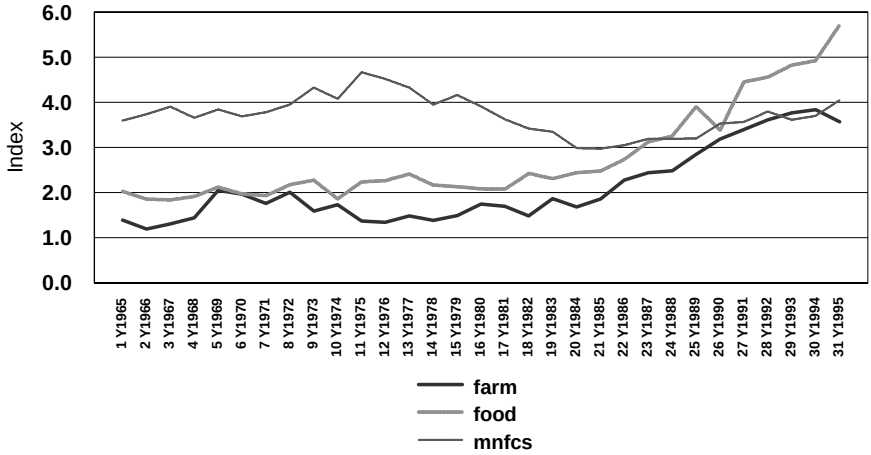
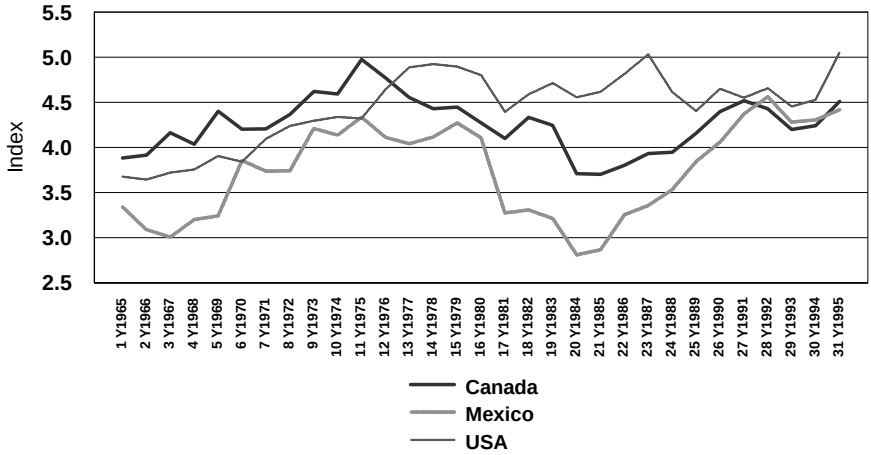
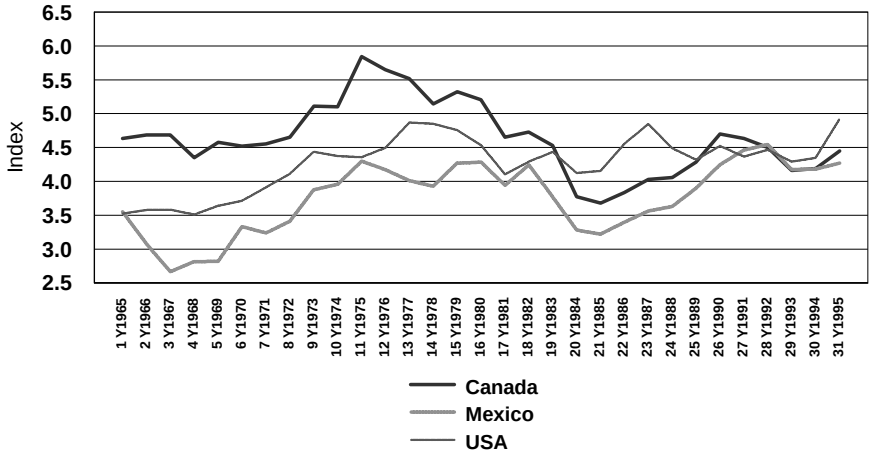


Figure 4: NAFTA Export Intenstity by Country All Merchandise Trade, 1965-1995.



period, the intra-NAFTA export intensity for farm products had risen to the level of non-food manufactures, and the index for food products in 1995 is nearly 50 percent higher! Most of these gains have been realized since the mid-

Figure 5: NAFTA Export Intensity for Non-food Manufactures, by Country, 1965-1995.



1980s. Clearly regional integration in farm and food products has been very successful over the past 15 years. It is likely that an important part of this has to do with the two regional free trade agreements.

Figure 4 compares the intra-NAFTA export intensities for total merchandise trade across the three countries. The most striking thing about this figure is the similarity in trade intensities across countries. When one simply compares export shares from each country to NAFTA they are quite different, with the U.S. share being about half the values for Canada and Mexico. This is because the United States is a very large import market, and by definition, it cannot export to itself. However, when one controls for this fact, using the simple adjustment suggested by equation (2), the United States is very similar to the other two countries in its NAFTA export intensity. The other noteworthy observation is the strong increase in intra-regional export intensity for Canada and Mexico since the mid-1980s. This offsets a ten-year decline in the intensity of Canadian and Mexican export intensities to NAFTA that began in 1975.

The increase in total export intensity from Mexico and Canada to NAFTA in the mid-80s to early 90s is mirrored in these countries' individual

Figure 6: NAFTA Export Intensity for Food Products, by Country, 1965-1995.

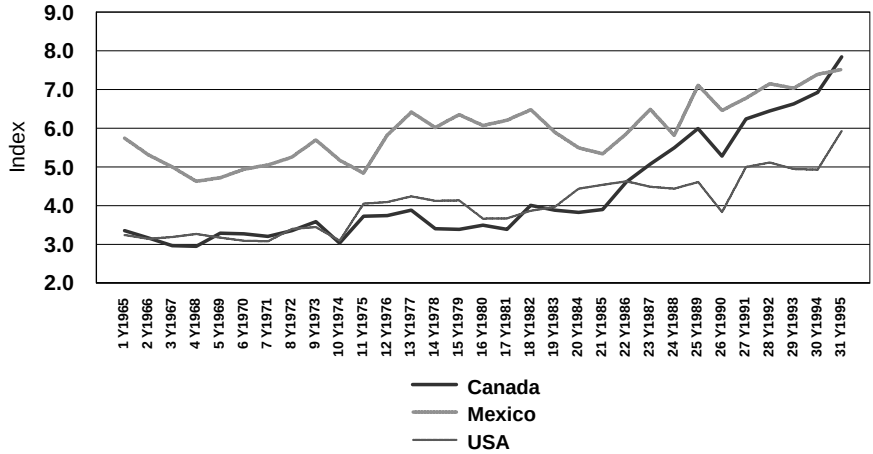
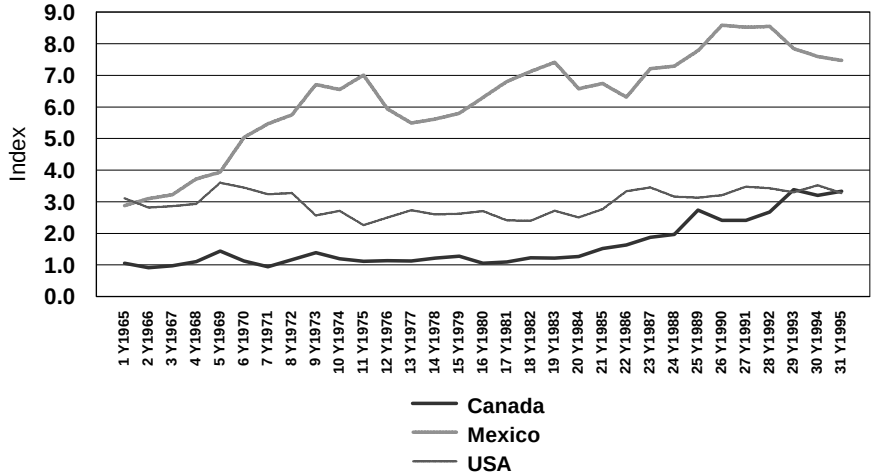


Figure 7: NAFTA Export Intensities for Farm Products, by Country, 1965-1995.



series of intensity indices is remarkably flat. This is especially true for Canada, which ends the period with a slightly lower intensity of exports to NAFTA (4.4) than at the beginning (4.6). In general the intensity of intra-NAFTA exports is quite similar across regions, ending the period in the 4.3-4.9 range. The free trade agreements appear to have had only a modest effect here.

By contrast, the intensity of NAFTA exports for the processed food sector in the three countries rises for all regions over the 1965-95 period. The increase is particularly striking for Canada, where the intensity of exports to NAFTA doubles over the 1985-95 period. This suggests a high grade on the "report card" for the Canada/United States and North American free trade agreements. Based on informal discussions at the workshop, it appears that much of this increase in trade intensity has come about due to rationalization in the Canadian food manufacturing sector. Prior to the CUSFTA and NAFTA, substantial tariffs still existed for many of these products (in contrast to non-food manufactures) thereby encouraging local production of the full range of products for the domestic market. In the wake of the free trade agreements, small-scale production was no longer viable and many of these product lines were dropped. By producing fewer varieties of food products at a much greater scale, Canadian manufactures have survived, and in some cases thrived, by exporting a large share of their production. The free trade agreement has turned these domestic producers into North American operations.

Figure 7 shows the evolution of the NAFTA export intensities for the three countries' farm sectors. Here the convergence evident in the previous two figures is absent. Mexico's export intensity starts out at a much higher level than Canada. (This is evidence of the compositional effect whereby Mexico specializes in exports of products, such as winter fruit and vegetables, for which Canada is a natural importer). Furthermore, Mexico's intensity index triples over this period. Canada's export intensity to NAFTA also rises strongly since the mid-1980s, whereas the U.S. export intensity to NAFTA ends the period about where it began.

CONCLUSIONS

Like many other controversial trade agreements, NAFTA is blamed for many sins — and credited with many successes — that it does not deserve. Macro-economic events such as the Mexican peso-crisis of 1995 and the Asian financial crisis of 1997/8 have buffeted trade flows in the North American economy. One goal of this paper is to control for these effects, thereby providing a more objective assessment of the impact of free trade agreements in the

region on trade flows. The share of NAFTA in Canadian/Mexican/U.S. exports has been shown to be a function of the size of the NAFTA market, relative to the world economy, the relative openness of this market, the degree of natural complementarity in trade composition, and finally, transactions costs. The North American Free Trade Agreement only directly affects the latter. Changes in these costs are expected to be reflected in changes in export intensities, and it is these intensities that are the focus of my analysis.

Taking advantage of the bilateral trade databases produced by Mark Gehlhar at ERS/USDA, I find a strong change in the intensity of farm and food exports from the NAFTA member countries to NAFTA as a whole since the mid-1980s. This stands in sharp contrast to the evolution of trade intensities for non-food products that find themselves little higher in 1995 than they were in 1965. The most striking growth in export intensity has been for manufactured food products. The export intensity of Canadian food products to NAFTA doubled over the 1985-95 period. Mexico's export intensity is also up sharply, and the U.S. export intensity has recently been on the rise as well. This provides strong evidence of falling transactions costs and increasing integration in the North American market. The recent free trade agreements have most certainly played an important role in this process.

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CONAGRA FOODS

Richard Gady

The Canada-U.S. Free Trade Agreement was implemented on January 1, 1989. NAFTA was implemented on January 1, 1994 by the governments of Canada, Mexico, and the United States. If the markets worked as expected and barriers to trade were effectively, substantially reduced, one might expect the overall level of grain trade to accelerate and the respective countries to specialize in the crops they produce best (other things being equal). However, analysis of NAFTA effects is distorted by at least three events. Canada eliminated the Crow rail subsidy, which lowered the price of grain in the interior grain producing areas. This made the United States a more attractive market for Canadian grain. And, a sharp devaluation and recession hit Mexico shortly after NAFTA was implemented, which adversely impacted U.S. grain exports to Mexico. At the same time the U.S. dollar strengthened relative to the Canadian dollar. Finally, the United States changed its agricultural policy in 1996, which changed the pricing structure and production structure of grain grown here, as well as elsewhere in the world. But, agriculture is constantly impacted by exogenous factors, and these kinds of changes are not all that unusual.

It is important also to understand the world trends for grain trade. As opposed to rapidly growing overall world trade for all products, grain trade is not increasing. World grain trade has been flat for 20 years, following the sharp growth during the 1970's. This has been true for both coarse grains and wheat. World grain trade as a percent of usage has fallen from about 17 percent for six years in the early 1980s to about 13 percent, the same level that existed in the mid 1960s. This reflects partly a shift to meat exports rather than grain, partly excellent world crops the past four years, partly the loss of much of the Former Soviet Union market and partly the move by the EU from a major grain importer to a grain exporter.

Within this overall macro background, the NAFTA grain trade record appears much more positive than for world grain trade in general. Although grain

trade within NAFTA does not account for a sizeable portion of overall grain trade, the trend is up[1] a positive trend. As a percentage of world wheat trade, NAFTA wheat trade has increased from less than 0.5 percent in the mid 1980s to the 3.0-3.8 percent range more recently. Canadian wheat exports to the United States could decline fairly sharply in 1999/2000 due to the low protein content of the Canadian durum crop. Coarse grain trade within NAFTA countries has grown from less than 3 percent of total world coarse grain trade to about 10 percent currently. Total metric tons of grain trade have grown from about three million in the mid-1980s to around 13 million tons currently.

The pattern of trade has evolved about as one might expect. U.S. coarse grain exports have grown fairly sharply over the period, more so to Mexico than to Canada. Canadian wheat exports to the U.S. have grown from very small quantities to about 2.0 million metric tons, and perhaps would be higher, if not for a "voluntary" quota at about that level. U.S. wheat exports to Mexico have grown by similar amounts. So the U.S. has capitalized on the advantage in coarse grain production, and Canada has capitalized on an advantage in wheat production. Mexico has imported growing quantities of both coarse grains and wheat.

Conclusion

Grain trade within NAFTA countries has accelerated relative to world grain trade since the agreement was implemented. Although the quantities traded are less than 10 percent of total world grain trade, the growth has been impressive. The U.S. has appeared to capitalize on its efficiencies in coarse grain production and Canada in wheat.

From the U.S. viewpoint, there are other considerations that warrant further focus on NAFTA in the years ahead. The economic recovery and growth in Latin America is likely to enhance the importance and status of Mercosur. As Mercosur negotiates agreements with Europe, China, and other parts of Asia, the benefits of further NAFTA trade liberalization will be necessary to maintain intra NAFTA grain trading growth. Furthermore, NAFTA participants need to be vigilant to not let issues like GMO's or country-of-origin labeling requirements to become obstacles to further trade growth in the years ahead.

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[1] These estimates are not totally accurate as they do not include Canada/Mexico direct Trade. Anecdotal evidence suggests the addition of that trade would reinforce.

IMPLICATIONS OF THE NAFTA FOR THE NORTH AMERICAN FOOD INDUSTRY

John Schildroth

This paper provides comments on the implications of the North American Free Trade Agreement (NAFTA) on the North American food industry. The workshop is billed as a "Report Card on Agriculture under the NAFTA", but agriculture and food are intimately connected, partially as a result of the NAFTA. The agri-food industry is, today, an integrated supply chain that is driven by consumer demand for food products. It includes production, processing, wholesale, retail distribution and finally the food service sector, the latter two being where most consumers are making their food choices. Producing and selling commodities without an awareness of the North American consumer marketplace is not a realistic option today. Those companies in the food supply chain who do not adjust (i.e., adopt a market orientation) are facing serious difficulties.

As indicated in the background material for this workshop, the NAFTA had six objectives, two of which will be discussed here:

- elimination of barriers to trade and facilitation of cross-border movement of goods and services; and
- increasing investment opportunities in the NAFTA territories.

With respect to the North American food industry, both of these NAFTA objectives have been realized. Total NAFTA agri-food trade has increased substantially, and investment decisions in the agri-food industry are being made now on a North American (or global) basis, through the guarantee of market access and the removal of investment restrictions within the NAFTA countries. Agri-food industry integration is increasing in most sectors, and industry confidence is increasing in all three national jurisdictions. In the case of Canada, adjustments have occurred in an industry that was stumbling badly ten years ago.

TRADE FLOWS AND INDUSTRY ADJUSTMENT

From the wider food industry perspective, trade flow statistics can be misleading or problematic when attempting to determine industry adjustment patterns. There are three major reasons for this problem:

- first, companies may choose to invest in a country rather than trade with it. Consequently, investment data may be just as important as trade flows in understanding industry adjustment.
- second, export trade categories can mask major industry or market shifts. For example, including beverages within the broad "high value processed product" category masks significant intra-category shifts.
- third, export trade category titles may (falsely) imply that the adding of value to commodities is limited to certain categories. For example, the "bulk commodities" category suggests no adding of value by industry, when in fact grading or other value-added processes may be part of the sectoral marketing strategy.

The NAFTA trade data were grouped into five major categories for purposes of this conference. Below is a listing of some subcategories in each of the five categories, and a brief commentary related to industry adjustment strategies.

1. **High Value Processed Products (HVPP)**
   - Red meat and Poultry meat.
   - Dairy products, Milk and Eggs.
   - Processed Fruit and Vegetables.
   - Sugar products.
   - Imitation Dairy products.
   - Packaged and Branded food products.
   - Beverages [Juices, Water, Beer, Wine].

The HVPP category typically attracts the attention of policy analysts and industry specialists. Today, the common wisdom suggests that countries exporting HVPPs have made the adjustment to the globally competitive agri-food industry. Although all products in this category have had value added, there is a considerable range of value-added, and the mere presence of value-

added does not guarantee the product has a sustainable or profitable market in North America.

The red meat, poultry, dairy and egg industries have all experienced significant restructuring and rationalization over the past ten years in Canada and the United States. The result has been large regional processing facilities that depend upon high throughput to ensure low per unit costs. Smaller facilities have closed or shifted to producing niche products that can sustain higher-cost facilities. Dairy and sugar products have both experienced regulatory and restricted market access issues that has limited industry adjustment to some degree.

Beverages are a unique product area that requires separate consideration. The wine and beer industries have undergone substantial adjustment to meet the challenge and opportunity of increased market access under NAFTA. In Canada, the wine industry has moved towards a quality model to capture a domestic niche when protection was removed, In Mexico, beer products and exports have increased dramatically as United States and Canadian consumers were able to access the Mexican product more readily.

2. Processed Intermediates

- Live Animals and Birds.
- Flour and Starch.
- Feeds of all types.
- Oils and Fats.
- Hides and Fur.
- Wool and Hair.
- Soya products – vegetarian products.
- Ginseng Root – functional foods.
- Enzymes – products of biotechnology.
- Extracts/Oils – nutraceuticals.

Some of these sectors have low value-added (e.g., livestock), while others are extremely high value (e.g., enzymes). Many of these products are inputs to higher value products that may be manufactured by another NAFTA partner. Feed is a large, yet often forgotten, industry that can help intensive

livestock operators remain profitable in light of tightening margins and reduced protection at the border. Livestock and poultry producers in both Canada and the United States now own and operate their own feed mills, using vertical integration as an adjustment strategy.

Soya, ginseng, enzymes and extracts are emerging and growing industries resulting from increased consumer demand. These products more properly belong under the HVPP category.

3. Produce and Horticulture

- Fruits.
- Vegetables and Potatoes.
- Flowers and Plants.
- Nuts and Spices.
- Mushrooms.

Fresh fruits and vegetables, fresh mushrooms, and floriculture and nursery products are all "commodity-like" products, but with significant added value that makes the horticulture industry one of the most profitable and dynamic in the agri-food industry. Adjustment to the NAFTA has been dramatic in this sector. Both increased market access through lowered tariffs and improved sanitary and phytosanitary rules have encouraged sectoral growth. For example, the greenhouse vegetables industry, including tomatoes, bell peppers and cucumbers in both Canada and the United States have:

- added stickers to the produce;
- guaranteed quality;
- developed strategic partnerships with competitors; and
- undertaken cooperative seasonal marketing.

This is a dramatic development over the past 10 years and at least partially reflects the fact that NAFTA reduced border protection against Mexican horticultural products.

4. Bulk Commodities

- Grains.
- Oilseeds.
- Cotton and Jute.
- Coffee Beans.

Bulk commodity trade is the traditional mainstay of agricultural trade. Needless to say, bulk commodity trade is a much reduced percentage of total agri-food exports in all the NAFTA countries. However, value can be added to these commodities. Examples include:

- organic bulk commodities
- quality grading systems, such as the one for Canadian grains; and
- speciality marketing of commodities with unique markets, such as "fairly traded" coffee beans.

5. Related Agriculture

- Fish and Shellfish.
- Lumber and Wood products.
- Spirits.
- Cigarettes and Cigars.
- Wool and Cotton Yarns.

For the United States and Mexico, related agriculture is less than 10 percent of their export shares. However, for Canadian exports to the United States, the figure is almost 60 percent. This is caused by Canada's large forestry and fish exports to the United States. It may be useful to remove this category from the trade analysis and consider the adjusted results.

FOOD INDUSTRY ADJUSTMENT TO NAFTA

There have been at least four areas of adjustment in the North American food industry:

- moving to a consumer focus;
- developing supply chain relationships;
- undertaking appropriate marketing strategies; and
- organizing into globally competitive operations.

The bottom line for the agri-food industry is that *demand, not supply, now drives the industry.* Strategic planning starts with the consumer, not the producer, the processor, or the retailer. The "consumer" is a spatial entity with dynamic tastes. Firms in the food industry ignore this reality at their peril.

Consumer Focus

A consumer focus requires that industry understand what the consumer wants. The considerations that must be made include price, quality, variety, safety and health, and nutrition of the products presented . Remember that old marketing saying, "There are three considerations in any purchasing decision – price; quality; and timeliness, and you can have any two"? Today's food consumer says: "No, I'll have all three!".

Today's consumer is also wealthier. As a proportion of 1998 disposable income, Canadians consumers spent 9.8 percent on food, the United States spent 10.9 percent, Mexicans 33.2 percent, the Japanese 17.8 percent and Australians 14.6 percent. For Canada and the United States, these percentages are at historical lows. However, North American consumers will resist any price increases.

As for variety and availability consumers want fresh produce such as apples, banana, mango, corn-on-the-cob, available every day; they want access to *any* product discovered in travel or from their home country; and they want products that are inputs to recipes available on demand such as shellfish, lemon grass, etc. Retailers will ensure these products will be available. They have access to imports and if the local source is short, product will be imported.

Food Safety and quality are also important. Historically, most agri-food products were grown, raised, processed or manufactured and consumed locally. Processors, retailers, restaurants and food service buyers largely purchased locally. Consumers did not question the food chain on safety, and food

safety problems were "localized" or, in the case of imports, isolated at the border. This is no longer true today. Consumers now are educated, aware, and understand how to get attention, if they are concerned about food safety. The food industry is aware of this and has responded by demanding all food chain participants adapt food quality programs.

Food Supply Value Chain

Major players in the food supply value chain include consumers, retailers and food service outlets, wholesale/distribution firms, processors and producers of the primary product. A food value chain or supply chain is essential in the future. Margins are thin, so a supply chain offers great advantages to all participants. For example, in a supply chain arrangement, there is little chance that burdensome inventories will accumulate at any level on this chain.

Marketing Strategies

There are many marketing strategies, but the key is "adding value" to a commodity or product. Examples include the following:

- New food products such as nutraceuticals;
- Certified Products
  - Organics
  - "Angus" beef, speciality eggs;
- Quality Assurance such as "VQA" for wine;
- Farm processing/direct farm sales;
- Complementary marketing of products; and
- Regional marketing which might include
  - Local identification programs
  - Psychographic profiling.

Globally Competitive Operations

Today, competitive firms in the food industry:

- source product/inputs globally;
- provide quantity and quality based upon a national or continental market;
- invest in other North American markets; and
- protect domestic market through marketing strategies, not protectionism.

CONCLUSION

The agri-food industry continues to have difficulties adjusting to NAFTA in those sectors where government has guaranteed conditions for one or more industry stakeholder (e.g., income; price; stability; market share), or where government continues to regulate a sector (e.g., dairy; sugar). Where the agri-food industry has been allowed to adjust, the adjustment has moved the industry towards the market and the consumer.

Section 2

Policy Developments Since NAFTA

The objective of this section is to review policy developments in each country since signing the NAFTA Agreement.

POLICY DEVELOPMENTS IN UNITED STATES AGRICULTURE SINCE 1986

Edwin Young, Frederick Nelson, Praveen Dixit, and Neilson Conklin

INTRODUCTION

U.S. agricultural policy has shifted towards increased market orientation and more reliance on non trade-distorting or "green box" programs. The 1996 Farm Act substituted decoupled income support payments for price sensitive deficiency payments. However, price sensitive marketing loan related benefits increased in importance in 1998 and 1999 with low market prices. In addition, acreage supply control programs were terminated in the 1996 Farm Act.

OVERVIEW OF CHANGES TO POLICY ORIENTATION

The focus of government spending is shifting towards more market orientation with increased reliance on non trade-distorting or "green box" programs as defined by the World Trade Organization (WTO) Agreement on Agriculture. A decoupled income support program (production flexibility contract payments) has replaced the price-sensitive target price/deficiency payment program. Planting flexibility increased under the 1996 Farm Act. The acreage reduction program (ARP) was eliminated. Producers now have the flexibility to plant any program crop on contract acres, as long as the producer does not

violate conservation and wetland provisions and some limitations on fruits and vegetables.

Price support levels are capped. Marketing loan provisions for grains and oilseeds changed the commodity loan program from a price support program to more of an income support program. Expenditures on long-run conservation reserve and environmental cost-share programs have increased.

The Organization for Economic Cooperation and Development (OECD) uses the Producer Support Estimate (PSE) as an indicator of the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers arising from policy measures which support agriculture. The United States percentage PSE was less than the 1986-88 average percentage PSE all during 1989-1999. It moved up close to the 1986-88 percentage by 1998 and 1999 due to the lower market prices and increased benefits from loan deficiency payments, marketing loan gains, and emergency legislation.

MONITORING AND EVALUATING AGRICULTURAL POLICIES

The following sections describe agricultural policy and policy changes in the United States, 1986 to 1999, based on the policy measures and categories used in the OECD monitoring of producer and general support to agriculture (the PSE's and the GSSE).

Market Price Support (MPS)

The United States provides market price support by guaranteeing minimum prices for commodities. This is accomplished through: (1) non-recourse commodity loans for crops at predetermined per-unit loan rates, with occasional acquisition of crop production used as collateral for the loans, (2) government purchases of dairy products at predetermined support prices, combined with a system of classified pricing in several regulated Federal milk marketing regions, or "orders," and (3) application of import restrictions, which are currently WTO-related tariff-rate-quotas

Program Changes. Commodity loan provisions have been revised to greatly reduce the extent of government stock accumulation at low market prices. For

most crops, minimum commodity loan rates are now derived from a formula based on a percentage of a moving average of recent past prices. Maximum loan rates were established for most program crops. Provisions now available for most loan commodities allow producers to repay loans at less than the original loan rate when market prices are below loan levels, resulting in a "marketing loan gain" that is equivalent to a per-unit direct payment. Alternatively, producers may forgo obtaining a loan and receive this same per-unit benefit in the form of a "loan deficiency payment." Provisions for special reserve loans and reserve storage payments on farmer-owned grain were suspended in 1996. Effective loan rates for sugar and peanuts were reduced in 1996 and are to be held constant through 2002.

Export Subsidies

While not guaranteeing minimum prices, the use of export subsidies (the Export Enhancement Program and the Dairy Export Incentive Program) can facilitate maintenance of domestic price levels over world market price levels, reducing the role of loans, acquisitions, purchases, and import restrictions in supporting domestic market prices.

The Export Enhancement Program has not been used in recent years. The 1996 Farm Act requires the Secretary to operate Dairy Export Incentive Program in order to maximize the amount of exports consistent with WTO Agreement on Agriculture obligations.

Dairy Program

U.S. dairy policy includes a system of Federal milk marketing orders designed to facilitate marketing of milk by specifying conditions under which milk handlers must operate within certain geographic areas and price support provided through government purchases.

Program Changes. The 1996 Farm Act called for consolidation of the dairy marketing orders (to be reduced from 33 orders to 10 -14 orders). Market order reform was implemented on January 1, 2000. Dairy support prices were gradually reduced from 1997 through 1999, and were scheduled to end on January 1, 2000. However, low prices during the fall of 1999 and delays in reaching agreement on Market Order reform resulted in a one-year extension of the program.

The Northeast Interstate Dairy Compact was authorized in the 1996 Farm Act to provide for an increase in the regulated price of Class I milk marketed in the compact region. Although authorization for the Compact was to end with implementation of market order reform, the authorization was extended until September 30, 2001.

Direct Payments

The United States currently provides direct payments and input subsidies to producers in several different ways, including (1) decoupled income support payments—payments not related to current production, prices or resource use; (2) commodity loan related payments and interest subsidies linked with current market prices and production; (3) natural-disaster related payments and subsidies using crop insurance, revenue insurance, and ad hoc disaster relief programs; (4) emergency income transfers to compensate for low market prices and lost markets; (5) income-based benefits due to Federal income tax provisions; (6) subsidies on inputs such as water, grazing land, fuel, advisory services, and feed; and (7) payments to support and encourage conservation and environmental-oriented practices.

Program Changes. *Decoupled payments:* The 1996 U.S. Farm Act fundamentally changed agricultural income support programs by replacing the price-sensitive target price/deficiency payment program with a new program of predetermined income transfers that are not related to current farm-level production decisions or market prices. Total outlays for the new production flexibility contract payments were capped at slightly over $36 billion for 7 years, 1996-2002.

Planting flexibility: Planting flexibility increased under the 1996 Farm Act. Participating producers are permitted to plant 100 percent of their contract acreage plus any other cropland acreage to any crop (with some limitations on fruits and vegetables) with no loss in payments, as long as the producer does not violate conservation and wetland provisions. Authority for acreage reduction programs (ARPs) and other planting regulations was eliminated.

Risk management: Assisting producers in the use of risk management practices is an increasingly important policy goal in United States agriculture. The

1994 Crop Insurance Reform Act provided new, low-cost catastrophic coverage and instituted procedures to restrict enactment of disaster assistance. Crop and revenue insurance, provided through private insurance companies, give producers an important income safety net. USDA's Risk Management Agency provides direction and financial support to the insurance companies and directly subsidizes producers by setting below-cost insurance premiums. In addition, educational and pilot programs are provided to help farmers learn more about risk management tools.

Emergency and disaster relief payments: Although crop insurance reform legislation in 1994 included language intended to eliminate ad hoc disaster assistance programs that have been used occasionally, emergency spending legislation enacted in 1998 and 1999 included disaster assistance for crop losses as well as direct "market loss assistance" and other payments to the sector. The total spending on these programs amounted to about $15 billion.

Input subsidies: In addition to changes in subsidized insurance and emergency programs, the United States made several changes or refinements for subsidies related to use or limitations on the use of farm inputs. The most significant change during this period involved the implementation of the Conservation Reserve Program (CRP), initiated in 1986. The 1990 and 1996 Farm Acts extended the CRP. Higher environmental and conservation criteria provide that new acreage must provide significant soil erosion, water quality, or wildlife benefits. New rules introduced in 1998 expanded the number of acres eligible to enter the reserve to over two-thirds of total crop land.

Other new programs: Also introduced during the period was the Wetlands Reserve Program, designed to protect wetlands or return cropped land to wetland status. The Environmental Quality Incentives Program (EQIP) introduced in 1996 simplified and consolidated Federal conservation and environmental cost share programs. EQIP involves technical assistance and direct payment incentives to implement certain practices. At least half of the funding must be allocated to livestock operations. Other direct assistance programs implemented involve flood risk protection and farmland protection through purchase of easements.

Income tax regulations: The Taxpayer Relief Act of 1997 reduced taxes generally and gave farmers several relief measures that they had requested. In particular, capital gains rates were reduced, loss carry-back provisions (income averaging) were provided, and estate tax exemptions were increased. The Tax and Trade Relief Extension Act of 1998 extended the loss-carry back to 5 years, made income averaging permanent, and provided acceleration of self-employment health insurance deductibility.

General Services Support Estimate

The General Services category of support includes assistance to agriculture in general, rather than direct subsidies to producers in the form of higher prices or payments. United States programs in order of importance, as measured by 1998 outlays include: (1) domestic food assistance through the food stamp program, (2) agricultural research and development programs, (3) foreign assistance and other marketing and promotion programs, (4) miscellaneous state expenditures on agriculture, (5) inspection services, and (6) off-farm rural infrastructure development.

SUMMARY AND CONCLUSIONS

The market-orientation of United States' agriculture policy increased since 1986-88. The focus of government spending is shifting to non trade-distorting or "green box" programs as defined by the World Trade Organization (WTO) Agreement on Agriculture.

- Income support programs are more market oriented. Payments based on historical production were substituted for deficiency payments tied to current prices with acreage constraints.
- Price supports were capped, with the grain and oilseed programs restructured to substitute direct payments for price support through stock accumulation.
- While emergency legislation in 1998 and 1999 provided market loss payments to compensate for recent price declines, nevertheless the payments were made after production decisions occurred and were also based on historical rather than current production levels.

- Recent policy changes are focusing on improving the farm safety net and helping farmers manage risk. A variety of new and innovative crop and revenue insurance options are being offered to farmers through private insurance companies. In addition, USDA's Risk Management Agency provides educational and pilot programs to help farmers learn more about risk management tools.
- Environmental concerns are increasingly being addressed through agricultural policy with programs targeted to soil conservation, water quality and wildlife habitat. The Conservation Reserve Program has grown to include over 30 million acres since its inception in 1986.

POLICY DEVELOPMENTS IN CANADIAN AGRICULTURE SINCE 1986

Jack Gellner and Brian Rattray

INTRODUCTION

With the implementation of the Uruguay Round Agreement on Agriculture in 1995, Canadian policy shifted toward reduced levels of support to agriculture and increased market orientation. The policy shift was reflected in a number of important changes:

- a shift from commodity price support to whole farm income stabilization;
- decreased use of subsidies for inputs;
- enhanced support for farm investment and diversification; and
- new emphasis on cost-sharing measures.

At the same time, federal and provincial governments were concerned with deficit reduction. The mandate to reduce deficits had major influences on agricultural safety net policies in the mid-1990s. A federal-provincial Memorandum of Understanding (MOU) negotiated in 1995 provided a management framework for the allocation of funds. In its 1995 budget, the federal government dramatically reduced agricultural safety net funds from over $1 billion in the early 1990s to $600 million in 1997/98.

OVERVIEW OF CHANGES TO POLICY ORIENTATION

The focus of government spending is shifting to non-trade-distorting or "green" programs as defined by the World Trade Organization (WTO) Agreement on Agriculture. In particular, there is greater relative emphasis on research and development and product safety, and less on commodity-specific income stabilization initiatives. Within income stabilization, there has been a major shift from commodity price support to whole farm income stabilization, consistent with WTO principles.

The Organization for Economic Cooperation and Development (OECD) uses the Producer Support Estimate (PSE) as an indicator of the annual monetary value of gross transfers from consumers and taxpayers to support agricultural producers. These gross transfers, measured at the farm-gate level, arise from policy measures which support agriculture. Figures 1, 2 and 3 in the Appendix highlight the differences in support in Canada, the United States and Mexico, and demonstrate the changes in producer support since 1986–88.

The PSE comprises Market Price Support (MPS) and direct payments to producers. MPS is an indicator of the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers arising from policy measures creating a gap between domestic market prices and border prices for a specific agricultural commodity, measured at the farm gate level. Direct payments are budgetary payments to producers based on factors such as output, area planted, historical entitlements, input use and overall farming income.

Canada's PSE shows a declining trend since 1986–88 due to lower MPS and lower direct payments, from a total of 51 percent of agricultural production to 23 percent in 1998. More specifically, MPS fell 19 percent in 1986–88. In 1998, MPS was just under half of all support and three quarters of that support was for milk production. Further, direct payments fell from 21 percent in 1986-88 to six percent in 1998 or in dollar terms from $3.8 billion in 1986–88 to $1.7 billion in 1998.

General Services Support Estimates (GSSE) or general service expenditures is another OECD indicator that reports the annual monetary value of

gross transfers to general services provided to agriculture collectively. These expenditures arise from policy measures which support agriculture regardless of their nature, objectives and impacts on farm production, income or consumption of farm products. Canada's GSSE declined from ten percent to six percent of production value from 1986-88 to 1998, with slight increases in the "research and development" and "inspection" categories. Also, general services increased as a share of total support (as measured by the Total Support Estimate).

MONITORING AND EVALUATING AGRICULTURAL POLICIES

Market Price Support (MPS)

As outlined above, MPS is an indicator of the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers. In Canada, MPS is mainly represented by supply management. Canada has a supply management system for dairy, poultry and eggs with considerable powers in three forms[†]:

- import quotas;
- a domestic quota system on individual producers; and
- a mechanism to set domestic producer prices.

These powers present significant intervention in marketing these commodities. The supply management system results in almost no budgetary cost to governments but consumers pay higher prices for some products.

There have been two important program changes concerning market price support. In 1995, the import control system for supply managed commodities changed under certain provisions of the WTO Agreement on Agriculture. Quantitative import restrictions were replaced by tariff rate quotas as border protection. In addition, imports of certain supply managed products, above historic levels, became subject to high over-quota tariffs.

[†] Editors note: "Supply management" as practised in Canada since the 1970s has meant tailoring domestic supply plus imports (less exports) to expected domestic demand at targeted producer prices. "Cost of Production" is used to establish price targets.

Direct Payments

Input and Output Subsidies. Direct budgetary payments to producers are comprised of both output and input subsidies. In general, output subsidies are not used as policy instruments in Canada. Safety net programs no longer contain deficiency payment schemes. However, dairy policy is an exception to this generalization on output subsidies since there is a direct payment on industrial milk. Producer revenues are a combination of the market return on dairy products and direct federal subsidy payment. Subsidy payments moderate the price of industrial milk products sold to the consumer by reducing the returns required by producers from the marketplace to achieve their target prices. In addition to the federal subsidy payment, Quebec maintains a commodity-based income stabilization program that provides direct payments to producers.

Direct payments in the form of input subsidies were used quite commonly in Canadian agricultural policy. The most important input subsidy involved transporting western grain to export port in which federal legislation fixed the freight rate. This subsidy was terminated in 1995.

Safety Net Programs. In Canada, there is a long history of farm safety net programs designed to increase income stability and reduce market risks. The Agricultural Stabilization Act was implemented in 1958 to provide deficiency payments to producers. More recently, the concept of whole farm income stabilization has become important in safety net policy. In late 1994, federal and provincial ministers of agriculture agreed that the model for future safety net policy would include three programs:

- crop insurance
- whole farm income program based on the Net Income Stabilization Account (NISA)
- province-based companion programs.

Today many Canadian producers have lower incomes, largely due to low commodity prices. In response, the Agricultural Income Disaster Assistance (AIDA) program began in February 1999. Over the past several years, seven federal programs were implemented to provide direct payments to producers: three

have been eliminated, one will be phased out and three still exist. These programs are described below.

Western Grain Transportation Act (WGTA). The WGTA was passed at the end of the Crow Rate era (1983) and continued some of the subsidization of rail movement of prairie grain to export. By 1995, the federal government viewed the subsidy as unsustainable while the international community viewed it as an export subsidy. The WGTA was eliminated in 1995, as was the smaller domestic Feed Freight Assistance program.

Gross Revenue Insurance Program (GRIP). In 1991, a voluntary national program available to grain, oilseed and specialty crop producers was set up to provide income support through market and production components of revenue. This program marked the transition from income protection at a sectoral or regional level to income support on an individual producer basis. Increasing dissatisfaction among producers, combined with pressing fiscal constraints by both levels of government led to termination of the GRIP in 1996.

National Tripartite Stabilization Program (NTSP). NTSP was set up in 1986 as a voluntary revenue insurance program to reduce losses to producers due to adverse changes in market prices or costs. It applied to livestock production outside of supply management and some horticultural and tree crops. In 1993, NTSP for red meats was terminated at the request of producers because of concerns over countervail actions. The entire program terminated in 1997.

Federal Dairy Subsidy. A direct deficiency payment made to producers for industrial milk produced within domestic requirements has been part of the national dairy program in Canada for several decades. It is to be phased out by January 31, 2002. Supply management remains in place.

Crop Insurance. Crop insurance has been a key federal and provincial program aimed at providing production risk coverage from drought, flood and hail to farmers in all provinces. Payments are triggered when a producer's yield falls below 70 to 80 percent of the farm's average historical yield. There

have been no substantive changes to crop insurance since the implementation of the North America Free Trade Agreement (NAFTA).

Net Income Stabilization Account (NISA). The NISA fund, initiated in 1991, receives producer contributions during favourable years and provides for withdrawals during years of low revenue. The uniqueness of the program is its whole farm approach, as opposed to the commodity-specific approach of previous stabilization programs. The program is funded by federal, provincial and producer contributions.

Agricultural Income Disaster Assistance Program (AIDA). This program was implemented in February 1999 to help with the farm income crisis triggered by low grain and hog prices. Initially, the federal government provided up to $900 million over the first two years, matched by up to $600 million from the provinces. In November 1999, the federal government provided a further $170 million.

IMPACT OF ELIMINATION OF FEDERAL SUPPORT PROGRAM

The phase-out of the federal dairy subsidy will be accompanied by administered adjustments to producer prices to offset the reduction in federal payments. The net effect will be to reduce the level of payments and increase MPS, with little overall change in total support (Appendix - Figure 4).

The elimination of the WGTA and changes to commodity specific programs have resulted in significant reductions in support levels to grains and oilseeds producers in Canada. Elimination of the WGTA ended MPS for these commodities. Also, reductions in other program payments and the reorientation of support programs resulted in a major decline in overall support for the grains and oilseeds sector. These changes are evident in measures of support to the grain and oilseed sectors in Canada. (Appendix - Figures 5 and 6).

Program changes have also had large impacts on red meat producers even though support levels were relatively low in the reference period. (Appendix - Figures 7 and 8). Elimination of the WGTA, in fact, ended a negative MPS for red meat commodities. This change, offset by payment reductions from

NTSP termination, resulted in an overall reduction in support for hogs and beef cattle producers.

General Services Support Estimate (GSSE)

As mentioned above, the GSSE or general service expenditures is an OECD indicator that reports the annual monetary value of gross transfers to general services provided to agriculture collectively. Federal agricultural research and development initiatives and government regulations are examples of general service expenditures.

Research and development to increase farm productivity is a Canadian policy objective. Recently, federal research funds have been allocated to avoid duplication and to match private sector contributions for high priority research and development activities. Also, regulatory reform has addressed food safety and quality concerns to improve consumer confidence. The Canadian Food Inspection Agency (1997) and Health Canada are responsible for health, safety and inspection services. The Agency's mandate includes recovering a portion of its costs from users of its services.

There are four federal government programs which comprise the majority of Canada's GSSE. They include:

- Canadian Adaptation and Rural Development (CARD) Fund
  The CARD Fund provides short-term funding for adaptation initiatives to support diversification, value-added processing, market development, innovation and job creation in the agriculture and agri-food sector. Adaptation programs provide the agriculture and agri-food sector and rural Canada with tools to acquire and use knowledge, skills and ideas to work together to create opportunities for themselves and their communities. CARD funding ($60 million annually), initiated in 1995, became a continuous program in 1999.

- Canadian Agri-Food Infrastructure Program (CAIP).
  It is a new $140 million investment in Western Canada to adapt to the changes triggered by transportation reform. Infrastructure changes include improving roads to contend with elevator consolidation and railway branch-line abandonment, and upgrading highway links to new grain terminals.

- Agri-Food Trade 2000 Program (AFT 2000).
  A cost-shared contribution program to support market readiness, market access and market development. Its objective is to increase sales of agriculture, food and beverage products in domestic and foreign markets. Program spending reached $12.8 million for the fiscal year 1999/00.

- Matching Investment Initiative Program (MII).
  Collaborative research activity between AAFC and the private sector, by matching dollar investments in research by industry. The program was introduced in 1995. Federal funding is expected to reach $35.8 million by 2000.

SUMMARY

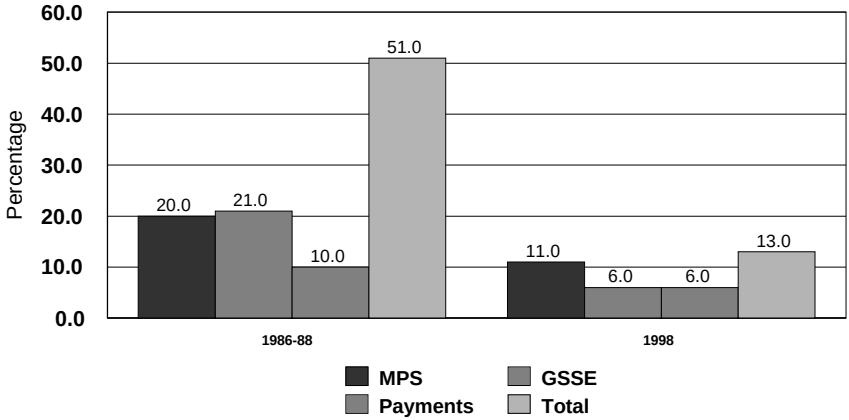
- Reduced budgets and more open trading rules have changed agricultural policies. There has been a significant downward trend in support to agriculture.
- Recent policy changes to Canada's safety net system helped producers manage their own risks in trade-neutral ways while improving the stability of farm income. The aim is to be compatible with WTO Agreement on Agriculture commitments and to avoid establishing a system that distorts producers' decisions.
- The broader policy framework has shifted its focus from the farm-gate to the entire agri-food system and rural economy.
- New policy initiatives focus on the enhancement of the industry's economic viability while strengthening rural community economic development. They are aimed at increased competitiveness and industry-led business plans developed at the regional level.

- Agricultural policy works in collaboration with other federal and provincial jurisdictions and industry to address horizontal initiatives such as biotechnology, climate change, the environment, endangered species, youth employment, rural development and aboriginal affairs.
- The Canadian agriculture and agri-food industry wants grassroots organizations to undertake more decision making and program delivery. This focus combined with the federal government's focus to reduce costs and enhance flexibility has allowed the government to approach adaptation programming from a new perspective.

APPENDIX

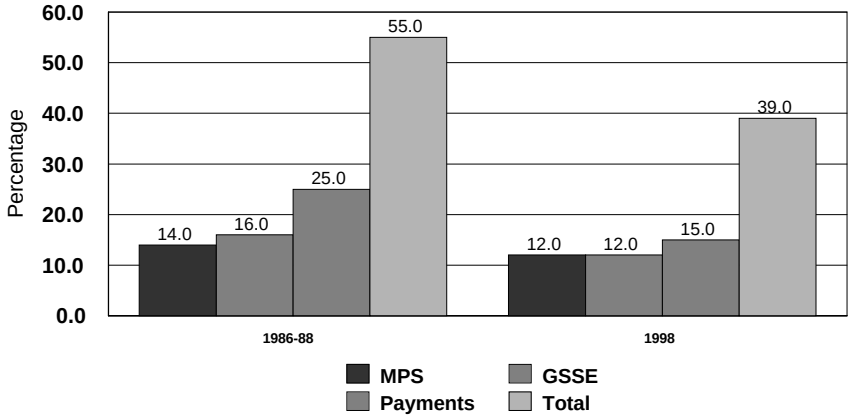
LEVEL AND BREAKDOWN OF PSE FOR NAFTA COUNTRIES AND SELECTED COMMODITIES

Appendix Figure 1: Canada--OECD Support Estimates.



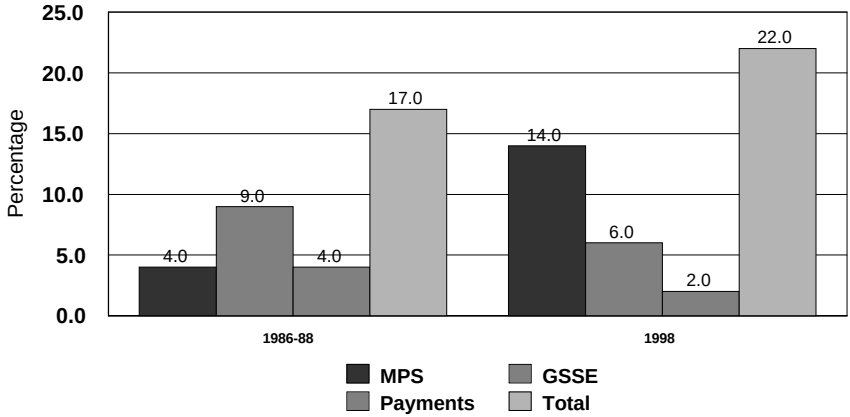
Source: OECD Producer and Consumer Support Estimates, Database, 1999

Appendix Figure 2: United States--OECD Support Estimates.



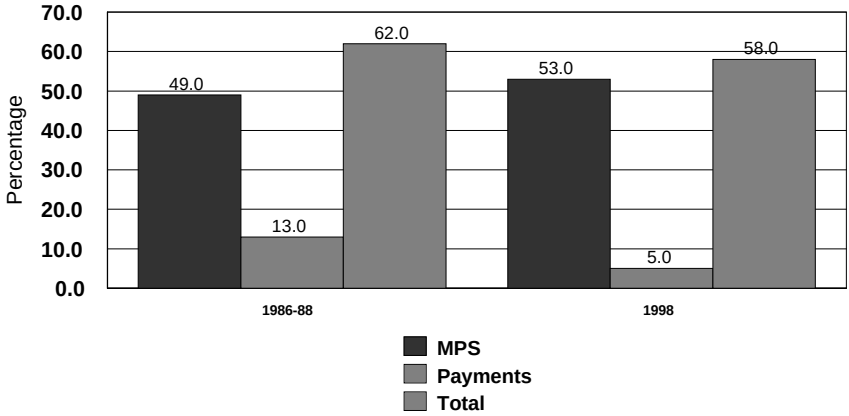
Source: OECD Producer and Consumer Support Estimates, Database, 1999

Appendix Figure 3: Mexico--OECD Support Estimates.



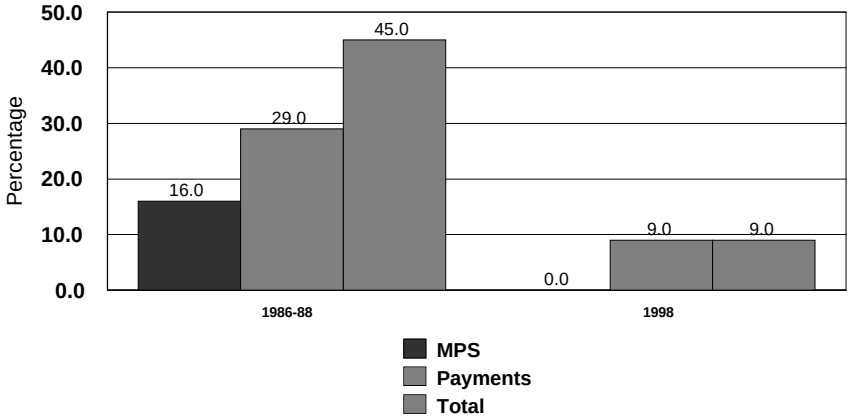
Source: OECD Producer and Consumer Support Estimates, Database, 1999

Appendix Figure 4: Canada--OECD Support Estimates, Dairy.



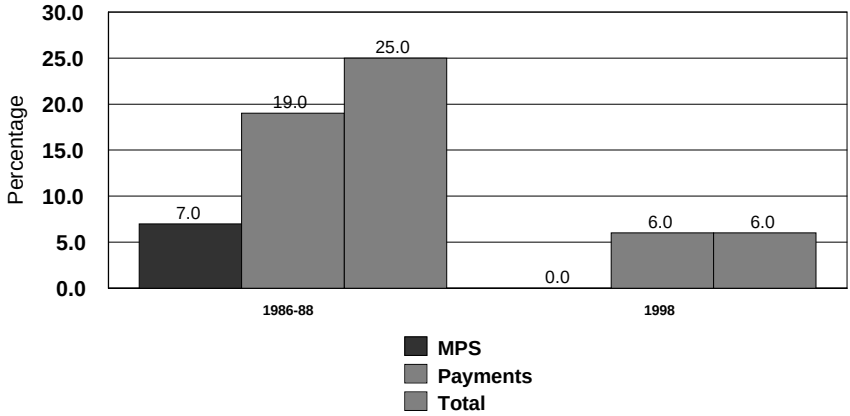
Source: OECD Producer and Consumer Support Estimates, Database, 1999

Appendix Figure 5: Canada--OECD Support Estimates, Wheat.



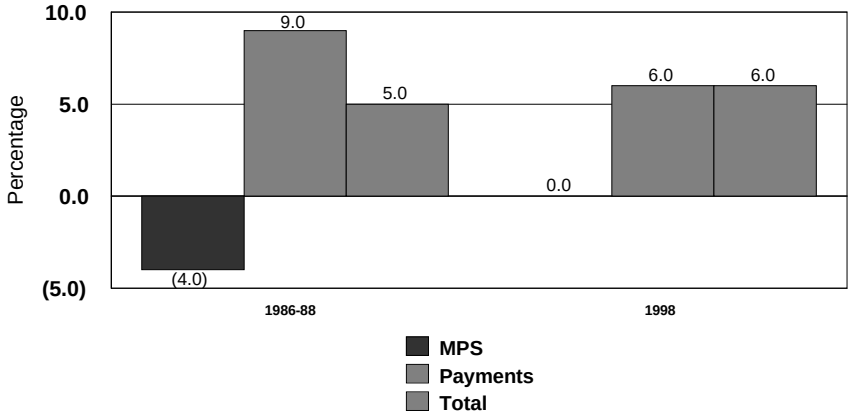
Source: OECD Producer and Consumer Support Estimates, Database, 1999

Appendix Figure 6: Canada--OECD Support Estimates, Oilseeds.



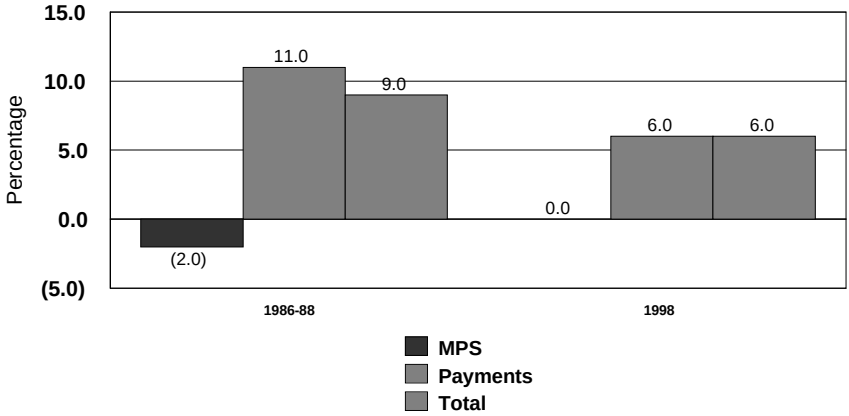
Source: OECD Producer and Consumer Support Estimates, Database, 1999

Appendix Figure 7: Canada--OECD Support Estimates, Hogs.



Source: OECD Producer and Consumer Support Estimates, Database, 1999

Appendix Figure 8: Canada--OECD Support Estimates, Beef Cattle.



Source: OECD Producer and Consumer Support Estimates, Database, 1999

POLICY DEVELOPMENTS IN CANADIAN AGRICULTURE: REPORT CARD ON TRADE LIBERALIZATION

Michele Veeman

BACKGROUND

The country policy review paper on policy developments in Canadian agriculture gives a concise listing of program changes for agriculture and food that have occurred since the mid-1980s. A major focus of many of the changes, as noted in that paper, is to orient agricultural programs to be consistent with the Uruguay Round Agreement on Agriculture (URA). The related, and even more compelling, focus underlying the reorientation of Canadian agricultural policy in the last half of the 1990s, has been reduction of budget outlays. A further motivation for changes in farm programs has been the high levels of costs associated with trade disputes. However, the need for expenditure reductions reinforced political will for action on a number of the policy changes highlighted in the country policy review paper for Canada.

IMPACTS ON THE CANADIAN FOOD INDUSTRY

The changes in Canadian agri-food policy that are outlined in the country review paper have accompanied considerable transformation of the Canadian food processing and distributing industry. At the start of the period under review, Canadian food processing and distribution were highly concentrated. Food manufacturing, in particular, contained numbers of relatively small-scale, high-cost plants, sheltered behind protective tariff walls. Industrial reorganization has occurred during the period since the mid-1980s and the industry now includes many lower-cost, larger technologically advanced processing units. This underlies increased exports of prepared and semi-prepared food by Canadian food processors. A recent study of Canadian food manufacturing companies, by Agriculture and Agri-Food Canada and Statistics Canada, focuses on advanced technology in food manufacturing. The study included assessment, by managers of the sampled firms, of their technological competitiveness. Of

these, 23% believed they were technologically more advanced than their US competitors, while 26% believed that their firm lagged in competitiveness [Baldwin et al, 1999].

The North American Free Trade Agreement [NAFTA] is often credited with contributions to this transformation, which has not been confined to Canada, but is paralleled in other nations. However, the removal of distorting agricultural programs (such as changes in Mexico's programs for maize and the deletion of Canada's transportation subsidies for grain, among other domestic policy reforms), as well as economy-wide changes in economic policy that are not directly related to NAFTA, are believed to be larger influences on trade within North America [Burfisher and Jones, 1998]. In Canada, corporate restructuring with associated major reorganizations of structure and operations has been evident in virtually all components of the food processing and distribution industries, including meat packing, grain handling and dairy foods.

Within agriculture, the regional integration of North American markets for farm products is most evident for red meats and for livestock. The cross-border markets for live cattle and beef in particular are fairly well integrated and highly interdependent. However, even in this sector, complete mutual recognition of the equivalency of beef grading standards has not occurred. Differences in grade standards have long been recognized to have impeded the evolution to a single market for beef [Hayes and Kerr, 1997]. These differences have contributed to such features as the value of boxed beef imports being heavily discounted in both the United States and Canada [Young and Marsh, 1998]. Proposals to introduce mandatory country-of-origin labeling for meat, which can be viewed to be a non-tariff barrier, raises potential trade concerns [FSIS, 2000]. For grains, market integration is hampered by institutional differences, such as in grain trading institutions and variety licensing practices. Cross-border market integration for the politically sensitive sectors is limited. In Canada, these are the supply managed sectors for dairy, poultry and eggs.

IMPLICATIONS OF CANADIAN AGRI-FOOD POLICY DEVELOPMENTS

The extent of the reform of agricultural and food policy in Canada is encapsulated in the summary figures showing the changes, over time, in OECD

support estimates for Canadian agriculture that are included in the country policy review paper for Canada. The removal of transport subsidies eliminated most of Canada's export subsidies and removed a large component of Canada's aggregate measure of support, with an associated significant reduction in transfers to the farm sector. A very high proportion of agricultural imports now enter Canada duty free. This proportion is higher than for any other OECD country [OECD, 1997]. However, the levels of tariff protection afforded the Canadian supply managed sectors are extremely high. When these are included, the average tariff rate on agricultural imports by Canada is calculated to be about the same as in the United States. This was 21% in 1996, according to WTO Secretariat calculations [WTO, 1997].

The continuing distortions in Canada's supply-managed sectors are reflected in the existence of 22 different tariff rate quotas. Most of these apply to the supply managed commodities. The fact that the supply-managed sectors have escaped meaningful reform can be attributed to the receptivity of regional sensitivities to effective lobbying and the absence of fiscal pressure, as the cost of support for these programs is borne mainly by consumers, whose ability to influence farm policy has been minor. This is the area of Canadian agricultural policy that requires further reform.

THE WTO RULING ON CANADA'S DAIRY POLICY: A SOURCE OF MAJOR CHANGE LEADING TO TRADE LIBERALIZATION OR AN IMPETUS TO MINOR ADJUSTMENT OF SUPPLY MANAGEMENT POLICY?

The recent WTO dispute settlement ruling concerning Canada's dairy trading and pricing practices is of interest as the first post-Uruguay Round WTO dispute settlement case that focuses on agricultural export subsidies. This is also the first occasion of a trade law ruling that an export subsidy has been provided at the cost of domestic consumers through price discrimination between domestic and export markets. In addition, the panel finding suggests that agricultural pricing practices for some other commodities that seem to involve systematic price discrimination between domestic and export markets could potentially also be challenged as export subsidies if this is effected through government action. Also of interest is whether the need to change Canada's

dairy pricing policy in response to the WTO ruling will be a trigger for substantial policy reform of supply management.

The WTO Appellate Body that examined the initial panel findings concerning the complaint against Canada's dairy price pooling practices concluded that the procedures associated with the arrangements for Canada's special milk classes 5 (d) and 5(e) constitute an export subsidy. These procedures make provision for milk that is priced significantly lower than the domestic milk price to be made available to processors/exporters. Access to this milk is only available for sales into export markets. The pricing of special class milk at prices lower than processors/exporters can obtain elsewhere was judged to confer a benefit to processors/exporters since revenue is foregone by its being discounted in price. Since this benefit is associated with the export of dairy products and the actions of governments or their agencies are required to provide for these benefits, the panel and the Appellate Body judged this benefit to represent the direct payment of an export subsidy. Consequently, it was determined that in following price pooling procedures for the two specific special classes, export subsidy reduction commitments arising from the URA had not been met. The export subsidy ruling applies only to the export classes 5(d) and 5(e) which were pooled with higher priced end-uses for domestic use. The dairy pricing challenge did not apply to the other Canadian dairy export category (the "optional dairy export program"), introduced at about the same time as the price pooling arrangements. Revenues from this milk are handled differently in different provinces, but this category of milk is not pooled with higher-priced end-uses for domestic use and thus does not receive a consumer financed export subsidy [WTO Panel, 1999; WTO Appellate Body, 1999].

Another issue in the dairy dispute related to the way in which Canada applied its tariff-rate quota for fluid milk imports. The United States had argued that this did not meet Canada's URA commitments. Fluid milk imports were confined to importation of restricted quantities for personal use by individual cross-border shoppers. (Canadian dairy interests have pointed out that the United States did not actually adopt any provision for fluid milk imports in its URA commitments.) The U.S. challenge on Canada's provision for access of fluid milk, and the initial panel finding on it, were not upheld by the Appel-

late Body, although Canada's restriction limiting cross-border imports to $20 for each individual entry was ruled to be inconsistent with its commitments.

Canada has agreed to reduce subsidized dairy exports (and to remove the milk entry limitation of $20) in compliance with the WTO ruling. Canadian dairy policy and procedures must now be developed that will ensure that this commitment is maintained in the future. One view of the necessary adjustments to Canada's dairy pricing and marketing arrangements, stated by industry spokesmen, is that changes can be made to meet Canada's export subsidy commitments in a way that need not interfere substantially with the supply management program for dairy. This approach to the need for adjustment of dairy policy is to make minimal changes to the current administered procedures, as by running a "tighter" program [DFO, 1999]. This policy reaction is likely the most expedient, politically, despite the expectation that future negotiations on agricultural trade liberalization will emphasize reductions in prohibitive tariff levels associated with tariff rate quotas so that the current isolation from world markets of Canada's supply management programs is unlikely to be sustained in the longer-term.

The need for reform of Canadian dairy policy extends to domestic trade. Provincial-level restrictions have, with some exceptions, limited interprovincial shipment of raw and semi-processed dairy products and there is virtually no ability for adjustments in dairy production and processing between provinces and regions in response to any differences in their economic environments. A challenge of restrictions on the shipment of milk from Nova Scotia to Prince Edward Island has recently occurred under procedures relating to Canada's Agreement on Internal Trade [AIT]. A ruling through the AIT panel process, which follows procedures patterned on international trade dispute procedures, was made in early 2000. This panel found that dairy regulations adopted by Prince Edward Island do contravene the AIT, but no resolution of this issue has occurred to this point.

The limited experiment to allow quota movements between regions through an interprovincial quota exchange, introduced in 1997, concluded in 1998. Ontario withdrew from these arrangements in March 1998, reportedly after more than two percent of provincial dairy quota was sold to producers in

Nova Scotia and Quebec. Later, with a net loss of dairy quota to Quebec and stated concerns about increasing quota price levels, Nova Scotia withdrew from the interprovincial quota exchange program, ending this particular experiment [DFO, 1999]. The alternative to the current rigid system of production/marketing quotas would be a more flexible system based on contractual arrangements between producers and their cooperative processing companies (or with other processors) but there is little indication that this is likely to be advocated by farm organizations.

CHALLENGES FOR CANADIAN AGRI-FOOD POLICY AND OTHER TRADE LIBERALIZATION ISSUES

As noted above, a major challenge for Canada's agricultural policy relates to the continued isolation of the supply managed sectors---the dairy industry in particular---from world trade. Producers' associations have been unwilling to seek the opportunities of competing in the larger North American market by moving to reduce the barriers to cross-border trade within North America. Recent price-tracking reports by ACNielson-Canada of cross-border retail prices for dairy products, commissioned and reported by Dairy Farmers of Ontario [DFO, 1999], show retail dairy prices for a variety of dairy foods to be higher in major U.S. cities than in cities in Canada, despite considerably higher producer-level prices for milk in Canada. Such comparisons are, of course, considerably influenced by the choice of the comparison city locations and retail outlets as well as by the rate of exchange between the Canadian and U.S. dollar. Even so, their focus is reinforced by the change over time in earlier patterns of cross-border shopping involving considerable diminution of this practice. These suggestions and other indications of increased efficiency in the dairy processing and distributing sectors in Canada do not support a hypothesis that the Canadian dairy industry would be at a major disadvantage relative to the US industry with a more open border. In fact, the opposite could be argued.

The increases in the level and concentration of trade between the United States and Canada have contributed to increased tensions over trade flows. As is discussed in other papers in this proceedings, these have resulted in U.S. countervail actions on Canadian exports of pork and live hogs, and a series of U.S. actions and inquiries related to single-desk selling of Canadian wheat and

barley. Challenges and disruptions in the export of beef from Canada to the United States have also occurred periodically. Tension continues between the United States and Canada about trade in softwood lumber, for which Canadian exports to the United States are effectively constrained. There is much concern in the United States (and some other countries) about Canada's trade policy for its supply managed sectors.

Despite periodic but persistent tensions over agricultural trade, in general the dispute settlement procedures of the WTO and NAFTA have streamlined the resolution of cross-national trade disputes and moved the outcome of these away from reliance on market power, in favour of settlement according to agreed rules. Even so, Canadians and others have concerns about the ability of U.S. farm groups to seek protection under national trade remedy legislation. The relative ease with which U.S. procedures for countervail and antidumping can be invoked by regional interest groups and producers' associations have imposed high levels of legal and other costs on some Canadian export sectors.

Existing trade dispute procedures are not well suited to the settlement of tensions arising from policy changes involving specifications of quality or grading that result in limitations of cross-border trade. A current example of this type of activity applies to the U.S. provisions for grading of meat that meets USDA standards. Currently beef and other livestock carcasses may be shipped from Canada to U.S. plants for USDA inspection and grading, but a legislative change that would disallow USDA grading of imported carcasses (and thus encourage U.S. importation of slaughter animals rather than beef carcasses) has recently been proposed.

Through the action of working groups, NAFTA was supposed to aid the harmonization of standards to reduce the potential for disputes that might arise through technical barriers to trade, as from differences in national composition or quality standards for food and associated labeling policies. These types of issues are likely to be of increasing importance in the future. In developing a report card on trade liberalization through NAFTA, a high mark cannot be given for major achievements in standards harmonization to date.

SUMMING UP

The report card that could be given for changes in Canadian agricultural policy relative to trade liberalization since the mid-1980s would note the major reduction in Canada's program expenditures that might distort agricultural production decisions, for the major products of grains and livestock. It would express concern about the relatively low progress on liberalization of trade, domestically and internationally, for Canada's supply managed products, particularly for dairy. The report card could raise concerns that the levels of Canada's investment in publicly funded research on agricultural and food issues is lower than desirable. It could suggest that more public communication and policy attention be directed to issues of food quality and safety and that more emphasis be placed on pursuit of harmonized standards---at the domestic as well as the international level. In looking towards the future, the report card could express concerns that Canada's current budget surpluses not be spent on emergency assistance in agriculture without targeting funding to assess the efficiency and distributional consequences of expenditures; concerns could be expressed that this type of assessment also be applied to other policy initiatives directed at agriculture and rural Canada.

In commenting on both the progress for Canadian policy and the effectiveness of NAFTA as a vehicle to promote trade liberalization, investment, and reduced trade disputes, the report card might sum-up as: "good progress but keep on working for even better achievements."

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GENERAL DISCUSSION

Comments in the open discussion session indicated that the main impact of NAFTA has been on trade flows, both north-south and south-north. It was also noted that NAFTA has had a large impact on the Canadian food and beverage processing sector as now Canada has begun to establish world class and scale production plants. Foreign investment in the sector is looked upon as being positive. Agri-food companies are now treating the market as being continental.

The point was made that we talk about liberalization under NAFTA yet, at the end of the day, PSE's in some countries have gone up, and are equal today to the levels of the late 1980s and early 1990s. This has created serious imbalance in producer returns within and between countries. For example, a Canadian prairie wheat farmer has a PSE of around 10 percent, but has to compete with PSE levels over 40 percent on U.S. wheat production. Dairy producers in Canada and the United States enjoy PSE's over fifty percent, close to the levels of a decade ago. Resource allocation and farm adjustment made under these mixed and conflicting market signals are unlikely to produce efficient and sustainable production. It appears that U.S. payments have been 'recoupled' which means that important parts of the 1996 Freedom to Farm Bill have been abandoned. The 2001-02 debate on the Farm Bill is expected to focus on recoupled payments in the U.S. It might be expected that WTO negotiations will also raise this issue.

It was noted that in this policy evolution portion of the workshop, there had been almost no mention of the Canadian Wheat Board. The question was posed: will it be relevant in the future? There appears to be growing interest in reform of the CWB, but it seems this won't happen quickly. The CWB has already gone through some changes, e.g., it has some new rules in place to be able to make changes and, farmers now sit on its board of directors. Comments indicated that more changes are likely to take place within the industry to pro-

mote changes in the system without destroying the CWB. Election of Board directors (November, 2000) could change the composition of the Board, or may reinforce the status quo. The current income conditions for prairie farmers detract from reform initiatives. The repetitive threats from the United States in the form of trade remedy law applications also detract from reform.

Beef/veal PSE's are about 6% in Canada. The US ITC has different numbers. Economists can't agree on the effects and impacts of subsidies. What do economists contribute to ITC investigations? Mexico often has these debates with the OECD concerning PSE calculations. What methodology used to calculate PSE's, and are the results dependable measures of aggregate public support? What is non-countervailable? As far as Mexico is concerned, these questions remain unanswered.

The question was posed of why the United States does not move towards a NISA-type (whole farm revenue, individual account, producer/government contribution) program. There are currently advocates of a whole farm risk management type program in the United States. The probability of getting all stakeholders to agree on such a program is not great although certain groups, such as livestock, would likely benefit. Also, fruit and vegetable growers indicate they would be interested. The down side is that the strongest lobby would be the crop insurance "people" who are organized on a commodity basis. The crop insurance people feel that a whole-farm NISA-type program would remove the need for crop insurance programs. It was pointed out that this is not the case in Canada where private hail insurance and public crop insurance programs are significant components of agricultural safety nets.

Total world trade in grains has not increased, but grain trade statistics do not reflect increased cattle/beef trade. It was suggested that a useful contribution of economists would be to compile some type of index measuring the feed equivalent in meat exports. Part of the increase in cattle/beef trade is attributable to demand side phenomenon and innovation in transportation to reduce costs. This kind of innovation has not yet taken place in the grain sector.

There is a need to focus on the consumer. Organics, environmental concerns, GMOs, neutraceuticals, and other consumer/public issues are be-

coming more important in the food market. An important issue for the agri-food industry is whether North America will face the same level of intensity on contentious issues as the EU. Will consumers become more of a driving force on policy formation? The agri-food industry cannot neglect these concerns and issues. It was concluded that these factors indicate the need to harmonize policies and programs, as well as to improve communication with the public. Consumers are increasingly technologically literate and responsive to innovative nutrition. Consumers will pay more if the value is recognized, but they don't always recognize the value-added. AAFC research into this issue indicates consumers want the ability to choose between GM and non-GM foods. Therefore, segregation and labeling are emerging issues that will affect policy makers.

Section 3

Case Study Analysis of Trade Disputes Between NAFTA Partners

The objective of this session is to review dispute resolution mechanisms, and analyze causes, implications, costs and outcomes of trade disputes in wheat, cattle, dairy, sugar, and avocado.

NAFTA TRADE DISPUTE RESOLUTION: WHAT ARE THE MECHANISMS?

Mary Burfisher, Terry Norman and Renée Schwartz

Since NAFTA's inception, there have been numerous trade disputes and trade frictions among the three signatory countries—some of which even predate the trade agreement. The sources of these disputes might be classified in four general categories. The first results from ambiguities in the agreement itself, which have led to disputes over the interpretation of the agreement. Other trade disputes have emerged or intensified with the deepening of trade and the increased integration of regional agricultural markets. With open borders, domestic policies that influence production, prices or trade have more direct spillover effects into agricultural markets in other NAFTA countries, and may lead to trade frictions. Third, an increasing number of disputes are related to sanitary and phytosanitary issues; these disputes are particularly complicated due to the presence of three different regulatory frameworks managing disease and pests within the region. A fourth source of trade disputes is the increased competitive pressure under free regional trade that has led some industries to seek protection through trade actions.

The objective of this paper is to review the *formal and informal* mechanisms that have been utilized to resolve trade disputes among NAFTA members. By formal, we refer to the NAFTA and WTO dispute resolution mechanisms, as well as to national antidumping (AD) and countervailing duty (CVD) actions. These formal mechanisms are legalistic in the sense that both the time-

tables and the rules of procedure in each stage of the dispute settlement are strictly specified. These formal mechanisms include both consultative measures and arbitral panels. Consultative measures attempt to find mutually satisfactory outcomes to disputes. When consultations fail, countries can resort to arbitral panels, which are designed to be codified and legalistic. Panels have an outcome that finds for or against the petitioner and the offending country. By informal mechanisms, we mean venues in which transnational disputes are resolved, or even prevented, through negotiation and consensus, using typically ad hoc processes that are defined by the participants. Participants in informal processes are more diverse than in the formal mechanisms. Informal processes can include industry or firm representatives, technical experts, and government agents. While the formal venues help to create an orderly, predictable, rules-based system for international trade, the informal venues can be more cost-effective, and may be used to prevent trade disputes from occurring or escalating.

FORMAL DISPUTE RESOLUTION MECHANISMS IN NAFTA AND WTO

NAFTA and WTO Reference

NAFTA created formal mechanisms for solving trade disputes. The principal dispute mechanisms are provided in Chapters 11, 14, 19, and 20. Chapter 11 covers disputes related to investment, and Chapter 14 covers disputes related to services. So far, agricultural trade disputes have been addressed under Chapters 19 and 20 of the agreement. Chapter 19 concerns the application of anti-dumping and countervailing duty laws. Chapter 20 covers disputes that relate generally to the interpretation or application of NAFTA.

Both Chapters 19 and 20 provide for several stages in the process of dispute resolution, beginning with consultations or mediation among disputing parties (Table 1). Under Chapter 19, the Agreement provides for regular consultations where parties can inform interested parties of domestic antidumping (AD) and countervailing duty (CVD) investigations, and provide them with an opportunity to furnish information. Once national investigations are complete, parties may request panel reviews of other parties' final determinations of dumping, subsidization or injury to domestic industries. Under Chapter 20, consultations occur at the request of a party. When consultations fail to resolve an

Table 1: Formal Dispute Resolution Mechanisms in NAFTA.

Dispute resolution mechanism	*Who initiates?*	*Process*	*Outcome*
NAFTA consultations	Under Chapter 19, countries ("parties") agree to consult annually, or at the request of any country. Under Ch. 20, a party may request bilateral consultations on matters relating to the agreement.	Under Chapter 19, each party designates one official to be responsible for regular consultations. Under Chapter 20, parties provide information and attempt to reach a mutually satisfactory resolution within 30 days, or within 15 days if the case relates to perishable goods.	Under Chapter 19, parties consult annually, notify interested parties of investigations, and provide parties an opportunity to present information. Under Chapter 20, parties attempt to reach a mutually satisfactory outcome during consultations; if they fail, they may request a meeting of the Commission.
NAFTA meeting of Commission (Chapter 20 only)	Under Chapter 20, if consultations are unsuccessful, generally within 30 days, complainant may request a meeting of the Commission.	Within 10 days of the request, the Commission will take action to mediate or resolve the dispute. The Commission may call on advisers or experts; use mediation, conciliation and other measures; and make recommendations.	The Commission makes recommendations that may assist parties in reaching a mutually satisfactory resolution; if this fails, parties can request arbitral panels.
NAFTA arbitral panels	Under Chapter 19, parties may request a panel review within 30 days of the publication of national, final determination of dumping, subsidization or injury. Under Chapter 20, if the Commission has convened but the matter is unresolved within 30 days, the complainant may request an arbitral panel.	Under chapter 19, within 30 days of the request for a panel, each party chooses two expert lawyers; within 55 days, they must agree on a fifth panelist/lawyer. Under Chapter 20, the panel chair is agreed upon within 15 days, and within the next fifteen days, each party chooses two additional panelists from the other party. The panel procedures ensure a right to at least one hearing before the panel, written submissions and rebuttal arguments. Within 90 days, the panel presents to the two parties an initial written declaratory opinion. The initial opinion becomes the final declaratory opinion, unless a Party requests a reconsideration.	Under both chapters, a party found to be in contravention must bring measures into conformity with the panel report, or be subject to compensation or retaliatory suspension of benefits. Under Ch. 19, parties may appeal the initial opinion. Under Ch. 20, parties may request a reconsideration before publication of the final opinion, which cannot be appealed.
WTO arbitral panels	Members must attempt to resolve disputes through bilateral consultations. If unsuccessful within 60 days, complainant may request that the Dispute Settlement Body (DSB) establish a panel.	Within 30 days, parties choose three expert panelists, to act in a neutral personal, rather than governmental, capacity. Panel proceedings are quasi-judicial process of written submissions, counter-submissions, oral hearings, and cross-examination. Panel report is issued to parties, and within 60 days, must be adopted by the DSB. Panel decision may be appealed or by consensus decision, may not be adopted by the DSB.	A party found to be in contravention must submit a plan for implementation of the panel report, compensation, or be subject to retaliation.
National CVD or AD actions (U.S. practice; Canadian practice is quite similar)	Domestic industry or party files a petition with the US Department of Commerce alleging unfair foreign competition.	Commerce investigates merits of allegations. US ITC also investigates whether US industries are likely to be harmed. Results of investigations are published in the Federal Register. Commerce calculates dumping or countervailing margins, publishes an AD or DVD Order	Commerce directs Customs Service to collect cash deposits on imports of the merchandise if there is a positive determination

issue, parties can request a meeting of the Commission. The Commission can call on experts, attempt mediation, and make recommendations for the resolution of the dispute. As a last resort in the dispute settlement process under Chapter 20, parties may request a panel review of the issues in dispute.

While the dispute settlement mechanisms under the two chapters differ in some details, in general they are similar in their development of strict rules of procedure and timetables for panel selection and panel decisions. The rights of each party to choose panelists who are charged with acting in a neutral, expert, and personal rather than national capacity, and the use of arguments, submissions and rebuttals are specified. At the close of the review period, panels issue initial declaratory opinions, along with recommendations for remedial action if the panel's findings are affirmative. Under Chapter 19, parties may object to or appeal the panel decision. In this case, an extraordinary panel will reconsider the panel's findings, and either uphold them or remand them to a newly formed panel. Under Chapter 20, the panel may reexamine the finding before publishing its final opinion, which is not subject to appeal. Under both chapters, the resolution of the dispute should be the removal of the offending practice, but failing that, the offending party must make compensation or the injured party may take comparable action against the offending party.

By the time an issue is referred to the Commission, it is not very likely that it can be resolved without a panel. So far, there have been 4 cases brought into panel reviews under Chapter 19 of the NAFTA, and 2 cases under Chapter 20 (Table 2). Chapter 19 cases involved U.S. malt beverage exports into Canada, U.S. refined sugar exports into Canada, live swine exports from Canada into the United States, and fresh cut flowers exported from Mexico to the United States. Chapter 20 panel reviews covered the interpretation of NAFTA provisions related to Canadian use of tariff rate quotas (TRQ's) on imports of some agricultural products from the United States, and the legality of U.S. safeguard action on broom corn brooms from Mexico.

NAFTA members also have the right to pursue actions within the framework of the WTO. They may pursue any suits relating to matters that are covered by both the NAFTA and the WTO Agreement, but can pursue a specific issue in only one forum, not both. The WTO has a panel system similar to that

Table 2: Examples of Resolving NAFTA Agricultural Trade Disputes Through Formal and Informal Mechanisms.

Dispute resolution mechanism	*Selected examples*
NAFTA/FTA dispute resolution mechanisms	Chapter 19 panels considered Mexican AD duties on US HFCS exports, US refined sugar exports to Canada, Canadian swine exports to United States and Mexican fresh cut flower exports to the United States. Chapter 20 panels considered Canadian TRQ's on poultry, dairy, barley and margarine, and US safeguards on broom corn brooms from Mexico
WTO/GATT dispute resolution mechanisms	WTO panels considered the Canadian fluid milk TRQ and certain milk pricing practices. Mexican HFCS duties, and Canadian pork exports to the United States.
National CVD or AD actions	Mexico investigated or implemented duties on HFCS, hogs, beef, apples and wheat from the United States, and Canada. United States investigated or implemented duties on tomatoes, cattle and beef from Mexico, and live swine, pork and cattle from Canada. Canada investigated and placed duties on red delicious apples, refined sugar, and certain potatoes from the United States.
Government negotiations	Standing Committees on Agricultural Trade and the NAFTA SPS Committee have addressed issues including regionalization, Mexican SPS import permits for US and Canadian wheat. Ad hoc negotiations established minimum price agreements for US apples and Mexican tomatoes, established one year TRQ for US imports of wheat from Canada, and modified Mexico's dry bean quota auction system, and the application of the US TRQ's for imports of sugar and sugar containing products from Canada. The Canada/US Record of Understanding has put in place a mechanism for managing the bilateral agricultural trading relationship and a framework for resolving many different kinds of trade irritants to prevent them from escalating into disputes.
Industry negotiations	US and Mexican grape industries resolved dispute over Mexican labeling regulations. Mexican and US cattle industry negotiations prevented Mexican AD. The Advisory Committee on Private Commercial Disputes Regarding Agricultural Goods resulted in the establishment of a voluntary industry led trinational Fruit and Vegetable Dispute Resolution Corporation to begin functioning.
Technical assistance	NAFTA SPS Committee facilitates regional technical cooperation. United States and Mexico established bilateral Plant Health Working Group and Karnal bunt Team. Two standards system for perishable commodities.

of NAFTA. The global mechanism for resolving trade disputes was considerably strengthened in the Uruguay Round. Gifford (1997) and Brosch (1998) describe the new credibility that was given to the WTO process in the Uruguay Round by the decision to prevent parties from blocking panel reports and providing parties with an Appellate Body review process. As in the NAFTA, the offending member must bring its policies into conformity with the finding, provide compensation, or face retaliatory withdrawal of concessions. So far, two cases involving disputes among NAFTA parties have been brought to the WTO. The United States has taken the Canadian fluid milk TRQ and certain milk pricing practices into dispute settlement at the WTO, and has requested a WTO panel review of Mexico's HFCS duties. Although it pre-dates NAFTA, Canada took the issue of assumed pass-through of subsidy from live swine to pork to the GATT. This was after implementation of the Canada-U.S. Free Trade Agreement when there was a choice of forum. In fact, in that instance, Canada

pursued the pass-through issue in the GATT and other aspects of the live swine countervail under the FTA simultaneously. In addition, there are other cases, e.g., live cattle, where WTO consultations were initiated but not carried through to the point of a request for a panel.

National AD and CVD Actions

National anti-dumping (AD) and countervailing duty (CVD) investigations and duty assessments have been a mechanism for NAFTA countries to address trade disputes by taking independent action to address perceived unfair trade practices. AD duties may be imposed if imports are being sold at less than fair value and causing or threatening to cause injury to a domestic industry. CVD duties may be imposed on imported goods to offset subsidies provided to producers or exporters by the government of the exporting country, and must also meet an injury test. Under NAFTA, each member preserved its right to apply its own AD and CVD laws, but agreed to publish notice of national AD or CVD investigations and inform other parties of the mechanisms for providing input. Recent AD and CVD actions include Mexico's investigation of high fructose corn sweeteners (HFCS) imports from the United States, the U.S. investigation of tomato imports from Mexico, the Canadian investigation of refined sugar imports from the United States, and the U.S. investigation of live cattle imports from Canada.

INFORMAL DISPUTE RESOLUTION MECHANISMS

Dispute resolution under the formal NAFTA mechanisms and AD and CVD actions represent only a very small part of the dispute resolution process that has developed and is strengthening under NAFTA. Indeed, the referral of disputes to formal venues is a means of last resort, and might be considered a sign of failure in bilateral relations. One may identify three other trade dispute resolution mechanisms: governmental negotiations, private industry negotiations, and ongoing formal and informal consultations through technical level working groups and assistance (Table 2). Most disputes are being addressed in earlier stages through consultation and negotiation in these informal venues. More importantly, greater informal linkages are likely to be preventing misunderstanding from occurring, and developing into sensitive, high level disputes that must be resolved in formal settings. By fostering greater communication

among parties engaged in trade, these mechanisms may also help to prevent trade disputes from occurring.

Government to Government Negotiations

Government negotiations offer a venue for resolving disputes before they reach the litigation or investigation stage. Ad hoc governmental negotiations have addressed trade disputes as they occur, and some negotiations are conducted in standing committees, in particular the Committee on Agricultural Trade and the Committee on Sanitary and Phytosanitary Measures (SPS Committee).

The Committee on Agricultural Trade is responsible for monitoring and promoting cooperation on the implementation of the agriculture provision of NAFTA and for providing a forum for consultations on agricultural trade issues. For example, clarification and publication of Mexican requirements for the issuance of SPS import permits for wheat imports was achieved following consultations on this issue in the NAFTA Committee on Agricultural Trade.

The NAFTA SPS Committee's role has been to facilitate technical cooperation between NAFTA partners and to enable consultation on SPS measures. This has provided a venue for resolving, and preventing, disputes relating to SPS measures, which have grown significantly in recent years. One achievement has been the implementation within NAFTA of "regionalization," a concept originally contained in the Canada -U.S. Free Trade Agreement and further developed in the WTO SPS Agreement and the NAFTA SPS provisions. This term refers to the process in which certain regions of countries are declared to be free of certain pests or diseases, even though these diseases or pests are present in other parts of the country. Regionalization permits some trade to take place, even though the SPS regulations of the importing country would have otherwise prevented it.

Trade restrictive actions taken or threatened against imports from Canada by several northern tier U.S. states in the fall of 1998 were resolved through bilateral government consultations which eventually led to negotiation of the Canada - U.S. Record of Understanding (ROU) in December of 1998. The ROU put in place a more effective process for managing the bilateral agri-

cultural trading relationship. In addition to establishing a framework for managing the relationship, the ROU also committed both countries to an Action Plan to deal with seventeen specified issues to reduce bilateral trade tensions and facilitate the increased two-way flow of agricultural products. A joint one year progress report was released in December 1999.

Government negotiations have helped to resolve disputes arising from the adjustment of sensitive sectors to increased competition under free trade. The U.S.-Mexican agreement on tomatoes, although partly a response to a U.S. AD action, was ultimately resolved through a bilateral agreement to set temporary minimum prices on Mexican tomato exports to the United States. A second example is the 1994 U.S.-Canadian agreement to implement a temporary U.S. TRQ on wheat imports from Canada.

While the scope of NAFTA does not extend to domestic programs, government negotiations have resolved cases in which domestic programs or policies had significant trade impacts, and helped smooth out differences in incompatible policies or regulations. Examples are the negotiated changes in Mexico's dry bean auction system, to stabilize auction timetables and definitions of qualified bidders; and the U.S. allocation for Canada under the U.S. sugar and sugar containing products TRQs.

Private Industry Negotiations

Private industry has begun to play a larger role in dispute resolution within NAFTA. In two recent disputes over grapes and cattle, producer groups in Mexico and the United States worked jointly to resolve trade disputes resulting from regulatory incompatibilities and allegations of dumping. A combination of private industry and government consultations led to creation of the Northwest Cattle Project to simplify and facilitate the importation of U.S. feeder cattle into western Canadian feedlots.

In an effort to strengthen private dispute resolution capacity, particularly for small and medium sized businesses which need an economical and cost effective way to resolve disputes, the NAFTA governments established the Advisory Committee on Private Commercial Disputes. This trilateral committee has helped to develop model contractual clauses relating to arbitration and

mediation. There are numerous private arbitral institutions available in the three countries, including the American Arbitration Association, the Mexico City National Chamber of Commerce and the International Chamber of Commerce, and the trilateral Commercial Arbitration and Mediation Center for the Americas (CAMCA). An impediment for small business is the difficulty of enforcing arbitral awards on foreign firms, but the existence of NAFTA has helped to make mediation more effective and enforceable.

In addition, NAFTA created a second Advisory Committee on Private Commercial Disputes regarding Agricultural Goods with emphasis on perishable products. This advisory committee has focussed its efforts on establishing an industry led trinational dispute resolution mechanism to facilitate trade in fruits and vegetables among the three countries. This work has resulted in the creation of the newly formed Fruit and Vegetable Dispute Resolution Corporation which is to become operational February 1, 2000. This model may be expanded to other agricultural sectors in the future if it proves itself to be effective for fruits and vegetables.

Technical Assistance

Incompatible national regulatory frameworks are sometimes the result of differing national capacity to set and enforce standards. Technical assistance provides a mechanism for resolving or preventing disputes by building scientific and institutional capacity. It creates a venue for cultivating a relationship that opens communication, creates shared objectives, and develops trust among stakeholders in an issue. The NAFTA SPS Committee has been one avenue for facilitating regional technical cooperation. Other programs have been established to provide for scientific cooperation and assistance relating to specific SPS concerns. Technical assistance and cooperation in developing agricultural statistics and strengthening analytical capacity can also contribute to the reduction of trade tensions by improving information and communication.

CONCLUSIONS

Why are dispute settlement mechanisms of interest? The development of rules-based systems for resolving disputes helps to strengthen trading rela-

tions by providing an orderly, legal framework that defines and protects the interests of all parties. An effective rules based dispute settlement system provides a non-confrontational way of dealing with the inevitable differences of view or interpretation that are bound to occur no matter how carefully an agreement is negotiated. However, it is not reasonable to expect any dispute settlement system to be able to deal effectively with every irritant, in particular, those irritants that arise as a result of the inability to reach agreement on a solution at the time an agreement was negotiated.

In both NAFTA and the WTO, formal mechanisms rely on the voluntary participation of members in both the process and the outcome; there is no coercive force behind implementation other than the interests that participating countries have in preserving a rules-based trading system and the knowledge that a failure to comply may result in counter action by their trading partners. Voluntarism is even more evident in the informal dispute settlement mechanisms than in the formal ones. Here, interested parties seek to achieve shared and mutually beneficial objectives in their trading relationship, through consensus building, communication and negotiation.

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WHEAT DISPUTES UNDER NAFTA

Julian M. Alston, Richard Gray, and Daniel A. Sumner

INTRODUCTION

U.S. imports of Canadian wheat grew as tariffs were lowered, following the implementation of the Canada-U.S. Trade Agreement (CUSTA) in 1989. The subsequent implementation of the North American Free Trade Agreement (NAFTA) changed nothing—by the time it came into effect, tariff barriers on wheat had been eliminated. While trade flows waxed and waned, any growth in trade was accompanied by an outbreak of tension between the two nations, and threats of trade disputes.

A U.S. International Trade Commission (ITC) inquiry was initiated formally in January 1994. Following conflicting testimony from various sources, the ITC forwarded three separate reports, reflecting a three-way split decision, to the President on July 15, 1994. Before the President took any action, however, in a negotiated settlement, the government of Canada agreed to limit its wheat exports and the U.S. government agreed to cease to pursue the issue under GATT.

The agreement lasted for 12 months ending in September 1995. Subsequently, tensions continued, with threats from U.S. wheat interests whenever

wheat prices fell or the quantity of imports rose. However, since 1994 there have been no further legal challenges. Trade rules have remained virtually the same, with minor changes in the use of end-use certificates. Wheat trade, particularly the Canadian Wheat Board (CWB) has remained a concern of U.S. producers, but overall the trade agreements appear to have resulted in a more integrated North American wheat industry.

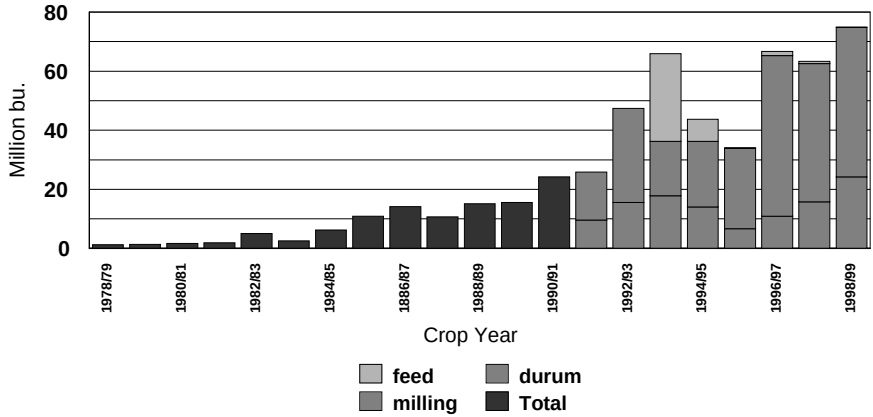
This paper describes the history of the wheat trade and trade disputes between the United States and Canada during the past 10 years under CUSTA and NAFTA. The most significant dispute during this decade was the one that led to the1994 ITC case. We discuss the details of that case, and present in summary form the different elements of testimony brought before the ITC, including the USDA position, our own modeling results, and the ITC staff analysis, as well as the ultimate decision and consequences.[1] Then we discuss the more recent events and summarize the overall experience and the effectiveness of the dispute resolution processes.

CANADA-U.S. WHEAT TRADE DISPUTES UNDER CUSTA

The Canada-U.S. Free Trade Agreement (CUSTA) came into effect in 1989. Prior to the free trade agreement, explicit barriers of importance were Canadian import licenses on wheat (and wheat products) and a U.S. tariff. CUSTA scheduled the gradual elimination of all tariff barriers between Canada and the United States. As a result of the CUSTA, a formula was developed to allow for removal of Canadian import licenses, and in return the United States agreed to gradually phase out its tariff of $0.21 per bushel on wheat. Notwithstanding its position as a major exporter, the United States has imported significant amounts of wheat from Canada, especially durum. U.S. imports of Canadian wheat rose from almost zero in the late-1970s, to over 2 million metric tonnes in 1993/94 (Figure 1). Although they represented only about three percent of total wheat supplies in the United States, the shipments of wheat

[1]For much of what is reported here, we draw heavily on our previous work, including Alston, Gray, and Sumner (1994, 1999), Alston, Carter, Gray, and Sumner (1997), and Sumner, Alston, and Gray (1994).

Figure 1: U.S. Wheat Imports from Canada, 1978/79 - 1998/99.



Source: ERS/USDA, Wheat Situation and Outlook

from Canada became a political irritant in the United States, and legal disputes began almost immediately after the CUSTA was implemented.[2]

Beginning in 1989, durum wheat producers in North Dakota argued that Canadian freight subsidies constituted an export subsidy, in violation of CUSTA Article 701.2.[3] After the United States Trade Representative determined that Canada had not violated this article, because the freight subsidy under the Western Grains Transportation Act (WGTA) applied to all shipments to Thunder Bay, whether destined for export or domestic use, the U.S. Congress instructed the ITC in 1989 to examine the "conditions of competition"

[2]There were previous restrictions on wheat trade under Section 22 of the U.S. Agricultural Adjustment Act of 1933 (as amended). The U.S. Tariff Commission (precursor to the ITC) instituted a Section 22 investigation in 1939. As a result, a U.S. wheat import quota of 21,775 tonnes was introduced. In 1973 the Commission and USDA recommended suspending the quotas indefinitely and, in 1974, the President did.

[3]Similarly, the U.S. government has argued that the CWB has violated Article 701.3 of CUSTA by selling below acquisition cost (including storage, handling and freight).

between the U.S. and Canadian durum industries.[4] The ITC rejected the argument that the CWB had been "dumping" durum into the United States (i.e., selling into the U.S. below acquisition price).

In 1992, the case of Canadian durum wheat sales was heard before the binational panel, under Chapter 18 of the CUSTA. The binational panel made its final ruling in January 1993, finding no compelling evidence that the CWB was selling below its acquisition cost. On reviewing the evidence, Alston and Carter (1993) suggested that the primary impetus for increased Canadian durum exports came from export subsidies, under the U.S. Export Enhancement Program (EEP), creating a premium market in the United States for Canadian durum that had been increasingly exploited in the post-CUSTA period.[5] More recently, Alston, Carter, Gray and Sumner (1997) developed a quantitative analysis of the Canada-U.S. durum wheat trade and concluded that the increased trade following the CUSTA had led to net costs to the United States as a whole, and to U.S. durum producers. They also pointed out that having eliminated the WGTA freight subsidies would have exacerbated the effects on U.S. producers by increasing CWB incentives to ship wheat South.

While these studies identified a major source of the increased trade as being U.S. policy rather than either Canadian policy or dumping by the CWB, they also supported the U.S. wheat growers' contention that freer trade with Canada was not in their interests, especially in the context of a U.S. export subsidy scheme. In response to relentless pressure from U.S. wheat-producing interests, combined with some other factors, a second ITC investigation was initiated in January 1994.

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[4]This was USITC Investigation No. 332-285 "Durum Wheat: Conditions of Competition Between the U.S. and Canadian Industries." The investigation began on December 4, 1989. The final report was released in June 1990.

[5] EEP was established in 1985 and designed to boost the volume of U.S. exports. It has played an important role in U.S. wheat exports. Gardner (1995) documents total wheat EEP expenditure during 1985-93 of $4.9 billion, with subsidies averaging about $31 per metric tonne or about 25 percent of the gross price.

THE 1994 "SECTION 22" DISPUTE

The 1994 ITC inquiry focused on the impacts of U.S. imports of Canadian wheat on the U.S. wheat farm program, in relation to Section 22 of the U.S. Agricultural Adjustment Act of 1933 (as amended). To apply section 22, the U.S. government had to show that imports had (or threatened to) "materially interfered" with the operation of the U.S. farm program for wheat. Parties agreed that the only reasonable channel for such interference was by causing lower U.S. wheat prices; the dispute turned on how much lower.

A finding of "material interference" by the ITC could have led them to recommend that the President implement tariffs or quantitative restrictions against Canadian wheat. In its evidence before the ITC, the USDA claimed such material interference, and recommended a tariff rate quota be introduced. In contrast, submissions on behalf of U.S. pasta makers, flour millers and grain handling industry, and Canadian grain industry interests led by the CWB, found much smaller effects—on the order of one-tenth of the effects claimed by the USDA. Critical differences in approaches in these studies concerned the treatment of trade with third countries, the role of trade in pasta products, and assumptions about elasticities.

The USDA Position

In testimony before the ITC, the USDA claimed effects of Canadian imports on the U.S. wheat farm program that, if valid, would seem to justify an intervention under Section 22. In testimony before the ITC on April 28, 1994, Keith Collins, Acting Assistant Secretary for Economics, U.S. Department of Agriculture, concluded as follows:

> *After a review of all the facts and all of the evidence, we believe the case for material interference is conclusive . . .*
>
> *Imports materially interfere by increasing program costs through higher deficiency payments and loan activity. . . For 1994-95, imports are expected to increase the cost of the USDA wheat program by an estimated $228 million, 15% of the projected cost of the entire wheat program* . (p. 11)

The USDA did not present details of the model and assumptions underlying their quantitative estimates. From the testimony we can infer some implicit assumptions (for instance, that the USDA ignored some third-country effects and pasta trade, and aggregated all wheat into a single category), and we can even deduce some implied values for elasticities, but the complete information that would be required to replicate the figures in a formal modeling context is not available. Below, we first summarize our own model and results under the most reasonable parameter values and explicit market assumptions, and then we show the effects of imposing alternative (less reasonable) assumptions, that would appear to be consistent with the USDA testimony.

A Simulation Model of U.S./Canada Wheat Trade and Policy

We developed a three-region model of wheat production, consumption, policy and trade. In our model, wheats of different classes, types and characteristics are segregated according to their end-use characteristics, into three categories: durum, other milling, and feed. The three regions are Canada, the United States, and an aggregate representing the rest of the world (ROW). Each of the three regions produces each type of wheat, with feed wheat being a byproduct of milling and durum wheat production, and consumes some of its own production of each type. Canada exports all three types of wheat to the ROW and to the United States; the United States exports milling and durum (but not feed) wheat to the ROW; and the ROW exports durum, in the form of pasta, to the United States.

The complete details of the model, its structure, data sources, the representation of policy in the United States and Canada, and the values used for the parameters, can be found in Alston, Gray, and Sumner (1994) and Sumner, Alston, and Gray (1994). The supply and demand equations are represented by functions that are linear in prices and quantities over the range of changes being analyzed. Supply is linked among categories within a region, but there is no appreciable substitution in consumption among these three categories. The slopes and intercepts of the supply and demand equations are defined using initial quantities and prices, and the own- and cross-price elasticities of supply and demand.

On the demand side, wheats of the same type from different regions are treated as differentiated products in an Armington framework in which the own- and cross-price elasticities of demand for any type of wheat (durum, milling or feed) in any region depend on market shares (which can be calculated using data on trade flows), the overall elasticity of demand for the commodity, and elasticities of substitution among different sources. We obtained estimates of these underlying elasticities from a combination of a review of the relevant literature and informed professional judgment, as discussed in Alston, Gray, and Sumner (1994, 1999). On the supply side, durum and other wheat compete for the same land and other specialized inputs. Therefore, the cross-price elasticities relate to the effect of the change in the price of durum in a region on the same region's production of other wheat, and vice versa.

Simulations

In Sumner, Alston, and Gray (1994) we presented simulations for two crop years, 1993/94 and 1994/95. We reported detailed sensitivity analysis showing a range of results for a range of parameter values. In what follows we use base or preferred values for all parameters unless otherwise stated and, to conserve space, we report simulation results only for 1993/94.[6] The most important result for present policy purposes is the calculated effect on the average price for U.S. wheat and, therefore, the effect on the total expenditure under the U.S. wheat program.

First, the model was run to simulate the quantities and prices for 1993/94 to define the base situation, as shown in column A of Table 1. Second, we simulated the effects of reducing Canadian exports to the United States of all types of wheat to half the base-run values in 1993/94. The simulation results are given in column B of Table 1. Relative to the base simulation in column A, the reduction in imports would have led to a saving in costs of U.S. wheat deficiency payments of $9.9 million in 1993/94.

[6]1993/94 was an unusual year in terms of weather damage to wheat which affected both the availability of high quality durum and milling wheat in the United States (increasing demand for imports from Canada) and the supply of feed wheat to the United States from Canada (a higher proportion of Canadian production was downgraded).

Table 1: Effects of Imports on U.S. Wheat Price and Program Costs, 1993/94.

	A	*B*	*C*	*D*
Quantity, Price or Value	***Base***	***Imports at 50% of Base***	***Imports at 22.40% of Base***	***Combined Assumptions***
U.S. Imports		('000 tons)		
Feed Wheat	1,088.61	544.31	243.85	243.85
Milling Wheat	680.38	340.19	152.41	152.41
Durum Wheat	653.17	326.58	146.31	146.31
Durum Pasta	163.29	216.18	244.99	322.36
U.S. Production		('000 tons)		
Feed Wheat	7,075.99	7,084.07	7,088.79	7,150.59
Milling Wheat	56,417.37	56,445.38	56,461.46	56,784.22
Durum Wheat	1,877.86	1,916.50	1,939.25	2,125.65 U.S.
Exports		('000 tons)		
Feed Wheat	0.00	0.00	0.00	0.00
Milling Wheat	31,841.93	31,537.36	31,369.96	31,709.50
Durum Wheat	1,496.84	1,271.99	1,150.01	1,427.53 U.S.
Market Price		($/ton)		
Feed Wheat	110.23	110.52	110.68	114.45
Milling Wheat	134.68	134.77	134.82	135.46
Durum Wheat	180.41	182.46	183.67	193.42
U.S. Market Prices		($/bushel)		
Average Producer Price	2.970	2.975	2.978	3.017
Deficiency Payments	1.030	1.025	1.022	0.983
[a]Deficiency Payments	0.000	-0.005	-0.008	-0.047
Government Outlays		($ million)		
Deficiency Payments	1,932	1,922	1,916	1,845
[a]Deficiency Payments	0.00	-9.94	-15.80	-87.28

Source: Calculated by authors. See Alston, Gray, and Sumner (1994) for details.
Note: "Combined assumptions" refers to a combination of a U.S. feed demand elasticity of -2.4, a U.S. export demand elasticity of -0.5, and other assumption that mean there are no third-country effects (see Alston, Gray, and Sumner 1994 for details).

The USDA stated that they modeled a restriction of wheat *grain* imports to 261,000 tonnes (9.6 million bushels) without imposing any similar restriction on imports of flour and other products, but assuming they would be unaffected by a wheat import quota. Essentially this amounted in their analysis to imposing a total quota of about 20 million bushels on wheat and products imports from Canada (excluding pasta from the ROW). This means they (implicitly) simulated restricting total imports to 543,000 metric tonnes, 22.4 percent of the base in 1993/94 rather than 50 percent. The USDA reported that

such an import restriction would have resulted in an average U.S. price of wheat about nine cents per bushel higher and a deficiency payment cost about $230 million lower.

To assess the USDA claims, we simulated a reduction in imports of each type of wheat to 22.4 percent of the base. The results of that simulation are given in column C of Table 1. The 22.4 percent reduction in imports would have led to a saving in U.S. wheat deficiency payments of $15.8 million in 1993/94–about 7 percent of the savings reported by the USDA. We found it difficult to identify even remotely plausible combinations of parameters that would yield effects nearly as large as those claimed by the USDA.

It appears that the USDA aggregated all wheat types together, regardless of end-uses, treated pasta imports as unresponsive to trade barriers on grain and other products, assumed quite small elasticities of supply and demand, and ignored "third-country" effects (see, also, Alston, Carter, Gray, and Sumner 1997).[7] In an attempt to replicate the figures of the USDA, in Alston, Gray, and Sumner (1994) we estimated the effects of reducing the U.S. imports to 22.4 percent of the base given (i) a U.S. feed demand elasticity of -2.4, (ii) an export demand elasticity of -0.5, and (iii) precluding third-country effects. The combined effects of changing these assumptions is to increase the estimated increase in costs of deficiency payments to $87.3 million in 1993/94 (Table 1, column D). This is still only one-third of the value estimated by the USDA; to obtain their estimate would require use of parameter values that are totally implausible.

The ITC Staff Analysis

The ITC staff used a vector autoregression analysis of U.S. wheat prices during the preceding 15 years, to estimate the price effects of changes in total U.S. wheat supply. Such a procedure ignores all of the structural features of the

[7]When Canadian wheat is withdrawn from the U.S. market, it will be diverted onto ROW markets, depressing prices in the ROW for Canadian wheat and its substitutes, including U.S. wheat exported to ROW markets. As a consequence, U.S. exports to ROW markets will contract and U.S. domestic prices will be lower, offsetting to some extent the direct effect of the withdrawal of Canadian wheat. Similar effects arise through trade in pasta products.

market—pasta imports, product differences and Canadian export competition with U.S. wheat exported to third markets. Implicitly, imports from Canada (or, for that matter, pasta imports from Italy) have exactly the same relationship to the U.S. price of wheat as do changes in the amount of idled land under set-asides or a drought. Further, the 1994 wheat market was assumed to be identical to that of 15 years previously, when the European Community was a customer not a competitor, and when there were no U.S. export subsidy programs.[8]

The ITC staff also adapted the ITCs general simulation model (COMPAS) to derive implied effects of imports on the domestic price of wheat. This model also left out pasta imports, and third-market competition between the United States and Canada—two features of the wheat trade that are fundamental to understanding the influence of imports.

The ITC Reports—A Split Decision

The ITC forwarded its findings and recommendations—based on a combination of information from the hearings and internal analysis conducted by the ITC staff—-to the President on July 15, 1994. Three separate reports were sent to the President, each of which had distinct findings and recommendations. Three of the six commissioners (including the Chair and Vice Chair) reported as a group that they determined that there was no "material interference" with the U.S. wheat program by imports. Nonetheless, they provided the President with recommended import restraints should he have determined (contrary to their findings) that there were grounds for restricting imports.

A fourth commissioner, determined that there was sufficient evidence to determine material interference, but recommended only a ten percent additional duty be applied after imports reached 500,000 tons for durum and 800,000 tons for other wheat—i.e., after imports of all wheat and wheat flour exceeded 1.3 million metric tons in wheat equivalent units. Such a policy would probably not have had any significant impact on imports. The last two commissioners also found material interference, but they recommended relatively tight tariff-rate quotas, or equivalent tariffs, be applied.

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[8]Our concerns about such an approach were outlined in Alston, Gray, and Sumner (1994, 1999).

Negotiated Resolution

Before the President took any action relative to the Section 22 case the wheat trade dispute between Canada and the United States came to a negotiated resolution at least for the 1994/95 year. On August 1, 1994, the government of Canada agreed to limit wheat exports to the United States and the United States agreed to drop its efforts to restrict wheat imports.[9]

Under this agreement, tariff rate quotas were used to restrict U.S. imports of wheat from the CWB. For durum wheat, the very low NAFTA tariff rate ($3/tonne) applied to the first 300,000 tonnes, a tariff of $23/tonne applied to the next 150,000 tonnes, and a rate of $50/tonne applied to imports over 450,000 tonnes. For "other" wheat from the CWB, the NAFTA tariff rate applied to the first 1,050,000 tonnes and a tariff of $50/tonne applied to imports above that quantity. The $50/tonne tariff was expected to be prohibitive for both durum and "other" wheat. There were no restrictions on flour, semolina, or Canadian soft red winter wheat from outside the Wheat Board area.

Although these restraints might have influenced the quantity of export shipments during the twelve-month period covered by the agreement, it is instructive that the official USDA projections for total wheat imports during the 1994/95 marketing year remained at 80 million bushels or 2.4 million tons (including the grain equivalent of flour and wheat products) before and after the agreement. The agreement was not viewed, even ex ante, as a binding constraint on expected U.S. imports by the USDA analysts, except in the case of durum.[10]

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[9] At the same time, the two countries agreed to appoint a binational panel of non-government experts, to examine and report on all aspects of Canadian and U.S. support systems, and on competition between the two countries in third markets for wheat. The Canada-U.S. Joint Commission on Grains filed its final report in October 1995. Although the report illuminated many of the differences in the marketing systems, little concrete progress was made in addressing the differences.

[10] As Figure 1 shows, actual imports in 1994/95 were only 12 million bushels (about 330,300 tons) of durum and only 32 million bushels (870,000 tons) for other wheat.

MORE RECENT EVENTS

The policy landscape for grain in the United States and Canada has changed substantially since CUSTA and even since NAFTA was implemented in January 1994. CUSTA mandated gradual tariff cuts and these have allowed wheat from Canada to become available in the U.S. market. Other U.S. and Canadian policy changes in the later 1990s were *not* mandated in CUSTA, NAFTA or the Uruguay Round Agreement on Agriculture (URAA). It is arguable, however, that these changes were, in part, a consequence of these trade agreements.

U.S. Policy Changes

The first change was the rapid reduction of the loan rate for wheat and elimination of the price support feature of the U.S. commodity loan program. These changes meant that the government no longer acquired stocks of wheat whenever the market price was low relative to some political norm. They also have meant that the market price facing buyers in the United States has been allowed to decline to clear the market. With an open border for wheat imports, a substantially higher budget outlay on government purchases is required to maintain the government set price. The loan program remained, with low guaranteed producer prices implemented by direct payments or loan repayment at the local market price, which could be lower than the loan rate.

The second change was the replacement of annual deficiency payments tied to production, with payments tied only to a history of wheat production, and related to market price only on an ad hoc basis. Because they are less connected to production and market price, these payments are less affected by imports. The third change was the reduction and then elimination of required acreage set-asides. When imports may freely enter, the price gain is smaller from a given amount of acreage idled, therefore the set-aside policy was gradually abandoned.

Finally, while EEP is still authorized, the United States has not implemented its export price subsidy program for wheat since the middle 1990s. Here, again, the effectiveness of export subsidies at raising domestic prices is much curtailed by an open border policy for imports. Thus, while there are

other reasons for not using the export enhancement program for wheat, free imports from Canada are surely a contributing factor.

Wheat Trade Tensions

Since the Section 22 hearings of 1994 there have been no significant grain disputes between Canada and the United States. No cases have been brought to the NAFTA or WTO trade panels. The only trade action of significance was the U.S. introduction of an end-use certificate (EUC) for wheat imported into the United States early in 1995. This requirement had only a very modest effect on trade flows and, according to Buckingham and Gray (1996), may have assisted the CWB in maintaining monopoly control over wheat exports.

Despite the lack of any tangible trade actions, the anti-Canadian grain trade rhetoric has continued in the United States. The U.S. Trade Representative, farm leaders, and congressmen from wheat producing states have continued to publicly condemn Canadian-U.S. grain trade, and in particular the actions of the CWB. U.S. wheat farm representatives expressed their desire to address the CWB issue within the next round of the WTO negotiations.

Canadian Policies

Given continued access, market forces will continue to drive Canadian grain exports to the United States. The elimination of the WGTA east-west freight subsidy in 1995 made the United States an even more-attractive market for Canadian grain products (see Alston, Carter, Gray, and Sumner 1997). As Figure 1 shows, after a drop in 1995/96, imports from Canada have been at or above the 1993/94 quantities in each of the past three years. And this occurred without the stimulus from EEP export subsidies.

The operation of the CWB has been and remains a key trade irritant to some U.S. wheat interests. However, even if the CWB were eliminated, if exports to the United States expanded, we might reasonably expect that U.S. wheat producers would continue to mount opposition to Canadian wheat exports and look for other rationalizations for dispute.

The U.S. industry is unlikely to obtain remedies for CWB behavior within the existing NAFTA and the URAA.[11] It seems unlikely that the CWB would find it profitable to price discriminate in a way that would be both inimical to U.S. producer interests and in contravention of the anti-dumping provisions that apply. State trading enterprises are allowed in the GATT and are allowed to price discriminate as long as they do so within the bounds of commercial practice. Price transparency and the conduct of state trading enterprises will continue to be discussed in the current round of WTO negotiations. However, given the number of countries with STEs to protect, it seems unlikely that binding disciplines will be forthcoming. Therefore, the decisions concerning the CWB, at least in the short run, lie with Canadian wheat and barley producers and the Canadian Government. It also seems unlikely that the domestic pressure for reform will cause the government of Canada to unilaterally remove the CWB any time soon.

PAST DISPUTES: BASIC CAUSES AND IMPLICATIONS FOR THE FUTURE

We have described the wheat disputes between the United States and Canada in the first half of the 1990s, and the lack of formal disputes in the later 1990s. Now we consider the fundamental reasons behind that pattern of events and then go on to draw implications for future controversy or formal disputes.

On one level it seems clear that past disputes were driven by increased imports of wheat into the United States from Canada. Before the middle 1980s, shipments South were quite small and a tiny proportion of the total supply available in the U.S. market. Imports then began to grow gradually, with a notable jump in the 1990/91 crop year. A second large jump in 1992/93 brought import quantities to approximately three times the 1989/90 figure, and another jump in 1993/94 left imports at four times the quantity that had seemed high just four years earlier. During this period, wheat prices remained at low to moderate levels, with substantial U.S. government payments used to make up the deficiency between the market price and the government-set target price (Figure 2).

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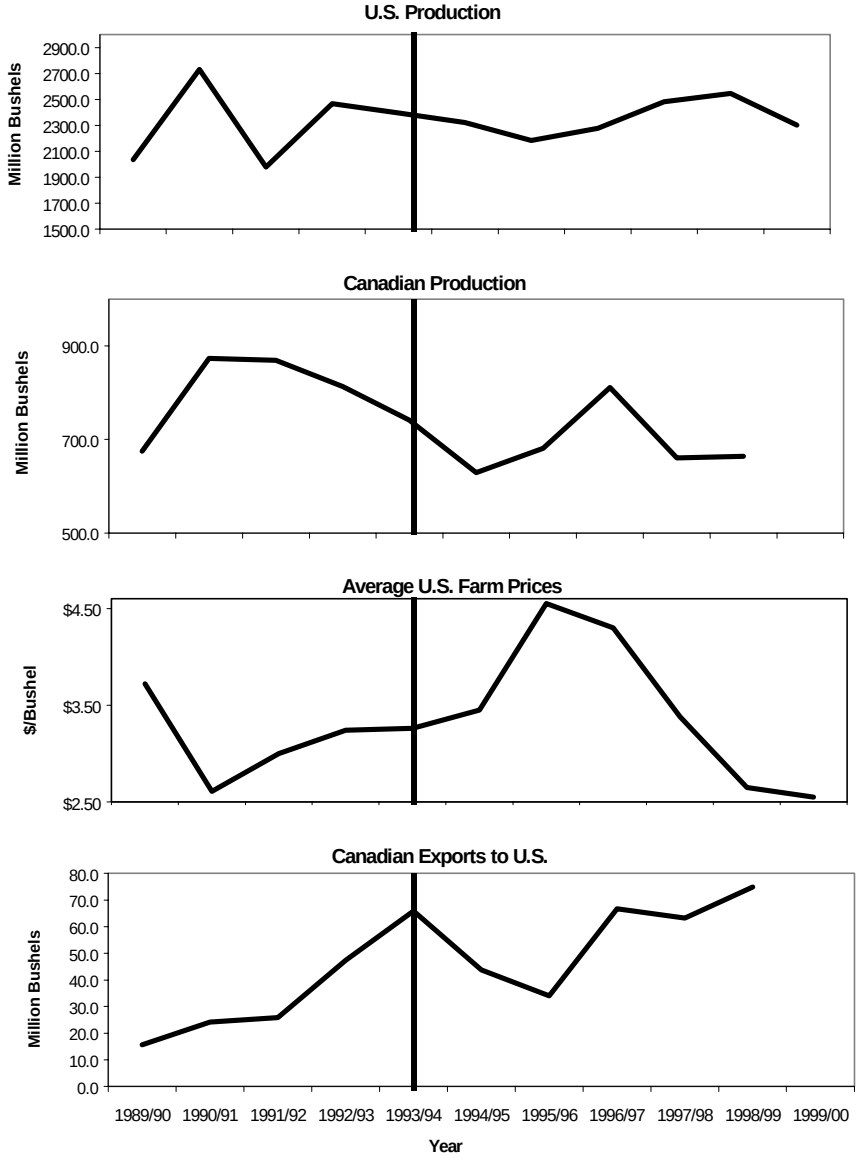
[11]The Uruguay Round Agreement established the new World Trade Organization (WTO) which administers the General Agreement on Tariffs and Trade (GATT). Negotiations for the new GATT/WTO Agreement were concluded in Marrakesh on April 15, 1994 and the Agreement was implemented in 1995.

Figure 2: A Decade of Relationships in the Wheat Sector.



Source: Wheat Situation and Outlook Yearbook (various), Economic Research Service, USDA

The pattern of imports and price after 1994 has not been conducive for the United States to take trade actions against Canada on wheat. Serious and broad-based trade complaints seem to require two market conditions. First, a high level of recent imports compared to what market participants have come to accept as normal. Second, a low commodity price—again relative to some accepted norm. In the early 1990s both of those requirements held. Compare the period 1992/93-1993/94 for wheat to the period 1996/97-1997/98, as shown in Figure 2. In the earlier period we had an increase in imports of wheat coinciding with low prices. In the later period we had a jump in imports, but not low prices; and by the time wheat prices subsequently dropped, the import quantities had become a regular part of the market. This made it hard to complain that something new was causing disruption.

To justify even the 1994 dispute required a stretch of the imagination. As documented by Alston, Sumner, and Gray (1994), a number of political and meteorological events contributed to the situation in 1994. The political events include the pledges made by President Clinton to build congressional support for NAFTA and the process leading up to the signing of the URAA. The meteorological events include weather damage to the U.S. and Canadian crops in 1992/93 and 1993/94 that added to the volume of wheat trade, and the visibility of that trade. As the USDA/ERS (1999) now notes in its most recent evaluation of NAFTA:

> *Tariff reductions under CFTA[CUSTA]/NAFTA have increased U.S. wheat imports from Canada above what would have occurred without these agreements. However, sharp rises in U.S. wheat imports, such as those that occurred in 1994, have mainly stemmed from weather-related events.* (p.3).

In particular, the combination of poor quality of the Canadian wheat crop with weather-reduced supply of U.S. feed grains, encouraged the flow of unprecedented quantities of wheat used for livestock feed. This low-quality wheat competed more with corn, sorghum and barley than with other wheat in the United States. Unfortunately, the USDA was not willing to admit this point, at least publicly, in 1994.

For trade actions to be pursued the government must have some potentially plausible legal basis for the action under current law and in accordance with current trade agreements. On these grounds, too, the period since 1994 has been less than conducive for trade actions. As noted above, prior to implementation of the URAA, the United States reserved the right to block imports whenever they threatened to materially interfere with the operation of a U.S. farm program. This so-called Section 22 waiver was written into GATT rules until the United States gave up that right for WTO members in January 1995 when the implementation of the URAA took effect. Ironically, even if the United States had conclusively won the 1994 ITC case, and if the President had applied limits on imports of wheat from Canada under Section 22, those restrictions would have been applicable for at most six months. Furthermore, the U.S. deficiency payment program, which was most at issue in the 1994 case, was eliminated in 1996 (Young and Westcott 1996).

The three main remaining legal bases for U.S. trade action on wheat imports from Canada are (i) special safeguard import barriers that may be used in the case of import surges; (ii) countervailing duties; and (iii) antidumping duties. Each of these requires demonstrated injury. Special safeguards may be applied only under limited conditions, in the case of large jumps in import quantities. Countervail and antidumping duties require evidence of trade practices that have not been shown in prior wheat cases.[12] A fourth, extra-legal, approach would be simply to apply quotas or other barriers- -accepting that, in accordance with WTO rules, this would give Canada the right to demand compensation.

CONCLUSION

The reduction in border measures following the introduction of CUSTA resulted in an increase in Canadian bread wheat and durum wheat exports to the United States. These increased trade flows resulted in four trade disputes.

In this paper we reviewed the Section 22 trade dispute in some detail. In Sumner, Alston and Gray (1994), we reported detailed results of simulations

[12]See USDA/ERS (1999, p. 21) for a review of recent NAFTA disputes across more than a dozen commodities.

using a fully-documented model that suggested very small effects of Canadian wheat imports on U.S. wheat prices and on U.S. wheat program costs. The USDA, however, asserted that the effects were much more important, claiming that in 1993/94, for instance, an import quota on Canadian wheat grain equivalent to 22.4 percent of the actual 1993/94 total would have reduced wheat farm program costs by $230 million, compared with our estimate of $16 million for that case. A host of unreasonable assumptions would be needed to replicate the USDA projections of large price impacts from relatively small changes in imports. The ITC staff conducted a simplified analysis that ignored most of the structural features of the wheat market. This approach led them to a set of estimates that fell generally about midway between ours and those of the USDA. The mixed set of findings and recommendations from the USITC may have been in part due to the mixed signals being given by the agricultural economists involved in the issue.

Regardless of any perceived or actual imperfections in the dispute settlement processes, wheat continues to flow from Canada to the United States with little restriction. There have been no legal challenges for the past five years, despite wheat trade at record levels and low farm prices (Figure 2). Perhaps the largest beneficial effect of CUSTA, NAFTA and URAA has been the implicit discipline placed on export subsides in both countries. Any U.S. use of the EEP program would encourage exports to the U.S. markets. Similarly, any attempt by the CWB to use higher domestic prices to subsidize exports would be constrained by competition in Canada from imports from the United States.

Two features of government policy might cause continuing conflict. The export monopoly of the CWB continues to be an issue, particularly in terms of transparency. When U.S. farmers look North, they cannot help but suspect some trade effect of the CWB. However, there is growing awareness that the removal of the CWB's monopoly position might increase rather than reduce flows to the U.S. market. The issue is likely to remain unresolved unless Canada decides to remove these powers from the CWB.

The other possible source of conflict, is the recent disparity between the agricultural budget transfers offered by the United States as compared with Canada. When Canadian farmers look South, they cannot help but envy pay-

ments made to farmers or former farmers under various U.S. government programs. This is true even if measured or projected trade effects of these payment programs are at most small (Young and Westcott 2000).

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KANSAS WHEAT PRODUCER

Alan E. States

Growing wheat in Kansas, as I do, is a long way from the Canadian border. As a result of geographic separation, maybe I can be a little more objective about the trade issues involved in U.S. imports of wheat and durum than growers close to the border. My objective is to be controversial enough to give you pause the next time you listen to the details of some trade dispute.

The North American Free Trade Agreement expresses a philosophy that the inhabitants of the continent will be better off with free and open trade among its citizens, than they would be by maintaining trade barriers. We are here today to report on the progress of that grand endeavor. In general, we may be living up to the terms of the agreement but we have a long way to go to accomplish the mission. Just as the Articles of Confederation were replaced by the Constitution, the NAFTA needs to be improved.

Free trade can be compared to a three-legged stool. If any of the legs break the stool falls over. A good trade agreement also has three legs to hold it up: if any of these legs are weak the agreement will fail:

- the first is elimination of tariff barriers;
- the second is elimination of non-tariff barriers;
- the third is elimination of trade distorting incentives to produce.

The first leg, the elimination tariff barriers, is the easiest to construct. Tariffs are visible and can be phased out over time. The second leg, non-tariff barriers, is tougher. These barriers may be import quotas. However quotas can be changed to tariffs and then phased out. More often non-tariff barriers come in other forms and are easier to hide or rationalize. They may come disguised as health or environmental regulations.

The third leg, elimination of trade-distorting incentives to produce, is also difficult to handle. These incentives are usually domestic programs in support of the income of local producers. They come in many forms.

For example, product specific transportation subsidies or preferences translate into higher local prices for producers. Producers are encouraged to produce more, which usually results in lower prices both for themselves and their competitors around the world. Product specific tax preferences work the same way. Similarly subsidized carrying costs, either in the form of storage subsidies or low interest loans, also translate into higher income and increased incentives to produce. Marketing loans are also highly trade distorting for the same reasons, as are price support loans, intervention prices, export subsidies and area payments that are coupled to plantings.

Effective state trading organizations may also be trade distorting to the extent that they may hide state subsidies in the form of low cost operating funds, have inordinate powers to distort freight rates, and restrict domestic supply to local consumers.

Of course the grass is always greener in the other side of the hill. We need to be cognizant to the danger that we may get what we are asking for. The United States fought for the elimination of subsidized freight rates in Canada. Termination of that subsidy led to restoration of the natural flow of grains to the south rather than to the far west.

The Canadian Wheat Board is doing a disservice to the better farmers in Canada, many who would be better off if they had free trade within their own country. The CWB wants monopoly powers to shield itself from more efficient domestic competition. While the CWB is a trade irritant, the elimination of its monopoly powers could be a nightmare-come-true for U.S. producers. Why is that? It is because Canadian wheat farmers may be more competitive than their U.S. counterparts. Farmers in the States have been telling themselves for years that they are the most efficient wheat producers in the world. That may no longer be true. Australia, Argentina as well as Canada may have lower costs of production than the United States. That is the case because the U.S. Farm Program, with its marketing loan, supports income, which in turn is capitalized

into the price of land, ultimately drives production costs higher making U.S. producers non competitive. U.S. farmland prices have been surprisingly strong in the face of low market prices.

This capitalization is also expressed even more blatantly in Europe where area payments, intervention prices and export subsidies support the income of European producers and are capitalized into land prices which clearly make the European farmer non competitive and dependant on the welfare state and the VAT. The fact that the EU's area payments are in the WTO blue box rather than the amber box says more about the Europeans negotiating skills than economic reality.

Income and tax subsidies can only be trade neutral when they come completely de-coupled from plantings and production. Distorting trade practices are counter-productive. Let me explain.

Wheat is a commodity just like a personal computer. Every year someone can make a computer better, faster and cheaper than before. The same holds true with wheat. In real terms, commodity prices tend to decline over time. This is what gives us all a higher living standard. This is a piece of the Great American Dream. When trade groups, whether they represent wheat, textiles or dock workers, fail to recognize this and are also powerful enough to impose protectionist measures to aid their constituents, they are being penny wise and pound foolish. Rather than encouraging their industry to adapt to change as it occurs, they protect it from change until the change is overwhelming and can no longer be held back. Then the dam bursts and the domestic industry is swept away in the flood that follows. While the distorting trade practices were in effect, the domestic consumers paid a higher price than needed, they also may have paid higher taxes to support the cost of the program and foreign competitors were damaged. The protected party ultimately was harmed because the protection from competition made him even less competitive and ultimately less able to survive in the long run. We have seen this happen time and again when great nations such as China and Japan turned inward and were bypassed by the rest of the world.

The Internet was not a factor when NAFTA was signed. The world has changed dramatically in the short period since 1995. The CAP of the EU, U.S. price support programs and the monopoly powers of the CWB are dinosaurs whose time has come and gone. Let them die gracefully.

The existence of these holdovers from the past may be allowed because they are within the letter of the NAFTA and WTO agreements. But their continued existence indicates that we have not yet accomplished the mission of open markets. That will only occur when a Canadian wheat farmer can sell his product to the highest bidder whether it be a local miller, an elevator in Fargo, or the CWB, and when a North Dakota grower can deliver wheat to a Canadian processor with same ease as going to his local elevator. As well, it will only occur when these producers receive prices which are genuinely reflective of market based demand and supply in the major producing and consuming countries.

Manitoba Grain and Livestock Farmer

Owen McAuley

This paper reminds us that there is always a political implication associated with any public decision, and that all good work may be derailed by political pressure. Although this situation is disconcerting, it is reality.

My first comments will focus on a particular era in dispute resolution between Canada and the United States, from 1994 to 1996. The U.S./ Canada Joint Commission on Grain (JCG) was established in 1994 and reported in1995. Within a year of establishing the JGC, another panel - - the Western Grain Marketing Panel (WGMP) - - was established within the prairie region of Canada[†]. The WGMP built upon some of the recommendations made by the JGC, followed by a federal government decision in Canada to adopt a go-slow process to reform of the prairie grain sector.

J G COMMISSION AND W G M PANEL RECOMMENDATIONS

The JGC identified a need to provide a consultative process through a bilateral commission in order to analyze issues and provide for positive action with the objective of heading off disputes before they surface. The Commission also identified several areas where change and harmonization of the grain marketing systems in the United States and Canada were required:

- work towards a more common grading system and improved understanding of grading in each country;
- the need to eliminate use of end-use certificates in both countries;
- the need to provide for opening up of the rail system in Canada, and infrastructure between the two countries;
- the need to resolve the ownership issue on publically owned grain cars in Canada;
- the need to harmonize competition policies in each country.

[†] Editors note: Owen McAuley was a member of the Western Grain Marketing Panel.

The difference in grading grain in the two countries, and Canada's licensing of varieties, are a constant source of misunderstanding and friction. With wheat trade growing, these tensions take on increased significance. Comments by a Cargill production line manager may help understand why U.S. mills access part of their wheat from Canada..."American wheat is variable in quality, wheat from different areas is based on wide variety differences but Canadian quality is much more consistent. If Cargill is providing flour to McDonald's, the buns in San Diego must be the same size as buns in New York, and consistent quality is absolute". Canadian wheat is not necessarily the cheapest to grow and not necessarily better wheat, but our system does provide a process of more consistency in quality. Varieties are not licensed in Canada if they do not fall within a certain baking quality. Better quality, or worse quality, is not accepted.

There are many factors in the Canadian system which contribute to consistency of quality: Canadian Grain Commission licencing, the grading system, and the Canadian Wheat Board (CWB). U.S. millers demand this consistency, if they cannot find it in U.S. wheat, they look to Canada. Better understanding of the systems may offset some of the irritations.

Certainly there is need for a more open and competitive transportation system in Canada. The publically owned hopper cars are a source of conflict with the United States (because they are viewed as an indirect subsidy), and within Canada (because they are viewed by some as a tool of increased competition). The cars are supposed to be sold commercially but that has not yet occurred. Certainly there is a need for competition policy to be harmonized and applied uniformly with the agri-food industry.

The JGC report also talked about reducing and eliminating export subsidization. Both countries did a good job on this issue in the mid 1990s - - by 1995 the Canada and U.S. PSEs had come together. However, since 1995, U.S. has increased its support to farmers while Canadians have reduced theirs. The OECD numbers show that, for wheat, the U.S. number is about 40% and rising, and Canada's is about 12 %. Production technology is almost identical, and producers are competing for the same basic resources. Subsidization is reflected in land prices and the differential in subsidization means land prices are much

higher in the United States. An informal telephone survey recently indicated that prices in Mohall, North Dakota are about $200/acre higher than just across the border at Pierson Manitoba. The land is similar and the difference is mostly subsidization. This support is at risk in the United States because farmers now represent approximately 2 percent of the vote. At risk is a 30 percent drop in revenue flow to U.S. farmers if public support were significantly reduced. We need to recognize this risk and move in front of the issue.

The JCG also mentioned CWB discretionary pricing. As Alston and Gray indicate in their paper, there have been several investigations into CWB practices. The WGMP made several recommendations which would make CWB pricing more transparent and, perhaps, more acceptable inside and outside Canada. The organizational structure of the CWB has been reformed and now includes producers on the board of directors. The federal government has withdrawn provision for guaranteeing increases in initial prices after the initials have been set.

OTHER ISSUES

There is a need to continue working within WTO and NAFTA to clarify rules. Our consumers have become accustomed to an unfettered Canada/U.S. border. The United States imports $36 billion of food products, of which about one-third is from Canada. Canada gets half of its food imports from the United States. Consumers are also accustomed to high quality, safe and reasonably priced food. I would not want to be the agency that stands between consumers and these expectations. The point here is only to point out the role of consumers: consumers do not only expect these products, they now “need” them.

On another matter, we need to understand that when you get involved in a spraying contest, once you’re wet it doesn’t matter who persists the longest; basically both parties lose. The impact of trade actions is felt throughout the economy. But the largest impact is felt by producers and processors who have built infrastructure around the product. A processor may access raw product elsewhere, but the producer is usually locked into a fixed asset which has been capitalized into an asset reflecting expectations. Producers can not just shut off the tap. The Canadian grain transportation subsidy is a good example.

On our farm, my grandfather, my father, and then I have built a farm operation and capital around a market for exporting bulk grain. With a single policy shift, we now have to build a new infrastructure for a different market as well as pay off facilities which were financed in yesterdays market. Government policy (in this case legislation from the last century and a subsidy paid out over several decades) left our operation with the belief that we were the cheapest place in the world to grow grain. The freight bill I saw for moving grain to tide water was about $10/tn. less than my competition in Texas and Australia faced despite enormous differences in distance.

The shift in policy moved my freight costs to almost the highest in the world. We spent 100 years designing and financing infrastructure, responding to the signals. The response cannot occur over night. Sunk capital like the railroads, elevators, granaries, equipment are still there accumulating costs. If we were to send sustainable signals, reflecting true costs and market advantages, my bet is that many policy and trade frictions would decrease.

We have made significant changes in Canada. As I look at the source of revenue flow for my U.S. competition, I see that government is again a major factor. U.S. farmers are efficient in the use of technology, and they are good producers. But, are the signals they are receiving sustainable? If they are not, somewhere down the line more pressure for sanctions will be applied to minimize the impacts of incorrect signals.

Montana Grain Growers Association

Herb Karst

Any discussion of the effects of grain imports has to recognize factors beyond the supply/demand/price models which are the tools of economists. Three additional factors, one largely social, and the other two strictly economic led the original grain disputes of 1993/1994 and to the lingering difficulties which continue to cause tensions at the Canada/U.S. border and at the WTO negotiations.

The first of these is the intertwining of social concerns in the agricultural policies of all countries. Subsidies, whether on grain prices or on freight, have largely been instituted as income transfers to rural areas. These have served to provide stability in an area where agriculture is risky at best due to the semi arid nature of the Great Plains.

Second, the largest single cost of producing grain is the land on which it is grown. This land is an investment of a lifetime for a farmer, usually capitalized for twenty to thirty years. As currency values fluctuate and as various subsidy schemes raise artificially inflated grain prices either by nationality or by geographic location, land values have followed those prices. To expect to see land prices rationalize to world markets in the short term, even as the grain market became integrated, was an unreasonable expectation.

Third and perhaps hardest to quantify, is the diversity in the price discovery process of the grain marketing systems of the two countries. While often the charges and counter charges of our wheat proponents in the two countries distort and divert attention from fact, there is agreement that the United States and world markets use a bid/offer system of attaching value to grain. This is predicated on the open outcry exchanges which let weather concerns, planting intentions, and other subjective factors alter strict adherence to supply/demand ratios. While using this same system to merchandise its product, a marketing monopsony has neither acquisition cost nor replacement value to

influence its marketing decisions. Further, costs associated with identity preservation, cleaning, and freight are a deduction ***after*** point of sale and are used by the Canadian Wheat Board, by its own admission, to give Canadian wheat an advantage in world markets.

Disputes across the Montana/Alberta border are not new. In 1953, Montana farmers called for the reinstatement of a 2 cents per pound tariff on yellow mustard as imports from Alberta surged following a tariff reduction. An International Trade Commission hearing ruled that the U.S. industry would not be harmed by the rising imports but within ten years all Montana production vanished.

U.S. farmers, used to fifty years of supply control/ price supports found it hard to accept why U.S. grain companies were now sourcing Canadian grain while U.S. surpluses were seen as the reason grain prices were still barely covering production costs. Then in 1985, the United States launched a new offensive which not only used set-asides to reduce crop acres but also authorized a 36 million acre land reserve designed to be financed by lower deficiency payments resulting from rising grain prices. Coupled with reduced plantings, the United States began using export subsidies to battle the European subsidies which had begun to erode our market share. Just as stocks of grain seemed to finally be reduced to manageable levels, U.S. producers were outraged when imports surged nearly 400 percent in 1993/1994. One must remember that because perception plays such an important role in the U.S. price discovery system, it was not only the 80-100 million bushels of cash wheat entering the United States which depressed prices, but also the availability of all Canadian stocks which then thrust U.S. markets out of isolation and into the subsidy filled world. Land values had no time to adjust to this new reality and until the passage of new farm legislation in 1996, U.S. agricultural policy was likewise hopelessly superseded.

While frosts, the export enhancement program, fusarium head blight, and floods have all been used as a justification for the continued importation of approximately 8 percent of U.S. domestic wheat needs, and nearly double that if spring wheat and durum are viewed in isolation, it is my perception that the Canadian Wheat Board markets according to a marketing plan which will con-

tinue to target those percentages. It is impossible for me, or even for the most learned of economists, to accurately predict whether or not state trading is of benefit to its producers. But until such time as producers have a choice similar to that present on the feed barley side in Canada, the debate will rage.

What is certain is this. If commodity pooling is of benefit to producers, then it should be done in a non-discriminatory manner. Producers from both sides of the border should be able to participate in the disciplines and benefits of that system. If, on the other hand, it is a vestige of a past era, more of a benefit for social equity than for economic gain, then it must go the way of set-asides and export subsidies. The choice ultimately needs to be made by the farmers whose economic livelihood is at stake not the institutions which fear for their survival.

WHAT HAVE WE LEARNED FROM CATTLE/BEEF DISPUTES?

R.M.A. Loyns, Linda M. Young, and Colin A. Carter[1]

> *Abuse of important trade laws represents one of the most ominous threats to a liberal international trading regime.* Joseph Stiglitz, SEJ, 1997.

BACKGROUND AND PURPOSE OF THE PAPER

The organizers of this workshop undertook to have reviewed five trade disputes among the NAFTA partners. Individual commodities were selected because of characteristics unique to that dispute, their overall significance in trade, or the nature of the resolution, with the goal of improving our understanding of trade relations among the three countries. The cattle/beef sector was selected because of its economic importance in all three countries, the example it provides of interest group participation, and because it involves a recent major formal dispute process affecting each country.

When economists conduct a case study review of "disputes" in a sector, and certainly in the cattle/beef sector, the first consideration is to define the

[1]The authors acknowledge research/drafting assistance provided by Kitty Sue Squires (MSU), Julia Davis (UC Davis), and the NCBA and CCA for providing documents for review. The authors also want to thank Gary Brester and John Marsh (MSU) for the generous use of several graphs.

scope of analysis. “Disputes” that reach formal resolution processes within the North American Free Trade Area (NAFTA), the World Trade Organization (WTO) [2] or bilaterally (all discussed in the preceding USDA/AAFC paper) are obvious candidates for review. U.S. investigations of Canadian or Mexican live cattle exports, initiated by the Ranchers and Cattlemen Action Legal Foundation (R-CALF), were also that form of dispute[3].

However, there are other instances of disputes which are more limited in scope but are no less significant. They usually involve specific trade considerations that occupy interest group, bureaucratic, and sometimes political, time and resources. These examples of trade disagreements are often resolved by negotiation outside any formal dispute settlement process, or they may not be resolved. If left unresolved, they may continue to stress trading relations and ultimately may rise in importance to become formal disputes. In some cases, informal trade stress may just disappear. In this paper, we identify informal and formal disputes in the cattle/beef sector because both forms are important to understanding trading relations among the United States, Mexico, and Canada. R-CALF, and antidumping duties imposed by Mexico against imports of U.S. beef in 1999, are the only formal disputes in beef or cattle. In this paper we concentrate on the R-CALF dispute. However, there are several significant examples of ongoing trade stress in the industry. We refer to these as “issues” in this paper. Many of the issues identified here have been discussed by various authors and discussants in previous workshops (Hayes and Kerr, 1997; Anderson, Mintert, and Brester, 1998; Hobbs and Kerr, 1998; Lambert, 1998; Isman, 1998).

The purpose of this paper is to review cattle/beef disputes among NAFTA partners in order to improve understanding of trade stress in the sector, with the broader goal of achieving more harmonious trading relations. The paper will:

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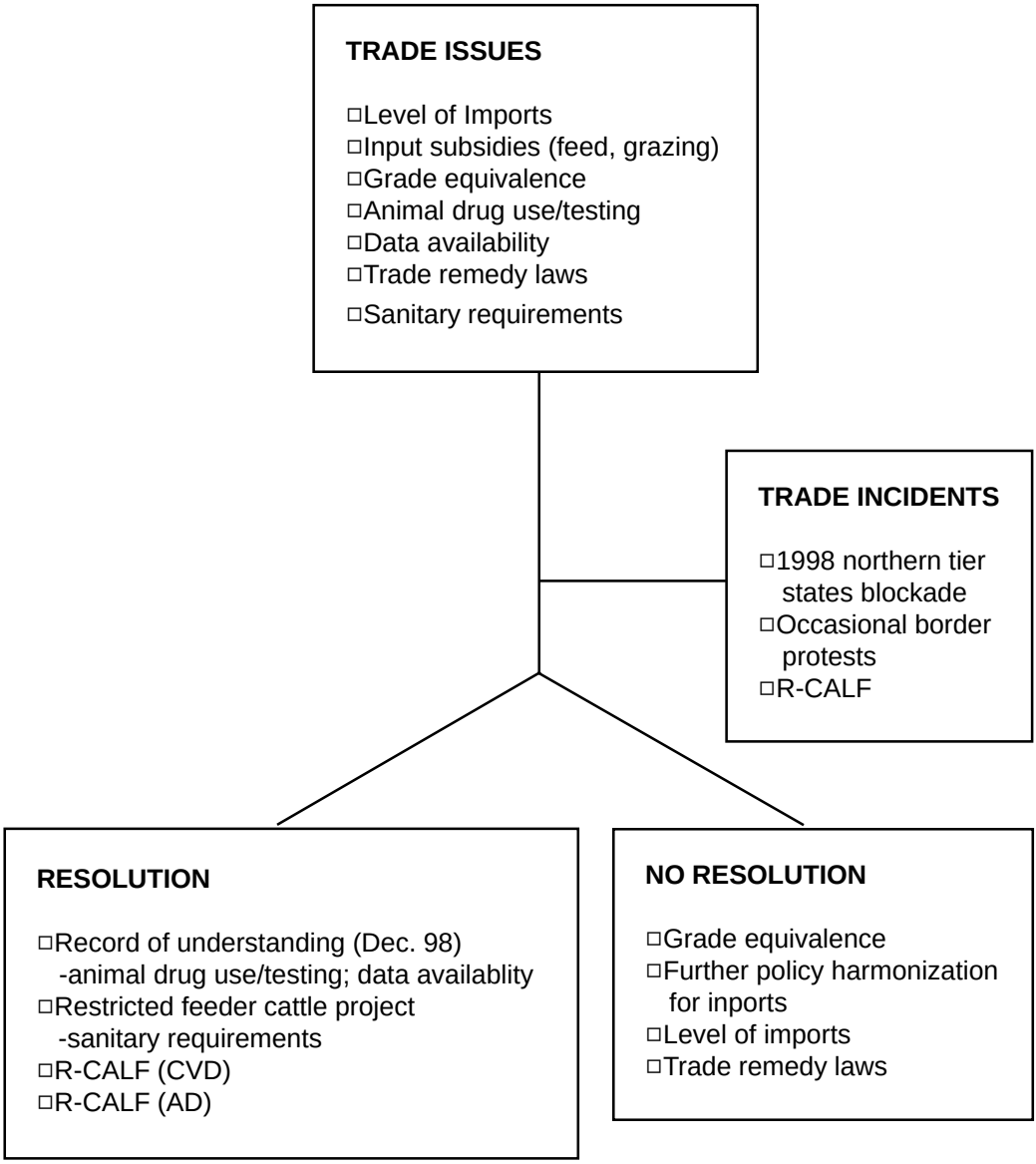
[2]Previously administered under the General Agreements on Tariffs and Trade (GATT).

[3]As discussed in a later section there were three separate actions launched under U.S. trade remedy law by the Ranchers and Cattlemen Legal Action Fund.

Figure 1: Cattle and Beef Trade Issues and Incidents.



Source: Compilied by the authors.

- identify policy and trade issues among the three NAFTA partners in the cattle/beef sector, and review causes and consequences of the R-CALF dispute;
- provide a summary of recent quantitative analyses of effects of increased cattle/beef trade within the NAFTA area; and
- draw conclusions on where the current dispute resolution process is inadequate for achieving greater harmony among NAFTA partners.

The next section of the paper provides an overview of the industry in the three countries, and a brief discussion of trade issues and incidents. A simple model of issues, incidents and disputes is provided in Figure 1. Section three provides a brief summary of the U.S. Trade-Remedy Laws under which the R-CALF cases were tested. Section four describes the suit initiated by R-CALF against Mexican and Canadian live cattle imports, and the last section provides our conclusions.

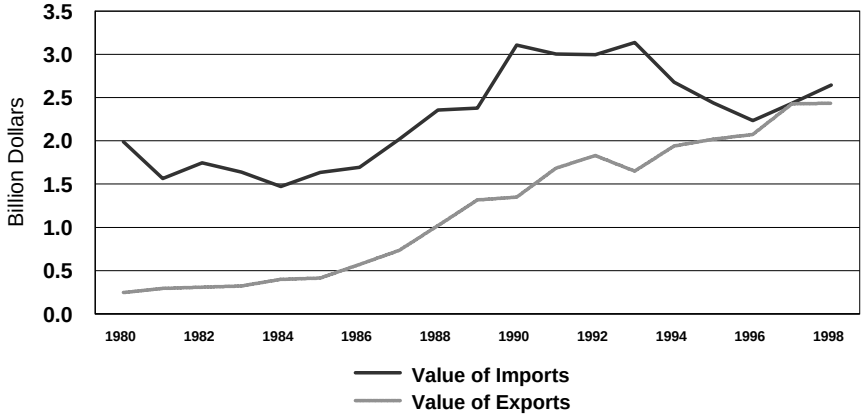
INDUSTRY BACKGROUND

Production and Trade

U.S. beef exports have grown significantly, from 1.4 billion dollars in 1989 to 2.5 billion dollars in 1997 (Figure 2). However, exports are still a relatively small percentage of production, accounting for 8.5 per cent in 1998 (Marsh, 1999). The increase in exports has resulted in the United States becoming a net exporter, in value terms, of beef since 1994. However, when both live cattle and beef are considered together, the United States remains a small net importer.

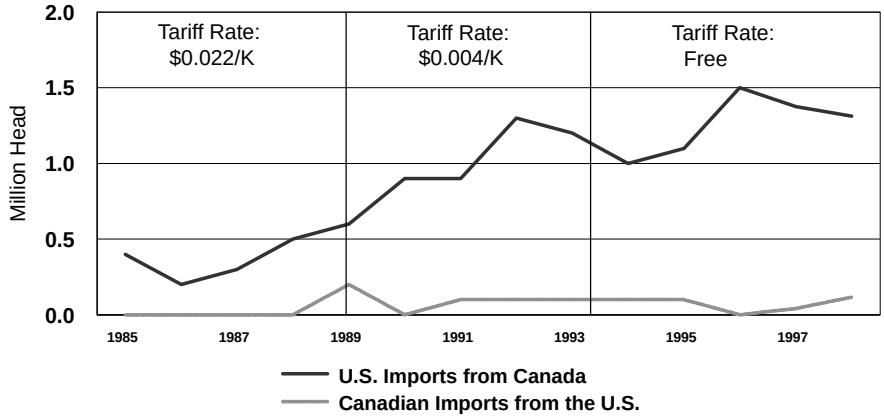
Increased imports of cattle and beef from Canada have displaced imports of manufacturing quality beef from Australia and New Zealand. In 1999 the United States imported 980 thousand head of cattle from Canada, a decrease from 1.3 million head in 1998 (Figure 3). While the United States is a consistent net importer of live cattle from Canada, U.S. exports of live cattle to Canada increased to 222 thousand head in 1999 from a previous five year average of 62 thousand head, due to increased demand in Alberta and less onerous sanitary restrictions at the U.S.-Canadian border. One factor behind increased U.S. imports of cattle was the cattle cycle, for western Canada had large inven-

Figure 2: Value of U.S. Imports and Exports of Cattle and Beef, 1980 - 1998.



Source: Marsh 1999.

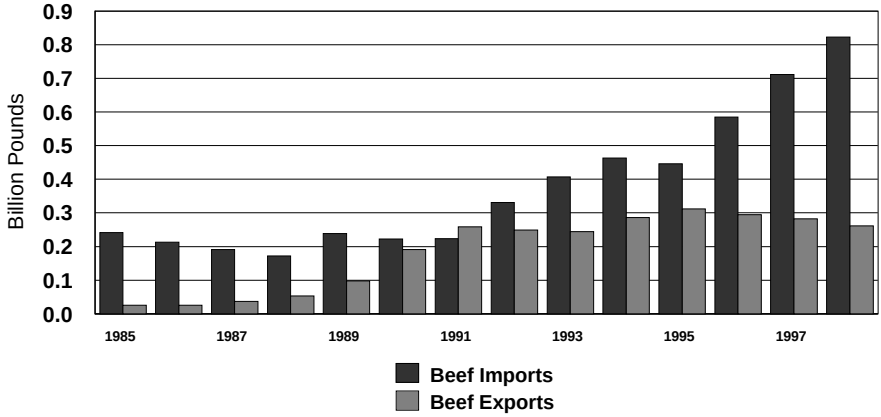
Figure 3: U.S. - Canadian Trade in Live Cattle, 1985 - 1998.



Source: USDA 1999a.

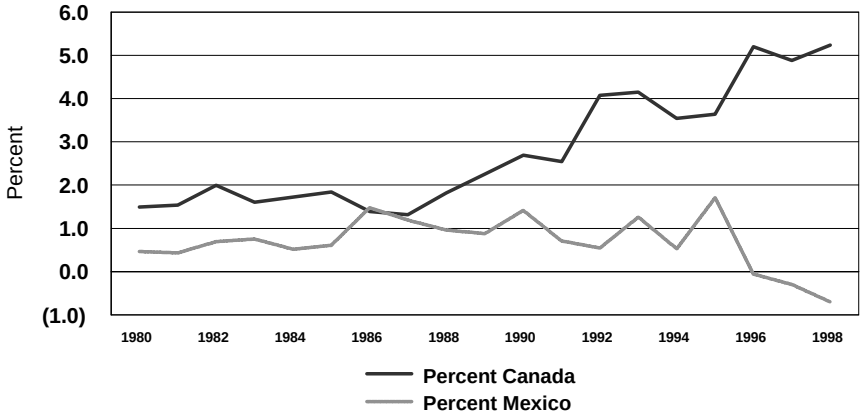
tories that needed to be liquidated (USDA, 1999b). Other factors were the elimination of Canadian transportation subsidies to export grain, resulting in lower feed grain prices on the Canadian prairies, and inadequate slaughter capacity in Alberta.

Figure 4: U.S. - Canadian Trade in Boxed Beef, 1985 - 1998.



Source: USDA 1999a.

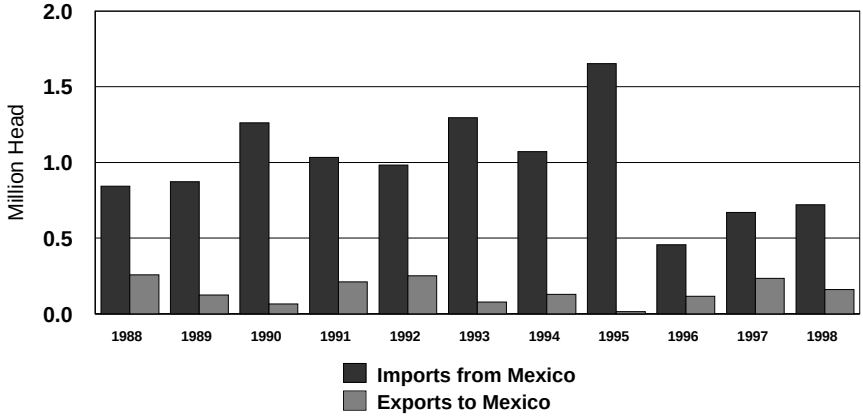
Figure 5: Net Imports from Canada and Mexico, Cattle and Beef Pounds as a percentage of U.S. Beef Supplies, 1980 - 1998.



Source: Marsh 1999.

The United States is also a net importer of beef from Canada, and imports of boxed beef have increased fourfold since the implementation of the Canada-United States Free Trade Agreement ten years ago (Figure 4). In 1998, the United States imported 823 million pounds of beef from Canada and ex-

Figure 6: U.S. Cattle Trade with Mexico, 1988 - 1998.



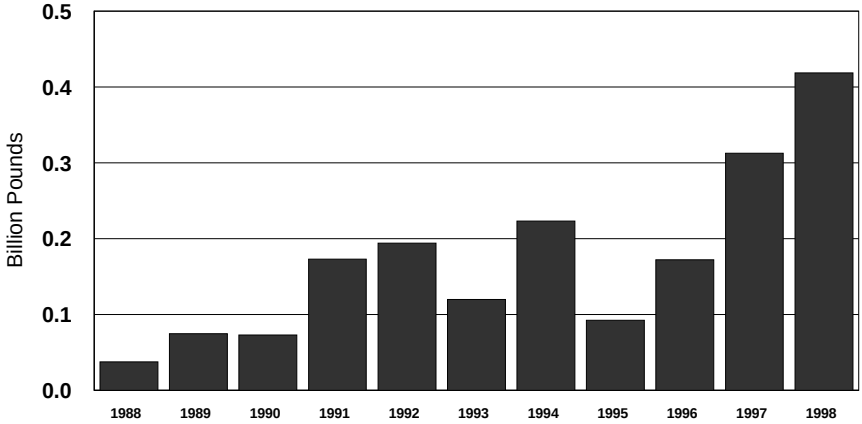
Source: USDA 1999a

ported 261 million pounds of beef to Canada (USDA, 1999b). Net imports from Canada are illustrated in Figure 5.

The United States became a net exporter of cattle and beef to Mexico in 1996 (Marsh, 1999). U.S. imports of feeder cattle have decreased from a high of 1.296 million head in 1993 to 959 thousand head in 1999 (Figure 6). While the United States exports some breeding stock and slaughter cattle to Mexico, the number is small, with 100 thousand head being exported in 1999. U.S. exports of beef have increased to 421.6 million pounds in 1998, after reaching a low point in 1995 of 90 million pounds due to the devaluation of the peso (Figure 7).

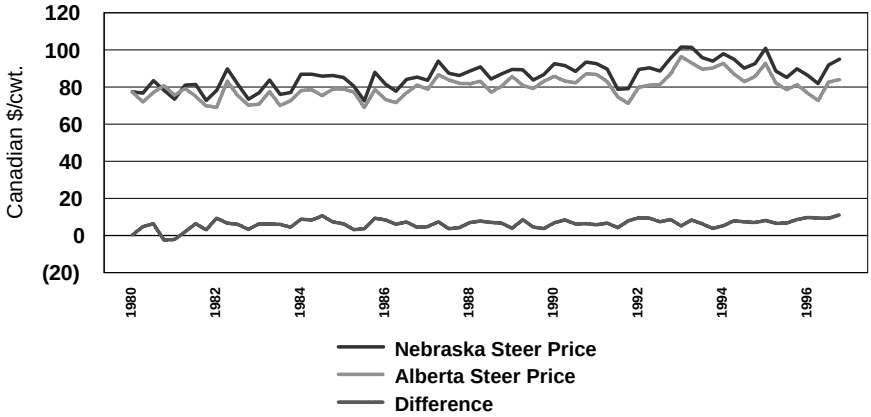
Previous research indicates that the U.S. and Canadian cattle and beef markets are well integrated (USITC, 1997; Young and Marsh, 1998). Figure 8 illustrates that slaughter prices in the Nebraska and Alberta markets track one another closely, are separated by a relatively constant margin and have common turning points. Inventory numbers show U.S. dominance in the North American cattle and beef industry. On January 1, 1999 the United States cattle inventory numbered 98.5 million head, Mexico followed with 24.6 million head,

Figure 7: U.S. Boxed Beef Exports to Mexico, 1980 - 1998.



Source: USDA 1999a

Figure 8: U.S. - Canadian Slaughter Prices, 1980 - 1998.



Source: Young and Marsh 1998.

and Canada had 12.8 million head (USDA, 1999a). Due to its size, the U.S. market is widely regarded as the primary pricing point in the North American market, with regional differences due to transportation costs and exchange rates.

Cattle/Beef Sector Issues

With the exception of the cases that are the subject of this paper, trade and policy relations in the cattle/beef sector have been reasonably harmonious, and the market has functioned reasonably well. Aceves Ávila and López López described the situation well in an earlier workshop paper:

> *Mexico-U.S.-Canada live cattle-beef trade has few tariff barriers and seems to be a good example of specialization based on competitive advantage of the three countries.* (Aceves Ávila and López López, 1998, p. 207).

Working relations among the three national producer organizations[4] began prior to signing the NAFTA Agreement. They were strengthened in January 1994 by creation of a tripartite body, the NAFTA Beef Working Group, an affiliation of the three producer organizations. The three organizations continue to meet periodically. A few on-going issues continue to affect trade relations. These issues are identified in Figure 1 and are discussed very briefly below.

Mexico-U.S. Trade Issues. For Mexico, there appear to be two significant issues in its trading relationship with the United States. Much of the beef exported to Mexico by the United States is offal, low valued cuts and other meats not usually consumed in the United States. It is claimed that these meats enter at low prices which disrupt the Mexican market. These concerns resulted in a Mexican dumping action against the United States in 1994–1995, and although dropped, the concern remains. In August 1999, Mexico initiated an antidumping suit and levied duties.

According to Aceves Ávila, another issue is the barrier to Mexican exports to the United States in the form of a sanitary rule relating to bovine tuberculosis (Aceves Ávila, 1998). From the U.S. side, animal diseases and the volume of imports have been issues. Each of these issues appears to be part of the producer groups' cooperative working agenda.

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[4]The organizations are the National Cattlemens' Beef Association (NCBA) in the United States, the National Livestock Producers Federation (CNG) in Mexico, and the Canadian Cattlemens' Association (CCA) in Canada.

Canada-U.S. Trade Issues. There are more outstanding issues between the United States and Canada. Those that continue to receive attention are grading procedures (equivalence and reciprocity), animal drug use and testing, and sanitary requirements. Consumer safety concerns and access to the European Union market are issues of shared interest. Border inspections have caused discord, especially when increased vehicle and animal health inspections were used by several northern tier states to disrupt the movement of agricultural goods entering from Canada. Issues involving import levels and input subsidization were addressed in the R-CALF actions. Whether the legal decisions emanating from R-CALF resolved those issues remains to be seen. Discussion comments by Lambert and Laycraft on this paper provide additional information on these issues.

For purposes of this paper it can be said that NAFTA, where it applies, has contributed to trade harmony on many of the "issues" in the sector. Some issues remain but there appears to have been commitment and progress toward achievement of improved trade, and the market outcomes in economic terms indicate considerable success. The exception to this favorable assessment appears to be events before, during and perhaps subsequent to the R-CALF actions.

U.S. TRADE REMEDY LEGISLATION

In November of 1998, R-CALF filed a countervailing duty suit against live cattle imports from Canada and antidumping duty suits against live cattle imports from both Canada and Mexico. The R-CALF petitions were filed with the Department of Commerce under Sections 701 and 731 of U.S. trade law (Tariff Act of 1930). Section 701 is intended to provide relief from subsidized imports through imposition of countervailing duties; Section 731 is intended to provide relief from product dumped in the United States through imposition of antidumping duties.[5]

[5]Canada has counterpart legislation which pre-dates the U.S. laws in terms of historical development. The existing legislation is the Special Import Measures Act (1984) administered by the Department of National Revenue, Customs and Excise; the Canadian International Trade Tribunal conducts investigations and determines injury (Dutz,1998).

The purpose of Section 701 is to provide protection to U.S. producers from unfair practices of exporters resulting from government sponsored benefits such as subsidized exports, tax relief and favorable credit terms to exporters or buyers. An interested party can initiate an action by filing a petition, as occurred in the R-CALF case, or the International Trade Administration (ITA) of the Department of Commerce (DOC) can initiate an action on its own. Petitions under section 701 are the joint responsibility of the U.S. International Trade Commission (USITC) and the ITA. If an ITA investigation under Section 701 determines that significant subsidization exists, and if the USITC determines that the imports are likely to injure the U.S. industry, a *countervailing duty* may be imposed on imports. An important characteristic of this legislation is that, once initiated, the process of investigation and decision making is mandated and occurs along a specified and tight time line (Coughlin,1991; Trebilcock and Howse, 1995).

If the DOC in its preliminary investigation finds subsidization, the USITC conducts a preliminary assessment of injury. If this determination is positive (injury or probable injury), the ITA establishes requirements of cash deposits or bonding equivalent to the estimated subsidy on imports. If further DOC investigation confirms subsidization, a countervailing duty may be applied until revoked. At any point in the investigation period which may extend over 320 days, findings negative to the allegations may result in termination of the process and removal of the cash requirements or the countervailing duty.

Section 731 is intended to provide protection against unfair trading practices referred to as "dumping." Originally dumping was defined as exporter price discrimination which resulted in lower selling prices in the U.S. market than in the exporters' domestic market, or in third markets. Stiglitz (1997) points out that application of the legislation has shifted in the past twenty five years from the criterion of price discrimination to exporters selling below their full average costs of production. Antidumping cases are also jointly administered by ITA which determines the dumping margin, and the USITC which determines if injury has occurred. In order for an antidumping duty to be applied, both a positive margin and material injury must be found. The process of Section 731 cases is also firmly mandated but the time frame may extend to 420 days from initiation.

Injury determination is an important component of trade remedy application. "Material Injury" is defined as "harm which is not inconsequential, immaterial or unimportant" and is assessed by consideration of "all relevant economic factors that bear on the state of the industry in the United States."[6] Factors considered by the USITC in making an injury determination include:

- volume of imports;
- effects of imports on U.S. prices; and
- effects of imports on domestic producers.

There is considerable economic literature on application of Sections 701 and 731 in trade disputes. Schmitz, Firch, and Hillman (1981) analyzed U.S. antidumping actions against Mexican tomato producers. They demonstrated the arbitrary nature of the outcome of the case by showing that a different, allowable test (cost of production vs. third market prices) would have produced opposite results. They also showed that it was normal business practice for tomato growers, at times, to sell below cost of production. Schmitz et al. argued that the jurisprudence associated with Section 731 did not contemplate perishable and cyclical agricultural production.

Coughlin, based on a review of Section 701, 731, and 301 applications, also noted major weaknesses. He attributed actions as much to self-interest protection as fair trade motivation and concluded:

> *Overall, the evidence is that trade-remedy laws hinder rather than facilitate free trade. U.S. fair trade laws can be more accurately characterized as the bedrock for protectionism rather than the bedrock for free trade. As such, trade remedy laws need to be remedied by eliminating the bias toward protection of domestic producers.* (Coughlin, 1991)

Stiglitz, writing in the *Southern Economic Journal* in 1997, provided the following observations:

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[6]USITC, Live Cattle From Canada, #731-TA-812 (Final). *Determination and Views of the Commission*, November 1999.

- there has been a dramatic increase in use of trade remedy laws by the United States in the 1980s and 1990s;
- antidumping actions have shifted, over the past twenty-five years, from preventing price discrimination to actions based on selling below costs of production;
- in over 80 percent of antidumping case since the mid-1980s, the dumping margin has been determined to be positive, suggesting bias in the tests;
- procedures applied in countervailing duty actions tend to produce biased margins;
- harassment cases are real, and legal costs are asymmetric meaning that domestic producers have a process-advantage in the action; and
- the trade laws induce rent seeking behavior.

Stiglitz also stated "Since it is relatively easy to show that a foreign firm has been subsidized in some way, the countervailing duty laws have become a populist sibling to antidumping laws" (Stiglitz, 1997, p. 412). He concluded that "the laws need to be reformed" and reported that even the chairman of USITC admits "we all know that these laws can be improved" (p. 418).

THE R-CALF DISPUTE

The dispute referred to in this paper as the "R-CALF Dispute" was really comprised of three separate trade remedy actions against Canadian and Mexican exports of live cattle to the United States. An action was brought against Mexico and Canada for alleged dumping of live cattle under Section 731, the antidumping provisions. The third action was brought against Canada0 under Section 701, alleging government subsidization of live cattle exports. The petitions were filed with the Department of Commerce in late 1998 by R-CALF, "a grassroots non-profit corporation who's sole purpose is to initiate actions ... [in relation to] U.S. Trade Regulations and Trade Relief Laws" (R-CALF release, undated about July 13, 1998).

The basic issues behind the action were the depressed state of the calf and fed beef markets in 1998, and the increasing volume of imported cattle. R-CALF alleged in 1998 that "beef and live cattle imports have caused an annual loss in value to U.S. cattlemen of over $200/calf in recent years and an annual loss to the cattle industry of over $4 billion on a net trade basis" and that "live

imports alone (excluding beef imports) have reduced annual value of calves over $100/head" (R-CALF release, 1998). These arguments were reflected in the arguments which led to the USITC investigation despite considerable economic evidence from several sources, including previous USITC investigations, which contradicted this position.[7]

The depressed state of the cattle sector was not, however, the only issue that influenced the action. It was R-CALF's perception that processors had the power to price cattle in their own interests; they believed politicians were unreceptive to problems in agriculture, in particular those of cattle producers; they had several differences with the national organization (NCBA); and they were suspicious of accuracy and dependability of official data on the industry as well as economic analysis (Anderson, Mintert, and Brester, 1998). More generally, U.S. cattle producers were experiencing unfavorable returns and they were aware that imports from Canada were rising. Earlier, producers had expressed concerns about Canadian safety net programs, including the National Tripartite Stabilization Program, that had previously existed in Canada. Those programs were reviewed by the USITC in 1993 and were found "to be very small" in their effects. Despite that finding, it is possible that the perception remained among U.S. cattlemen that these programs influence Canada's competitiveness. Safety nets and other federal and provincial programs became part of the Section 701 investigation on Canadian cattle.

Petition On Mexican Cattle

The antidumping dispute filed by R-CALF (November 12, 1998) on live cattle from Mexico alleged damage of about 176 million dollars related to 670 thousand head of imports. However, this dispute did not last long. A survey of U.S. cattle producers before the petition was filed revealed limited support for action against Mexico. NCBA chose not to support that petition and

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[7]If the Brester and Marsh results from the appendix are applied to a "750 pound calf," an estimate of the negative impact of IMPORTS ALONE would be about $35/head, around 6 percent of the value of the animal (Marsh, 2000). If they were applied considering ALL U.S. TRADE, the impact would imply an INCREASE of about $6/head. Holder (USDA, August 1998), Mintert (Kansas State University, August 1998), and the USITC (1997) all reported that live cattle imports had very little to do with the depressed state of cattle prices.

Table 1: Canadian Cases: Investigation Details/Criteria.

Time Period	Most recent four quarters before filing the petition, October 1997 to September 1998. For subsidization, April 1997 toMarch 1998.
Coverage	• Live cattle for slaughter; not beef or beef products. Exports sourced from Alberta, Saskatchewan, Manitoba, and Ontario. • For determination of subsidies, 30 government programs ranging from National Income Stabilization Act, to grazing and pasture management programs, to a bear damage compensation program in Ontario. The Canadian Wheat Board was identified as a source of government subsidization. • For determination of dumping margins, six producer/ex porters with the greatest volume of exports were used to estimate production costs and returns.
Action Costs	Estimates place R-CALF costs at around $US 1.7m. Canadian direct costs have been estimated at $ Cdn 5.0 m; there are noofficial estimates of marketing losses on Canadian cattle, or estimates of indirect producer group and government intervention costs.

Source: Various USITC and participant documents.

actually worked to have it terminated. The USITC preliminary report on injury, released about two months after the petition was filed, found no evidence of injury in relation to Mexican live cattle imports. The case terminated in January 1999 after the first round of investigation.

The Countervailing Action On Canadian Cattle

There was reasonably broad support among cattle producers in the United States for a countervailing duty initiative on Canadian live cattle. This support resulted in the NCBA taking a public position of supporting the petition drafted by R-CALF. That petition was filed on November 12, 1998. No estimate of damage was provided but the allegation covered 135 thousand head of imports valued at 920 million dollars. The investigation, begun in December, covered 28 federal and provincial programs as well as the Net Income Stabilization Account (NISA) and the Canadian Wheat Board (CWB). A few details of the countervail case are summarized in Table 1.

The basic argument in relation to the CWB was that it reduced prices to barley producers on the prairies and thereby represented an indirect government subsidy to Canadian cattle feeders. Most of the evidence in support of this allegation was drawn from published Canadian material including a submission by Canadian cattle producers to a public inquiry, and economic analysis conducted as part of the ongoing debate on role and impacts on prairie grain producers of the CWB. As it had in policy debates for some time in Canada, the CWB issue dominated the countervailing duty action. Several position statements were presented with claims and counterclaims about CWB impacts. The CWB was a significant participant in presenting the overall Canadian position on this case.

Canadian intervention in defense of its position was broadly based and, of course, expensive because these actions require using U.S. legal firms specializing in trade law.[8] The Government of Canada, each of the four named provincial governments, Quebec, the Canadian Cattlemens' Association, and the Canadian Wheat Board retained counsel separately or in combination, and made submissions and appearances throughout the first eight months of 1999.

The preliminary USITC countervail decision in January, as is common in these cases, found in favour of injury. That finding initiated further analysis by DOC to determine the magnitude of subsidization. This analysis showed that in a few programs there were subsidies; calculated in terms of the value of the subsidy to producers (not the cost of the subsidy to the government), in *ad valorem* terms, the estimates ranged between 0.01 percent and 0.65 percent. When these subsidies were allocated over all production, the overall level was determined to be 0.38 percent. That is below the 1 percent level required to trigger countervailing duty action, i.e., *de minimis*, as agreed to in the Uruguay Round Agreement (Trebilcock and Howse, 1995, p. 145). As a result, on May 4, 1999 DOC reported that countervailing duties would not be applied to live cattle from Canada.

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[8]Stiglitz (1997) points out the imbalance in influence and cost in contesting a trade remedy action. In total, seven Washington legal firms were retained by Canadian defendants.

The investigation confirming the preliminary analysis continued into September, and when the final ruling was reported October 22, 1999 the estimate was raised to 0.77 percent (Federal Register, October 22, 1999). Countervailing duties were not imposed as the level of subsidy calculated was still *de minimis*.[9] The investigation agreed with the conceptual argument that the operations of the CWB could provide a subsidy. However, during the period of investigation the estimated subsidies attributed to the CWB were insufficient for the imposition of countervailing duties. The case was thereby terminated (USITC, 1999).

Antidumping Action Against Canadian Cattle

The antidumping petition was also filed on November 12, 1998. The allegation was that live Canadian cattle were being sold into the United States for slaughter at "less than fair value," and that imports were injuring the U.S. industry. The alleged dumping margin was $6.42 to $10.72 per hundreweight, on 135 thousand head. If these two conditions are determined to exist, under Section 731 of the Tariff Act of 1930, offsetting remedies may be applied. Producer support for this action was much less evident than in the countervailing duty case. As a result, the NCBA took a neutral stance on the antidumping case.

The DOC and the USITC began their investigations in December, and USITC announced its preliminary finding of probable injury on January 20. For purposes of this case, fair value was determined to be a "constructed value" of Canadian cattle based on calculated full costs of production. Consequently a major costs and returns analysis of selected western Canadian cattle feeder operations was initiated by the DOC.[10] A set of six producer/exporters were identified and questionnaires sent out to provide the basic cost and sales information. Four provinces- -Alberta, Saskatchewan, Manitoba, and Ontario- -were

[9]Subsidies are *de minimis* if they are determined to represent less than one percent of the value of the product, measured by the amount of benefit conferred to producers.

[10]There are well defined, standardized procedures and DOC regulations for determination of "fair value" according to production costs. Details of the analysis can be found in DOC, Notice of Final Determination ..., FR 56739. October 21, 1999.

Table 2: Percentage Dumping Margins Posted By DOC, June 30 and October 12, 1999

	Weighted Average Percent Margin	
Exporter/Producer	***Preliminary 6/30 Effective 7/1***	***Final 10/12 Retroactive 7/8***
Cor Van Raay Ltd. and	4.49	4.53
Butte Grain Merchants Ltd. Groenenboom Farms Ltd.	3.9	3.86
Jameson, Gilroy and B & L Livestock Ltd.	3.94	5.10
Pound-Maker Adventures Ltd.	0.18 (de minimus)	no duty required
Riverside Feeders Ltd. and	6.81	5.34
Grandview Feeders Ltd.		
Shaus Land and Cattle Co.	5.43	15.69
All Others	4.73	5.63

Source: USITC # 3255 November 1999: Live Cattle From Canada (Final) and 64 FR 56739 October 22, 1999.

identified because these provinces are the major source of live cattle for export to the United States.[11]

On June 30, DOC released its preliminary determination of dumping margins on live cattle and established the requirement of bonding requirements on imports effective July 1. Effective July 22 some margins were revised upwards (see Table 2). When a dumping margin is declared, the Customs Service

[11]Participation by Canadians in the DOC analysis is discretionary in the sense that candidates can refuse to provide information. One respondent withdrew part way through the investigation. However, DOC can conduct its analysis as if respondents did provide all information requested. Hence, there is strong motivation for those selected to respond, despite uncompensated reporting costs and contributing to a process which may produce unfavorable market consequences. The firm that withdrew from the survey (on July 12) experienced a large increase in its assigned dumping margin on July 22.

requires a cash deposit or posting of bond in the amount of the dumping margin to allow the product to enter the United States.

On November 19, 1999 the ITC released its final determination on injury caused by selling live cattle for export at "less than fair value." That determination, which ended the case, stated:

> *...that an industry in the United States is not materially injured or threatened with injury, and the establishment of an industry in the United States is not materially retarded, by reason of imports from Canada of live cattle, ..., that have been found by the Department of Commerce to be sold in the United States at less than fair value (LTFV).* USITC, *Determination and Views of the Commission*. Investigation # 731-TA-812 (Final).

The countervail case, as indicated in the previous section, was terminated by the determination that there was *no significant subsidization*. This determination *found dumping* but *no injury*. The distinction in the findings is significant in symbolic terms and perhaps will have implications for subsequent actions. Exports were determined to have been dumped, i.e., live cattle were unfairly traded, and the record shows that conclusion. The wording in a separate "view of Commissioner Carol T. Crawford" of the final determination is interesting:

> *...I find that the domestic industry* ***would not have increased its prices or its output and sales, and therefore its revenues, significantly had the subject imports been fairly traded.*** *Therefore, I find that the domestic industry would not have been materially better off if the subject imports had not been dumped.* (USITC, November 1999, p. 32, highlighting by the editor).

The USITC found that Canadian cattle producers traded unfairly, but it did not matter. This conclusion, if viewed from the vantage point of trade harmony and market performance, speaks volumes.

Observations On The Cases

It is not within the scope of this paper to analyze positions presented on both sides of the cases. That would require summarizing hundreds of pages of documentation. However, some key aspects of the investigation and debate deserve comment in view of the purpose of this workshop.

First, objective economic assessment of the Canadian-U.S. cattle/beef sector would likely conclude that it is an example of a well functioning, reasonably mature market, that has few barriers to trade. Certainly there are pressures from the cattle cycle, and packer concentration continue to be issues of concern, as are regulation effects on the Canadian feed grain market. However, Canada and the United States have been close to one economic cattle/beef market for years, and Mexico is becoming part of that market. Movement toward "free trade" and its benefits are as close to reality in the cattle and beef sector as any other agricultural sectors characterized by significant domestic production and trade. Importantly, prices, location of production, distribution of cattle and beef, and beef consumption are market determined.

That trade issues persist, and that trade stress arises within this milieu is understandable. However, that a dispute could reach the level of R-CALF actions against Canadian producers, generate the costs and disruptions it did, and be characterized by an agency determination that cattle were traded unfairly when in reality they were sold and slaughtered according to fundamental market forces, has to be a cause for concern. It might also be of concern that NAFTA mechanisms for dispute resolution, and NAFTA itself, did not prevent this costly process. Indeed, freer trade in cattle and beef was a major irritant among R-CALF supporters.

Adding to the concern is the fact that, at the time the USITC investigation began, there was considerable economic evidence available on the role of imports on U.S. cattle and beef prices, on comparative levels of subsidization (OECD, 1999), and on reductions in agricultural subsidies in Canada. The USITC had conducted its own analyses in 1993 and in 1997 which appear to contradict the basic R-CALF claims. There were, therefore, strong economic grounds for

rejecting the petition.[12] The national producer organization in the United States had reservations about addressing overall industry problems through use of the trade remedy legislation, especially the dumping case. Certainly Canadians would have preferred a different approach.

That these considerations did not influence the U.S. Department of Commerce decision to proceed with R-CALF in November 1998 and again in January 1999 indicates that external and available economic evidence within the United States held little weight in these proceedings. On the other hand, incomplete economic evidence from Canada on barley prices held substantial weight in the early decisions.[13] These considerations may suggest there were other motivations for the particular approach. The cases certainly did draw attention to the issue caused by the volume of imports and created significant costs for Canadian producers (and others). As well, it presented the CWB as a trade issue in a new form, and as a new twist on an old issue for Canada.

The finding of no subsidization by the CWB turned on the evidence that during the period of investigation, Alberta and Montana barley prices were very similar. In fact for part of the period reviewed, Alberta prices in the unusual situation of exceeding those in Montana. If DOC had chosen a different time period, the conclusion on subsidization by the CWB may have been reversed, and that may have removed the *de minimis* finding on overall subsidies. There are some who argue that historic barley prices have no relevance in the post-Crow era on the Canadian prairies, and the similarity of Montana and Alberta prices will prevail in the future. Whether Canadian barley prices will arbitrage well with those in the United States depends partly on how much the border is opened to grain movements. These comments illustrate the cross-sector relationships that exist, and raise the issue of harmony between Canada and the United States on cross-border grain trade. Had Canadian prairie barley marketing continued under the open-border framework introduced in 1993 (the continental barley market), the 701 action might not have occurred.

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[12]The final USITC determination indicating lack of injury more or less replicated these findings.

[13]Initial allegations of CWB barley price and feed cost differences were grossly overstated and based upon arguments that were inappropriate to the case.

There are numerous criticisms of the cost of production methodology used in these investigations to determine dumping margins (Coughlin, 1991). One concern is that there are legitimate instances when agricultural and manufacturing companies sell below their cost of production. As quoted by Bovard "If the same antidumping laws applied to U.S. companies, every after-Christmas sale in the United States would be banned" (Coughlin, 1991, p. 13).The cyclical nature of prices in the cattle industry (illustrated in Figure 8) is well known. Many U.S. producers sold cattle during the period of investigation at market prices that were below the cost of production, and some U.S. producers stated misgivings at the double standard applied in this case.

There are other problems in using cost of production for these purposes. The method of determining the dumping margin is to exclude "below-cost sales" in the home market (Canada) from the comparison if the proportion of below-cost sales exceeds 20 percent. These below-cost sales, consistent with legal requirements, were excluded from determination of normal value. This means that the distribution of sales prices in Canada was truncated, but there was no corresponding adjustment made in U.S. prices. This means that different (in fact, biased) price estimates are used between Canada and the United States to determine the antidumping margin. Further, there is no indication that tests are conducted to determine if differences in prices are statistically significant. These procedural matters cast doubt on the validity of the calculations.

Finally, there is an efficient and accurate way to identify differential input costs (subsidized or market determined) facing livestock producers. It is to analyze regional (in this case, cross-border) prices and flows of feeder animals. Subsidized feed costs in Canada would show up as higher feeder animal prices and/or inflows, just as support for grains and subsidized farm credit show up in land prices. This economic test could be conducted relatively easily by either side to the argument. It would likely show that, as in feeder cattle from Mexico and feeder pigs from western Canada, the flow of feeder cattle was for some time *to* the United States. Health restrictions on imports into Canada do not explain southern movements of Canadian feeder cattle and pigs, but relative feeding costs probably do.

Table 3: Mexican Antidumping Duties on Selected U.S. Beef Products, 1999

Item	***Shipper***	***Duty (percent)***
Live Cattle	all	none
Beef Carcasses	ConAgra, Excel Corp., IBP	none
	other shippers	5.24
Bone-In Beef Cuts	ConAgra, Excel Corp., IBP	none
	Farmland National Beef Co.	7.60
	other shippers	12.76
Boneless Beef Cuts	Excel Corp., Farmland National Beef Co.	none
	IBP	4.14
	ConAgra	7.66
	other shippers	74.98

Source: USDA 1999c.

The use of trade remedy law is costly in unanticipated ways. This is illustrated by the Government of Mexico antidumping suit against the exporters of U.S. cattle, beef and edible beef offals in 1999. Mexico's Secretariate of Commerce and Industrial Development found that some U.S. exporters sold selected beef products to Mexico at prices determined to constitute dumping. Antidumping duties were implemented on August 2, 1999 (USDA, 1999c). Table 3 shows the duties imposed for selected products, which vary by the company selling the product. The actions by the Government of Mexico are regarded by some observers to be in retaliation for U.S. trade actions, and illustrates how trade relations can degenerate in unanticipated and costly ways.

These observations indicate that there remains much to be done in achieving trade harmony in what is already a relatively free market and which, otherwise, should be a relatively dispute free sector. They also indicate that

Table 4: A Binary Assessment of Economic Impacts of R-CALF

	United States		*Canada*	
	C.V.	*A.D.*	*C.V.*	*A.D.*
Imports	0	0	0	0
Producer price impact	0	0	-	- -
Packer impacts	-	-	+	+
Consumer price impact	0	0	+	+
Dispute costs	- -	- -	- -	- -
Producer group relations	- -	- -	- -	- -
Short-run trade relations	- -	- -	- -	- -
Long-run harmony	?	?	?	?

Notes: + indicates probable favourable outcome in relation to the factor.
- indicates probable unfavourable outcome.
0 indicates no perceptible impact.
Source: Compiled by the authors.

responsibility for achieving trade harmony lies with each of the NAFTA partners.

CONCLUSIONS

Table 4 summarizes some of the probable impacts and direction of benefit or loss from the R-CALF experience. It is not an encouraging picture. If our conclusions on impacts are valid, the most likely "winners" are Canadian packers and, perhaps, Canadian consumers. That was not the intended outcome of the action. It is difficult to identify any significant benefits to offset the considerable costs incurred by the parties to the R-CALF dispute, and Canadian producers bore market costs of the antidumping margin through reduced prices.

Ideas of how to develop dispute resolution systems that will achieve greater harmony across the U.S., Mexican and Canadian beef industries can be

informed by an evaluation of the experiences in the R-CALF cases. On the positive side, the processes used by the DOC and the USITC resulted in negative final findings for both suits. The antidumping duty was terminated and a countervailing duty was never imposed. The investigations published by the USITC and the DOC follow previous USITC reports (in 1987, 1993 and 1997) that did not find violations of trade agreements or anticompetitive practices by the Canadian cattle industry. Another positive aspect of these investigations is that they directly responded to concerns raised by the U.S. industry, for example, the impact of CWB practices on feed prices in Canada. In doing so, the investigations have added information and data on the Canadian and U.S. industries.

There are also negative consequences of this application of U. S. (and Mexican) trade remedy law. Antidumping and countervailing duty actions are costly. The industries in both countries must invest a large amount of resources in preparing their case. Reportedly, the U.S. industry spent US$1.7 million and the Canadian industry spent CA$5 million in legal and associated fees. The opportunity costs of this time and money, and the unaccounted costs, for the industry are high as the resources could have been directed at trade issues of joint concern, such as the European Union beef hormone dispute, or the reduction of other trade barriers through multilateral negotiations in the WTO. Substantial resources, which also have high opportunity costs, were expended by both governments. In addition, a linkage may exist between the R-CALF suits and the suit initiated by the Government of Mexico against the U.S. industry, increasing the cost of the R-CALF suits. Importantly, progress on efforts to make changes to ease other trade issues (as in Figure 1) often stall during periods of high conflict. There may be a question of willingness to pursue other issues after this conflict.

Certainly economic losses were imposed on the Canadian industry even though the bond funds are returned. Brester, Marsh, and Smith (1999, p. 24) estimate that with imposition of the antidumping tariff of 5.57 per cent, Canadian slaughter prices were reduced by 2.88 per cent in the short run (US$ 1.77/cwt) or by 3.53 per cent in the long run if they had been in place longer (US$ 2.17/cwt). That represents a large price decline over the July–November marketing period and significant revenue reduction. Economic losses would have

been much larger had the final determination been positive for R-CALF, and antidumping duties implemented for an extended period. This raises the question of liability for market and defense costs in disputes of this nature- -should initiating parties have some financial responsibility if their case fails? Legal settlements often ignore economic costs, but compensation payments are common in agricultural policy.

The antidumping and countervailing duty processes under the Tariff Act were not designed to encourage and develop good working relations between two industries or to accommodate partners in a trade agreement. The process was designed in a era when domestic production was dominant, to provide protection to domestic industry under pressure from imports. However this has all changed with globalization. More importantly, NAFTA is a trinational agreement and the cattle/beef sector is approaching one market. The trade remedy process is a legal-administrative process which encourages adversarial behavior. In the quest for improved trade harmony and reduced policy stress, particularly in the face of economic evidence pointing so strongly to "very small impacts," a less damaging process needs to be developed. As indicated earlier, there is economic literature which supports that position, and this review of the R-CALF actions reaches that conclusion.

Avoidance of trade disputes may be facilitated by greater involvement of producers and other industry participants in problem solving. There has been discussion of the potential of cross border producer organization in past workshops. The past year has produced several examples of cross-border meetings and conferences, some of which are discussed later in this publication. These fora are to be encouraged. Further, within NAFTA there are provisions for dealing with sanitary and phytosanitary issues according to "*science based*" evidence and rules. Adherence to "*economic science-based*" information early in the R-CALF discussions may have avoided the entire process. Building an "*economic-science based" analogue* into NAFTA process may be a useful consideration. Trade remedy law in its present form, needs to be, at most, "last resort" action.

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APPENDICES

Two recent analyses of the cattle/beef sectors in the United States, Mexico, and Canada provide useful economic information related to the R-CALF case, and to the overall question of effects of NAFTA on cattle and beef trade. They are briefly summarized here as information related to the purpose of this workshop.

APPENDIX 1

USITC Analysis of Quantitative Relationships Among Mexican, Canadian, and United States Cattle and Beef Industries

The USITC report set out to analyze the impact of NAFTA and URA on U.S. imports and exports of live cattle for slaughter (LCFS), and on fresh and frozen beef; and to report on steps to prevent transshipment of fresh and frozen beef through Mexico and Canada to the United States. Chapter 4 of the report *IMPACT OF THE NAFTA ON U.S. TRADE IN CATTLE FOR SLAUGHTER AND BEEF* contains results of quantitative analysis using econometric models of factors which, for Canada, appear to be directly related to issues raised in the R-CALF petitions. The evidence on Mexico is relevant only to the question of NAFTA effects on the sector.

For Mexico, the analysis demonstrated that the new zero level tariff rates on cattle and beef within NAFTA resulted in the United States becoming the virtual sole supplier of Mexican beef imports. The USITC estimates show an increase in U.S. exports of 187m pounds, valued at $180M over the period 1994–‘96, with the United States now accounting for about 97 percent of Mexican imports. Canada has no significant cattle/beef trade with Mexico except in breeding stock. Second, the analysis indicated that peso devaluation had a larger net effect on U.S. exports to Mexico than NAFTA, and in the opposite direction. The estimates are about 314 m pounds reduction, valued at about $300m.

The peso devaluation was composed of two separate, and opposite effects. Edible offal and other by-products (for retail or household consumption) declined significantly. Imports for the HRI trade increased due to increased tourism.

The analysis of imports from Canada showed:

- Canadian live cattle for slaughter imports are determined by prices on both sides of the border. The elasticity of trade with respect to price U.S. and Canadian prices is 3.7. (in other words arbitrage in the LCS market functions as economists would expect);
- cattle inventories can be used to predict future LCFS imports;
- available slaughter plant capacity on the Canadian prairies influenced LCFS imports in the post-NAFTA era;
- there was no indication of major NAFTA impacts on LCFS imports from Canada because tariff levels were already low (less than 2 percent ad valorem) prior to implementation of NAFTA meaning that the structural change associated with NAFTA was small;
- "grain prices were found not to be important in explaining the pattern of trade over the past few years." (p. 4–32); and
- during 1997 and into 1998, there should be a decline in Canadian LCFS resulting from reduced Canadian cattle inventories and increased slaughter capacity coming on line in Alberta.

The report concluded:

> *While increased slaughter capacity in Canada will likely result in fewer live cattle for slaughter moving south, it may also provide opportunities for increased shipments of feeder and slaughter cattle to Canada. If so, then Canada will increasingly export beef rather than live cattle for slaughter, particularly if efforts to harmonize the meat-grading system of both countries are successful* .(USITC, 1999, p. 4–32).

APPENDIX 2

U.S. Beef and Cattle Imports and Exports: Impacts on Cattle Prices

Brester and Marsh (1999) report:

- U.S. cattle and beef imports from Canada increased substantially after 1988, increasing Canada's share of total beef imports (which increased only slightly over the same period);
- U.S. prices declined steadily in the 1990s; of the $8/cwt decline in slaughter prices, 4.4 percent of the reduction, or $0.35/cwt was attributable to the change in Canadian cattle and beef imports;
- cattle prices continued to fall in 1998 as a consequence of increased marketing weights, large supplies of competing meats, flat exports, and Asian flu problems; the contribution from imports from Canada was small;
- imports from Canada represented 6.5 percent of total U.S. beef supplies in 1998;
- U.S. beef exports to Canada (1989–1997) increased by less than half a percent;
- the United States is a net importer of beef, veal, and live animals when imports are measured in volume (carcass equivalents) terms. When imports are measured in value terms, the United States is a net exporter; and
- using their model to extrapolate different U.S. trade scenarios, indicates that the finished cattle price in the United States would rise by about $5/cwt if all imports of cattle and beef from Canada and Mexico were eliminated, but fall by $5/cwt. if all U.S. participation in cattle/beef trade were eliminated. Eliminating all other beef imports are estimated to raise U.S. price by $1/cwt.; eliminating U.S. exports reduces price by about $11.00/cwt, more than half of which is associated with by-product exports.

APPENDIX 3

Chronology of Petitions on Canadian Live Exports

Section 701: Countervailing Duty Action Against Canada

- October 1998: NCBA supports initiatives on cvd against live cattle from Canada.
- November 12, 1998: Petition filed by R-CALF.
- December 22, 1998: DOC initiates investigation.
- January 20, 1999: USITC (preliminary) finds reasonable grounds for injury.
- May 4, 1999: DOC (preliminary), Canadian Subsidy rate determined to be 0.38 percent (*de minimis*). No duty imposed.
- October 22, 1999: DOC final report/countervailable subsidies are not being provided to producers or exporters of live cattle in Canada. Case terminated.

Section 731: AntiDumping Action Against Canada

- October 1998: NCBA takes a neutral position on antidumping case against Canadian live cattle imports.
- November 12, 1998: R-CALF petition filed.
- December 22, 1998: DOC initiates investigation.
- January 20, 1999: USITC (preliminary) finding of grounds for injury.
- March 1, 1999: six Canadian cattle feeder/exporter respondents selected for analysis of production costs.
- March–May 1999: responses on costs.
- June 30, 1999: dumping margins determined; requirements for bonding exports imposed effective July 1.
- July 23, 1999: revised dumping margins (upward adjustment).
- October 21, 1999: margins revised effective July 8.
- November 19, 1999: ITC Final Determination of No Injury.

CANADIAN CATTLEMEN'S ASSOCIATION

Dennis Laycraft

I appreciate the invitation to participate on this panel and to comment on the Loyns, Young and Carter paper. The authors are to be commended for their paper and I concur with their overall findings.

Canadian cattle producers and their association have had a full plate over the past two years. We have had to defend against U.S. actions on anti-dumping (AD) and countervailing duty (CVD) investigations, country-of-origin labeling initiatives targeted to beef products sourced predominantly from Canada, border protests, State introduced non science based testing requirements and false allegations about pharmaceutical product usage, petitions to eliminate grading of imported Canadian beef, and so forth. We recognize that during this time many cattlemen on the U.S. side saw a "growing imbalance" in trade (often measured by counting cattle liners), and they were frustrated with our animal health requirements. In fact, Canada moved too slowly to address these concerns and saw the problems aggravated by the failure of the first attempt with the North West Project (feeder cattle) in 1997. That program is now working very well.

What was lost in rhetoric was the fact that, on a per capita basis, we consume almost twice the amount of U.S. beef in Canada that the United States consumes of Canadian beef. Overall, Canadian per capita consumption of U.S. agricultural goods is about six times American per capita consumption of Canadian agri-food products. In many ways we are each others best customer.

The Trade Remedy Actions

As one becomes more familiar with anti-dumping rules, it is clear that measures are increasingly being used as a form of protectionism and are completely inappropriate where a common market, free trade zone exists.

The CVD case found Canadian subsidies to be well below "de minimis" (1percent) making Canada one of the least subsidized beef cattle industries in the world. What was worrisome about the ruling however were the subsidy benefits that were attributed to some government policies affecting input costs. In particular the rates charged on crown grazing lands and reduced commercial interest rates due to loan guarantees were overemphasized. Ironically the U.S. International Trade Commission (USITC, 1993) studied the issue of grazing fees on public land found that Canada's nominal rates were three to four times higher than U.S. rates and U.S. Bureau of Land Management (BLM) rates are unchanged since that study. The Canadian Wheat Board (the main target of the countervail action) was *found not to be causing lower feed grain prices* during the period of investigation. As a result, that investigation terminated in October.

The trade remedy laws do not take into account relative subsidy levels in the two countries. Our President was once asked by a group if he fed subsidized grain. He said no, and then corrected himself when he remembered that he had imported some U.S. grain and fed it to his cattle.

The "market-to-market" comparison method was a critical part of the USITC analysis under the AD action. By that method, comparison sales are examined to determine if they are below the full cost of production. *If more than 20 percent of sales are below the full cost of production as calculated by the investigating agency, all below- cost sales are removed from the home market average. This adjustment causes a higher home market average price in comparison to the export market and a dumping margin is found even though there is the absence of underselling.* The adjustment biases calculations against the exporter. The preferred method of comparison is to examine prices in the receiving market versus the home market (less adjustments for freight, brokerage, handling, etc.). If there are receiving country sales below production costs, those should be reflected in the calculations.

We sold cattle in a competitive market place and, according to U.S. data, likely at a better margin, albeit negative, than many U.S. producers. We find it offensive that the process concludes we traded these cattle "unfairly". If you truly believe in free enterprise and there are no unfair subsidies or policies

that affect pricing, you must accept there are periods of profit and loss in our business. How many agriculture crops are being sold today would pass the test that was applied to Canadian live cattle? Wheat, corn, barley and many more would surely fail.

The option of undertaking a cross border analysis through an International Trade Commission 332 Study or through the Canadian International Trade Tribunal is a viable alternative or at the very least a useful precursor to the initiation of any trade investigation. This might prevent many costly and disruptive investigations from occurring.

NAFTA

Protectionists in the United States, including those in agriculture, have struck out at NAFTA as the source of all that is wrong in the world. Sound analysis demonstrates that NAFTA has been good for all three countries. W e recognize the NAFTA has some inadequacies. For the most part, the shortcomings are related to what was not included, not excluded, and the failure to complete several processes to harmonize standards *dating back to the Canada/United States Agreement in 1989*. These "shortcomings" have directly and/or indirectly contributed to the disputes that have taken place over the past several years.

The most serious shortcoming was the failure to prohibit the use of anti-dumping rules between free market participants. It is our position that *there is no justification for antidumping actions where a product is sold in a free trade environment*. We are also seeking changes through the WTO. 134 out of 135 countries supported a change in Seattle but the United States opposed it.

As the paper suggests, there are other issues that factor into disputes. The second inadequacy of NAFTA was a failure to achieve the harmonization objectives. The process started off well in 1990 when Trade Minister Mazankowski and Trade Secretary Yeutter agreed to streamline meat inspection. Political pressure from border meat inspectors and "susceptible" U.S. cattle producers stalled and eventually killed the initiative. Following the Jack In the Box tragedy, the attention switched to "mega regs" and all initiative was

lost even though the two systems were studied and found "remarkably similar".

Other commitments to harmonize standards saw little process and in some cases the divisions have grown wider, supported by anecdotal arguments to justify inaction or contrary action. Some are suggesting that technical standards such as grading or country-of-origin are part of some equity in a "brand" or trademark. Brands or trademarks are part of commercial trade and should be pursued voluntarily by those that see value in those initiatives. Technical standards should be science based and trade friendly, otherwise they will also be used increasingly as a non tariff trade barrier.

CCA is encouraged by the December 1998 Record of Understanding to improve the dialogue between our two country's Departments of Agriculture, to address some harmonization issues, and to set up an early warning system to address disputes at the early stages.

CONCLUSION

We have had a rough couple of years. However that should not overshadow the fact that, on balance, we have achieved an integrated market for beef and beef cattle, we have a good relation with many of our U.S. counterparts, and the CCA and NCBA have a long history of cooperation, and work well together on most issues.

NATIONAL CATTLEMEN'S BEEF ASSOCIATION

Chuck Lambert

The paper by Loyns, Young and Carter is generally factual in its documentation of the United States versus Canada and Mexico, and Mexico versus United States in the recent anti-dumping and countervailing duty cases. The authors are to be commended, along with Brester, Marsh and others for providing factual information to the policy process even in the face of political unpopularity and criticism from their local constituents.

National Cattlemen's Beef Association (NCBA) recognizes the deficiencies of the current dumping laws as pointed out by the authors. Following expenditure of scarce industry resources to defend against dumping cases filed by Mexican producers against U.S. cattle, beef and beef variety meats, NCBA has adopted policy to draft new language defining "dumping" that would better protect U.S. producers in future cases. The objective is to make the definition of dumping more consistent with the practical realities of producing a product in a cyclical commodity marketplace. NCBA is considering alternatives, including adding evidence of predatory pricing or intent to drive competitors out of business, to the definition of dumping. This policy is consistent with a position developed during the 1999 five-nation beef conference in Banff, Alberta. It is also worth noting that the current Administration refused to raise this issue during the Seattle Ministerial Conference in the face of opposition from the U.S. steel industry and other industries that rely on anti-dumping cases for protection.

The Loyns et al. paper, however, fails to address a perception, and in many ways the reality, that the original U.S./Canadian trade agreement was skewed. In fact the United States gave more access than it received. This factor ultimately resulted in the trade actions, accurately described by the authors, plus border blockades instituted by state officials during the winter of 1998. Two cases in point are restrictions on U.S. feeder cattle exports to Canada and utilization of U.S. quality grades on carcasses and beef produced from cattle imported directly for slaughter from Canada.

U.S. FEEDER CATTLE EXPORTS TO CANADA

The first case has been addressed in part by the Northwest Project, strongly supported by the Canadian feeding industry and the Canadian Cattlemen's Association. USDA Secretary Dan Glickman and the Canadian government first announced on October 24, 1997 the implementation of the Northwest Project. It is a trade agreement that waives specific animal-health testing requirements and facilitates cross-border shipment of live cattle from U.S. cattle producers to Canadian feedlots. During the period October 1, 1999 through March 31, 2000, approximately 160,000 US feeder cattle will be exported to Canada under the Northwest Project protocol.

Contrary to findings in the paper by Loyns et al. the flow of feeder cattle is not from Canada to the United States in the absence of artificial, scientifically undocumented trade barriers. Transportation costs from Montana ranches and feed costs generally favor shipment of calves from Montana to Alberta feedlots versus feedlots in the U.S. Cornbelt or the High Plains. During the last marketing year (October 1, 1998 through March 31, 1999), 51,009 U.S. feeder cattle entered Canada under the revised Northwest protocol. This total was more than 5 times larger than during the previous year. This successful project was initiated through coordinated efforts of state and national industry representatives, Montana and Washington state officials, U.S. government officials and Canadian officials. During the past year Alaska, Hawaii, Idaho and North Dakota have been added to the growing list of states eligible to ship cattle to Canada under these revised rules. The project relies on science to resolve animal-health related trade barriers, one of the key initiatives of NCBA policy.

The case could easily be made that if this issue had been resolved during the 1989 U.S./Canadian agreement and U.S. feeder cattle had been able to enter Canadian feedlots under current protocol, that the recent dumping case and country-of-origin policy adopted by NCBA would never have been implemented. If half of the slaughter cattle entering the United States from Canada had originated in Montana or other northern tier states, pressure to restrict entry or differentiate the product would have been significantly reduced. The fact that Canadian cattle were able to come south while U.S. feeder cattle were denied access to Canadian feedlots was a significant contributing factor to producer frustration and unrest.

NCBA and the Canadian Cattlemen's Association are currently working to allow year-round access to Canadian feedlots for U.S. feeder cattle from a few select states. The long-term objective is for Canada to recognize the health status of each state (zone). Ultimately, the border must be as transparent for U.S. feeder cattle moving to Canada as it is for U.S. feeder cattle to move from one state to another, or for Canadian slaughter cattle to move to U.S. packing plants.

USDA QUALITY GRADES

NCBA supports the concept of grade equivalency. That means that if Canada, Mexico or other trading partners wish to adopt grading standards that are equivalent to USDA quality grades, then *market and promote* them as such, NCBA will not object. The U. S. beef industry does, however, understand the economic "free rider" principle and strongly objects to beef from other countries receiving USDA quality grades without country of origin differentiation. USDA grades are recognized as the standard of excellence in the international market and the U.S. beef industry has invested substantial resources in developing brand equity associated with USDA grades. NCBA opposes reciprocity - - ie., USDA graders in non-U.S. plants and grading of imported carcasses and beef produced from cattle imported directly for slaughter.

Historically, U.S. packers had an economic incentive to present imported carcasses for USDA quality grades. The Canadian grading system did not recognize marbling as a quality factor for nearly 20 years. During this period there was virtually no price differential between Canadian carcasses that were more highly marbled (equivalent to USDA Choice or Prime, for example) and carcasses that were less marbled (equivalent to USDA Select or Standard). Consequently, U.S. packers could purchase carcasses (or cattle) in Canada with potential to grade USDA Choice or Prime, export them to the United States to be graded, and receive the quality differential (in effect the U.S. spread between USDA Choice and Select carcasses).

During 1999 NCBA petitioned the U.S. Department of Agriculture to end the practice of putting grades such as "USDA Choice" or "USDA Prime" on imported beef. This practice misleads consumers because it allows imported beef to receive the same grade as U.S. beef, leaving the false consumer perception that the imported beef with an USDA grade is produced in the United States. NCBA be-

lieves this violates the Code of Federal Regulations that governs meat processing. On February 3, 2000, USDA published an advanced notice of public rule making proposing that imported carcasses no longer be graded, or that if they are graded that the country-of-origin identification currently applied to imported carcasses be retained if the quality grade is retained to the ultimate consumer. A third alternative proposed by USDA and strongly opposed by NCBA is that imported carcasses receive the USDA quality grade without country-of-origin identification.

Country-of-origin labeling will become increasingly important to the U.S. cattle industry as international beef trade continues to expand. Country-of-origin labeling allows consumers to make informed decisions when purchasing meat and meat products, and competitive market forces will determine the relative value of meat from different countries.

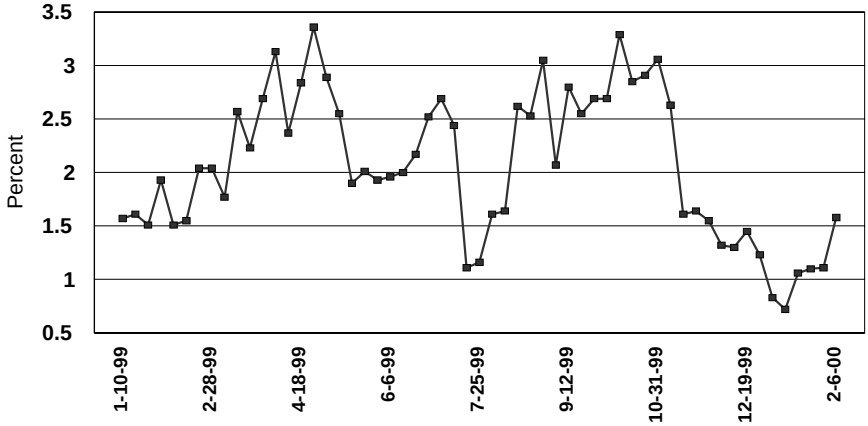
This issue is not about food safety. USDA inspects imported beef, which must meet the same safety and wholesomeness requirements as U.S. beef. It is important to note that imported beef has country-of-origin labels - - either on the product or on shipping containers - - when it enters the United States; however, these labels are lost during further processing. The benefits of this system accrue more to importers, packers and processors, and less to beef producers in exporting countries. Country-of-origin labeling will ultimately provide a "brand-like" mechanism for the beef industry.

NCBA will continue to work for approval of legislation to implement mandatory country-of -origin labeling. Concurrently, efforts will be intensified with the Food Marketing Institute (FMI), other organizations and packer representatives to develop a voluntary system for identifying and promoting U.S. beef consistent with instructions from Senate and the House committee leadership. And NCBA will continue to work for eliminating provisions for grading imported carcasses, or at a minimum insist that country-of-origin identification applied to these carcasses be retained to the end consumer if the USDA quality grade is retained.

IMPACT OF ANTIDUMPING DUTIES

Preliminary dumping duties were imposed on Canadian cattle imported into the United States on June 30, 1999. (See Figure 1.) A case can be made that

Figure 1: Canadian Cattle as a Percentage of U.S. Slaughter, January 10, 1999 - February 6- 2000.



Source: Calculated by the author.

forward shipping took place for 2-3 weeks prior to June 30 in anticipation that the duties would be imposed. Imports of Canadian cattle as a percent of U.S. slaughter declined for two weeks as U.S. packers, other importers and Canadian sellers determined how the new system would operate. By the end of five weeks, imports of Canadian cattle had returned to pre-duty levels as participants adapted to the new system and Canadian cattle prices adjusted to account for duty levels.

A case could be made that this is a classic example of a shock to a functioning market that subsequently adjusts and returns to equilibrium. Duties were eliminated on November 19, 1999 when the ITC released its final determination of no injury. Imports of Canadian cattle declined after the preliminary duty was lifted — probably a year-end seasonal marketing factor.

IMPORTS FROM MEXICO

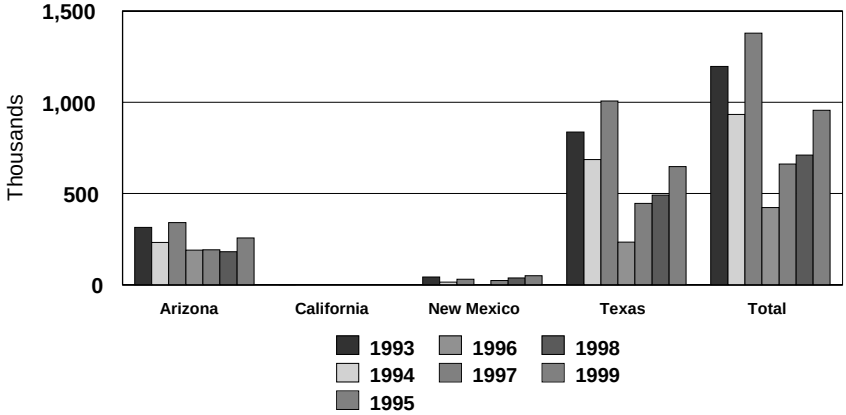
U.S. imports of feeder cattle from Mexico spiked to 1.378 million in 1995 in response to peso devaluation (flight to the dollar) and drought in northern Mexico. (Table 1 and Figure 2) U.S. imports of feeder cattle from Mexico declined to approximately 424,000 during 1995. During 1999, U.S. imports of feeder cattle

Table 1. Imports of Mexican Feeder Cattle, 1993-1999.

	Arizona	*California*	*New Mexico*	*Texas*	*Total*
1993	314,790	1,634	43,015	837,131	1,196,570
1994	232,338	0	15,532	685,813	933,683
1995	340,901	0	30,540	1,006,954	1,378,395
1996	190,377	0	276	233,229	423,873
1997	191,788	0	23,620	446,206	661,614
1998	180,937	0	37,865	491,327	710,129
1999	257,242	0	49,929	648,483	955,654
99%98	142.2%	N/A	131.9%	132.0%	134.6%

Source: U.S. Department of Agriculture/Animal and Plant Health Inspection Service. Calendar year-to-date comparison through December 31.

Figure 2: Imports of Mexican Feeder Cattle, 1993-1999.



Source: U.S. Department of Agriculture/Animal and Plant Health Inspection Service.

reached nearly 1 million — approximately the number imported during the late 1980s and early 1990s.

TRADE LIBERALIZATION UNDER NAFTA: TRADE IN AVOCADOS

Maury E. Bredahl

The importation of fresh avocados was banned by the United States in 1914 after U.S. plant health officials identified avocado seed weevils in Mexican orchards as pests of quarantine importance (TED Case Study). In the early 1970s, Mexican officials proposed lifting the ban on avocados produced in the states of Michoacán and Sinaloa. All overtures were rebuffed until the early 1990s when bilateral negotiations, conducted with the sanitary and phytosanitary (SPS) provision of NAFTA, led to a resolution of this long standing disagreement.

This paper first briefly reviews the negotiation process leading to the partial lifting of the ban and outlines the elements of the agreement. The second section draws directly from the first by identifying the underlying principles used in reaching an agreement. The third and fourth sections evaluate the market and economic impacts of the partial lifting of the import ban. The paper concludes by drawing some conclusions from the resolution and identifying lessons learned in the process.

RESOLUTION OF THE AVOCADO IMPORT BAN

Process of Resolution

The process leading to a resolution of the import ban was long, costly and, at times, acrimonious. The brief review presented here facilitates evaluation of alternative procedures that might reduce cost of reaching a resolution and to increase its timeliness.[1] The process of addressing the issue began substantively in 1990 with agreement at the Ministerial level to consider the ban, and with the submission of a Mexican work plan in October by representatives to the U.S. Animal and Plant Health Inspection Service (APHIS). The first work plan was rejected because it addressed quality and not pest risk, and scientific proof was requested to establish that proposed areas were free of the quarantine pests.

In 1991, a second work plan was submitted, and the use of a 'systems approach' was introduced. By June 1992, APHIS had 'tentatively' accepted Mexican evidence that the areas were free of the pests, but disagreed on the protocols to determine if avocados were hosts for fruit flies. A small olive branch was offered to the Mexicans by proposing to allow exports to Alaska. Disagreements on the scientific evidence continued through 1993 leading to an agreement in June, 1994 on scientific protocols. In July, 1995, the proposed administrative rule was published and the period of public comment was open until October. In March, 1996, public comment was reopened at the insistence of the domestic industry and their political representatives. Despite dire predictions that the regulatory agency was a captive of the domestic interests, the Executive Order of February 1997 partially lifted the ban.

The 1997 Agreement

In February, 1997, APHIS published the final rule that allowed the importation of Hass avocados from the Mexican state of Michoacán into 19 Northeastern U.S. states and the District of Columbia from November to February. (Figure 1). APHIS approval of fresh avocado imports "requires strict compliance with phytosanitary procedures and standards as well as passing a series of

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[1]Numerous historical accounts of the negotiation process are available. A good summary is found in Orden and Romano, pages 7 and 8.

Figure 1: Approved Avocado Area in Mexico and Import Areas in the United States.

APHIS inspections during the growing, packing and exporting processes." (FAS, 1999b) Apparently to mollify domestic interests, APHIS notes that the "Final rule does not guarantee that Mexican avocados can enter the United States; they can enter only if APHIS inspectors determine that the avocados in question have successfully met all of the safeguards." (APHIS, 1997).

FAS (1998b) reports that the total cost of complying with the strict phytosanitary procedures would cost Mexican producers and packers approximately $110,000 annually. Reportedly, the state of Michoacán provided loans to growers to pay for the initial cost of the program.

Recent Developments

Illegal shipment of avocados was meant to be thwarted by the requirement that a sticker or label be placed on each fruit. Placing individual labels on each piece of fruit to indicate its origin is common practice in quality management systems and vertically coordinated supply chains, and, so does not represent an onerous cost to packers. Because of problems with transhipments from the approved area to unapproved states outside the Northeast and with failure of Mexican packers to comply with the regulations, APHIS proposed a change in the import regime, first published on June 25, 1999. (Federal Registry, 1999a). APHIS noted that in the 1998/99 marketing season, five distributors had allowed Mexican Hass avocados to be shipped to non-approved states. Subsequently, two U.S. firms, La Hacienda Brands, located in Chicago, and Wal-

mart, the largest U.S. retail chain headquartered in Bentonville, Arkansas, paid civil penalties totaling almost $100,000. (APHIS News Releases, 1999a and b). Of course, neither firm admitted any illegal intent or activities. APHIS reported that nearly 50 administrative complaints have been received alleging violation of U.S. regulations.

APHIS proposed that all handlers and distributors be required to enter into compliance agreement. The compliance agreement is meant, as much as a regulatory device, to educate handlers, second-handlers and distributors to the legal requirements. In addition, APHIS proposed that any boxes used for re-packaging imported avocados in the United States must be clearly marked with the same information that must be placed on the original boxes at the Mexican packinghouse.

A second issue with the stickers, which were required to differentiate program fruit from that sold in the domestic or other export markets, was that they were being placed on all fruit from a packing house. So, fruit could be sold in the domestic Mexican market or exported to Canada, for example, and then reexported to the United States. APHIS proposed that in addition to the packing house identification number, the stickers bear the letters “M/US”. Mexican officials objected that this placed requirements on domestic commerce within Mexico and so was not acceptable.

The rule became effective on January 6, 2000, with it publication in the Federal Registry. An interesting issue raised by this case is what is the outcome if the importing country cannot enforce its own laws and regulations while, at the same time, the exporting country faithfully meets all import requirements?

PRINCIPLES USED IN THE RESOLUTION

Risk Assessment

APHIS prepared a quantitative pest risk analysis examining the likelihood of pest introduction into susceptible areas of the United States. The APHIS quantitative risk assessment estimated that the probability of a seed pest or fruit fly infestation would occur less than once every million years, and of a

stem weevil outbreak might occur once every 11 thousand years. Firko estimated that the maximum probability of an infestation of any of the quarantine pests at 0.00345, and of minimum value for a stem weevil infestation at 1.35 x 10^{-6}. (Orden and Romano, 1996)

APHIS (1997a) also reported the results of a study by The University of California Center for Exotic Pest Research. That study examined 'the quality of the entomological background for the proposal, and ... the validity of the systems approach methodology and risk assessment.' This study was submitted as a comment opposing APHIS' July 1995 proposed rule. In their analysis, the authors question the validity of many of the assumptions on which APHIS based its proposal. The authors concluded that "APHIS does not have a suitable basis of scientific information upon which to move forward with a credible and reasonable plan for the importation of Mexican Hass avocados."

Any import regime that limits imports will create economic rents that may induce illegal activities to circumvent the limitations. Clearly, an incentive exists to ship avocados from groves that are not registered for export. The agreement allegedly provides an incentive for group actions to prevent that from happening by threatening to cut off all exports from a municipality if a pest is found in any shipments from that area. If imports cause regional price differences in the United States, there will be an incentive to illegally tranship avocados to other regions. The cost of these transshipments is increased by requiring that each fruit carry a sticker indicating its origin.

System Method

A 1994 proposal, subsequently augmented by APHIS, utilized a number of risk mitigation measures intended to individually and cumulatively reduce pest risk. According to APHIS "the system consists of nine safeguards designed to operate sequentially to progressively reduce risk to an insignificant level." (APHIS, 1997a). In general, a systems approach identifies the requisite steps for reducing risk to an acceptable level. (Roberts, 1977). The components of the systems approach for Mexican avocados are:

Host Resistance: Fruit fly infestations of the Haas avocado are not known to occur outside laboratories.

Field Surveys: Appropriate field inspection techniques to determine the presence of the pest. Individual orchards will be certificated on the results of the surveys. Municipalities must be shown to be free of the pests at a 95 percent confidence level.

Trapping and Field Bait Treatments: Prescribes trapping practice to detect and, if detected, eliminate fruit flies.

Field Sanitation Practices: Details practices reducing chance of insect infestation.

Post-harvest Safeguards: Prescribes production and packing practices to reduce risk of post-harvest infestation.

Winter Shipping: Shipping from November to February to cold climates reduces risk of infestations.

Packinghouse Inspections and Fruit Cutting: Inspection of facilities and of fruit leading to detection of pests will cause rejection of the shipments and potential cancellation of the packing house registration.

Port-of-arrival Inspections: Lays down physical inspection and paper review requirements.

Limited U.S. Distribution[2] : Limiting shipments to the Northeast reduces risk that transported pests will survive due to the cold weather and the lack of suitable hosts.

APHIS contended that the systems approach "operates as a 'fail-safe' system" in that if one measure fails the other safeguards insure that the risk continues to be reduced and managed. (APHIS, 1997a). Individual shipments are sealed at the packinghouse in Mexico, and reopened at the port of entry where a visual inspection is carried out and fruit cuttings are taken. Upon successful completion of the inspection, the truck is then resealed and proceeds along roads in an approved corridor to a terminal market. The truck is met at the terminal market by an APHIS inspector who unseals the truck and carries out a final inspection of the produce.

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[2]The approved states include Connecticut, Delaware, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia and Wisconsin.

The United States exports products to a number of foreign markets using a system approach: citrus to Japan; plums to Mexico; and apples and pears to Taiwan. APHIS also uses this approach to facilitate interstate commerce in the United States.

MARKET EVOLUTION AND IMPACTS

Overview of the Industry

California, which has grown avocados since 1971, is the world's second largest producer of avocados, accounting for about 15 percent of global production. More than 90 percent of avocados groves are located in California, and about half of all U.S. production occurs in San Diego County. Almost all U.S. production is the Hass variety, with a small amount of a West Indian variety produced in Florida. From five to ten percent of production is exported with the remainder consumed as fresh or processed products.

Mexico is the world's largest producer of avocados, with an annual production varying between 700 and 900 thousand tons. Stanford reports that the state of Michoacán produces more than 80 percent of the Mexican crop, and accounts for between 35 and 40 percent of global production. The overwhelming majority of avocados, more than 80 percent in all years, are consumed in the national market as fresh fruit. In a typical year with normal weather, from five to ten percent are exported and three to five percent are converted to processed products. (FAS, 1998a)

Mexican exports have grown significantly in the 1990s, expanding from about 13 thousand tons in the early 1990s to almost 50 thousand tons in the last few years. France is by far the largest export destination, followed by nearby countries in Central America, Canada, Japan and the United Kingdom.

About 6000 Mexican producers, with orchards varying from as small as one hectare to commercial operations with as many as 1000 hectares, can produce avocados year-round. However, peak production and highest quality fruit is produced from November to April. The majority, perhaps as high as 80 percent, are small producers owning 10 hectares or less, while a handful of commercial producers operate more than 1000 hectares. FAS (1998a) reported

that avocado production employs 65 thousand people on a full-time basis, and thousands more during the harvest season.

Natural production advantages and low wages favor Mexican producers. Avocado production requires large amounts of water, which must be obtained from relatively expensive irrigation water in California. In Michoacán, normal rainfall is sufficient for production and only about half of the groves are irrigated. Mexican yields vary from seven to nine metric tons per hectare, but a mature grove can produce up to 15 metric tons per hectare. California yields are reported to be somewhat lower at about five metric tons per hectare.

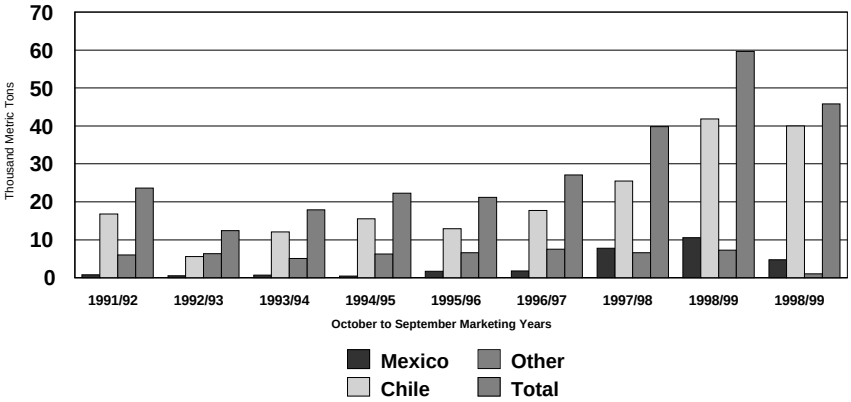
Import Market

Until the 1995/96 marketing year, imports from Mexico, which were only allowed to Alaska, never exceed a thousand metric tons. (Figure 2). In the first year that shipments were allowed to the Northeast, exports grew to almost eight thousand tons and in 1998/99 exports exceeded 10 thousand tons for the first time. Shipments in the 1999/00 season are running just slightly ahead of the previous year. During the same period, total U.S. imports grew from about 25 thousand metric tons to almost sixty thousand tons. Avocado imports from Chile, which had languished in the mid to lower teens in the early 1990s, grew to more than 25 thousand tons in 1997/98 and more than forty thousand tons in 1998/99.

The Mexican share of the import market increased from less than ten percent in the early and mid 1990s to about twenty percent in the past two marketing years and in the current year. The growth in the Mexican penetration has come at the expense of Caribbean exporters as the Chilean market share has stayed in the range of 60 to 70 percent.

The growth of Mexican imports has been significant, but far less than some analysts had predicted when Mexican producers gained access to the U.S. market. At that time, some Mexican analysts predicted that the U.S. market would absorb as much as twenty percent of Mexican production, about one hundred thousand tons. So, while imports have grown significantly, access to the U.S. market has not been a boom to Mexican avocado producers.

Figure 2: U.S. Imports of Avocados by Origin, 1991/92 to 1998/99.



Sources: 91/92 to 96/97- USDA/Foreign Agricultural Service, Avocado Situation in Selected Countries
97/98- USDA/Economic Research Service

Mexican Developments

FAS (1998a) reported that, as of January 31, 1997, APHIS had approved 65 Mexican growers and five exporters in four municipalities of Michoacán. The financial requirement that producers bear the cost of inspection and certification activities led to formation of a growers and packers association to apportion costs among exporters. (Stanford). By December 1997, 51 growers had joined the organization and they accounted for more than 80 percent of the export volume. Prior to the start of the marketing year, most forecasts of export volume ranged from five to 25 thousand metric tons, and FAS (1998a) forecast exports in the range of 10 to 15 thousand metric tons. Some Mexican sources predicted that the market could grow to 100,000 tons. The first year, 1997-98, was judged a success because although only 8,000 tons of avocados were exported, not one shipment was rejected, nor were any participants in the marketing chain suspended from the program.

The Mexican fruit and vegetable industries have a long history of costly disputes with U.S. producer groups, dating back to the tomato wars of the 1960s. Undoubtedly reflecting concern with the potential of U.S. producers initiating antidumping or other action to restrict imports, Mexican officials felt that exports to the U.S. market should expand slowly. But at the start of the 1998-99

season, almost 250 groves, encompassing 4400 hectares of avocados, were certificated for the U.S. export market. By November 15, 1998, only two weeks into the new season, more than 2000 tons had been exported, almost a third of the amount exported during the previous season. Stanford reports that market prices for Mexican avocados collapsed, falling to $10 per box, while supplies from Chile sold for $20 per box and from California for $40. By the beginning of December, exports to the U.S. market had all but ceased.

Stanford reports two differing explanations for what the Mexicans viewed as a disastrous 1998-99 season. The failure to control the flow of a product and to uphold quality standards is linked to potential supply greatly exceeding the capacity of the U.S. market to absorb it, and to the inexperience of Mexican trading companies. The proponents of a second explanation allege that the two largest U.S. avocado packing companies, Calavo and Mission, both grower-owned California cooperatives, established relations with packing houses in Michoacán, offered high prices to local producers, and flooded the U.S. market with low quality Mexican produce. The conspiracy theorists conclude that the objective of the U.S. firms is to force Mexican producers to sell to them and so "reap the benefits of exporting to the U.S. market." (Stanford)

Stanford concludes that both versions hold some truth. The movement of multinational firms to offer branded products, even fresh fruits and vegetables, would prompt U.S. firms, actually California grower cooperatives, to enter the Mexican market to expand their supply of a high-quality product. The ability to offer a consistent, high-quality product on a year-round basis might create a competitive advantage for these firms, and so they could command a premium price and higher margins.

ECONOMIC AND SOCIAL IMPACTS

U.S. Producers and Consumers

Roberts reports that the APHIS estimated grower losses ranging from $1.4 to $6.4 million under differing scenarios. They also estimated consumer gains ranging from $3.3 to $19 million, and net economic benefits ranging from $1.9 to $12.5 million. Orden and Romano estimated that under a complete liberalization of trade and no pest infestation, domestic consumption would

increase 68 percent, production would fall by 47 percent and price would fall from $1385 per ton to $878. They estimated that consumer surplus would rise by $87.5 million, producer surplus would fall by $55.2 million and the net welfare gain would be $32.3 million, or about 14 percent of the initial consumer surplus. Using APHIS estimates of a worst-case scenario, the net welfare gain is reduced to $13.9 million. Orden and Romano conclude: "Thus, even when free trade is bad phytosanitary policy, it is good economic policy, in the sense of raising net welfare." (Orden and Romano, p. 33) The partial liberalization of trade leads to a significant reduction in consumer surplus, and, with worst-case infestation scenarios, to net welfare losses. They conclude that the partial lifting of the ban might be both bad economic and bad phytosanitary policy.

The reality of the first two marketing seasons, and of the partial results from the current year, is that the level of imports, and the resulting gains in economic welfare have been toward the lower end of estimated outcomes. Consumer gains, based on observed prices and changes in consumption, have been very small. The producer losses have been small, as well, and no losses have occurred from the introduction of the quarantine pests. Welfare gains have been small, and may be exceeded by the cost of inspection procedures.

Mexican Producers

The production and export of winter fresh fruits and vegetables to the United States has always been problematic for Mexico. Typically, the export industries have been owned and controlled by the Mexican agricultural elite and the economic surplus has not been shared by workers and small landowners. This has led many to call for the production of food for domestic consumption rather than production of fruits and vegetables for the rich market to the North. Stanford (p. 14) admirably summarized the policy developments and dilemma:

> *. . . state governments now face the challenge of defining new political relations with agricultural producers and their organizations. In Michoacán, and particularly in the case of the avocado industry, this process has led to a tenuous alliance between regional representatives of SAGAR and the state government of Michoacán in their efforts to provide support*

for avocado exports while they attempt to control and regulate avocado production and commercialization. State regulation of the phytosanitary campaign was successful, given the state's control over export permits, mandatory programs to register orchards, and state policing of fruit shipments. Furthermore, reflecting financial interests, this phytosanitary campaign primarily provides benefits for export producers. Yet these actions essentially reflect an agricultural policy of triage, in which limited resources are directed at those most able to compete commercially, while those farmers most in need of state support are abandoned.

LESSONS LEARNED AND CONCLUDING COMMENTS

While the level of exports has fallen far short of Mexican expectations, the procedures codified in NAFTA and the SPS Agreement of Uruguay Round, have led to a resolution of the ban on the importation of Mexican avocados. An important element that allowed settlement is the sub-national treatment of import markets, and of threatened trade actions. If a municipality in Mexico is found to be in violation of the phytosanitary requirements, exports from only that area, and not the entirety of Mexican exports, are banned. This innovation in application of phytosanitary import requirements significantly lowers risk to foreign producers. Similarly, basing import restrictions on sub-national, or regional markets, allows a partial lifting of phytosanitary or sanitary bans while establishing an acceptable level of risk for domestic production. The lifting of an import ban that had been placed in the early 1900s, and elimination, or at least reduction, of the acrimonious international dialogue, against the vocal opposition of the domestic industry, has to be viewed as a major accomplishment. With that said, the emphasis was on finding a politically acceptable solution and not on finding a solution that maximized economic efficiency and welfare gains in the two nations. Neglected, as well, in the analysis were any externalities, positive or negative, and equity considerations, which often loom large in the political and social equilibrium in developing nations. The resolution of the avocado issue should be viewed as a starting point, and not as an ending to research and analysis of the imports of trade liberalization.

Regional treatment, on both the import and export side, places regulatory emphasis on transportation and inspection protocols for movements from an infestation-free production area to the allowed consumption areas. The systems approach, at least as applied in Mexican avocado trade, requires redundant and costly risk mitigation practices and multiple inspections of the produce before it reaches the final consumer. The requirement that municipalities follow the prescribed practices, enforced by the threat that exports will be disciplined on that geographic basis, increased production and social costs without an assurance or institutional arrangements that the benefits of export sales are shared along with the costs.

A reasonable question is whether some other approach might be less costly while accomplishing the objective of reducing risk to a minimal level. Exporters in developing countries argue that product inspection on individual shipments, and the chance of a costly rejection of the shipments, would reduce risk of pest transportation to an acceptable level. The next level of a penalty should be the exporting firm and its import agents as they are the offending party, and not the innocent producers and packers in the geographic area where the offending firm operates. But, leveling penalties against a small geographic area is a decided improvement over banning imports on a national basis.

The negotiation of the components of the risk-mitigation systems approach between the appropriate sanitary and phytosanitary agencies in the two countries has been time consuming, costly and potentially leads to capricious outcomes. In even the best of circumstances, the strategic economic and political importance of the potential source of imports cannot help but influence the outcomes of the bilateral negotiation of risk-mitigation practices. But, beyond the political influence on scientific outcomes, the length of the process would have been greatly reduced by the acceptance of internationally accepted procedures to determine disease-free areas and the host status of a plant and its fruit.

It seems clear that the cost of reducing the level of risk to that of the avocado import regime exceeds its benefits. But, lacking an international consensus on the acceptable level of risk, on accepted risk mitigation systems and on the appropriate techniques and methods to carry out an economic assess-

ment, the negotiated systems approach, and reducing the risk to near zero, may be the only acceptable alternative.

Development economists will find little comfort in the social and economic impacts of the opening of the U.S. market to Mexican avocados. As imports are increasingly determined by strategic alliances between dominant producers and packers in the United States and Mexico (who will be producing and packing a branded product), small producers will be progressively excluded from participation in the lucrative export market. But, small producers are required, at the same time, to carry out the costly phytosanitary practices required of all producers in order to gain export certification for that region.

Consideration of equity and the distribution of the gains from trade should be a more important part of the analysis of trade liberalization carried out by agricultural economists. Not to do so, risks the danger that trade liberalization will become the victim of a domestic and international backlash against perceived unequal and undesirable outcomes. Certainly, the failure of the WTO negotiations in Seattle, against the backdrop of street riots and violent disturbances, suggests the need for a broadened and deepened research agenda.

Some elements of that agenda are found in the analysis of sociologists and anthropologists, such as that of Stanford. They reason that the social and economic institutions that were adequate in autarky are not sufficiently robust to maintain social and equity goals in a globalized market environment. The case for continued gains in economic efficiency from further trade liberalization would be strengthened by policy prescriptions and marketing innovations to at least partially address social and equity considerations. After all, the case for free trade is made without consideration of positive and negative externalities despite the obvious fact that the world is resplendent with both.

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DISPUTES IN SUGAR AND AGRICULTURAL-BASED SWEETENERS

P. Lynn Kennedy and Daniel Petrolia

INTRODUCTION

Significant strides have been made toward the goal of achieving free trade in sugar and agricultural-based sweeteners in North America. Although the North American Free Trade Agreement (NAFTA) spells out the steps to be taken that will allow the parties involved to transition to free trade, the process has not been painless. To put it mildly, disagreement exists regarding interpretation of the Agreement. Initial disagreements are exacerbated through a variety of cross-effects as sectors undergo structural change as a result of the agreement and, in turn, affect the profitability of other sectors.

The purpose of this paper is to provide a thorough review of current and potential NAFTA disputes related to sugar and agricultural-based sweeteners. The paper will proceed by, first, providing an overview of the North American Free Trade Agreement as it relates to sugar and high fructose corn syrup (HFCS). The paper then discusses the current environment within the NAFTA countries, particularly the United States and Mexico, with respect to various factors related to production and consumption. Next, various disputes stemming from the Agreement will be outlined. Of particular importance are disputes related to Net Surplus Production Status and various issues related to

dumping. The paper concludes with implications of the Agreement and current disputes.

NAFTA SUGAR AGREEMENT OVERVIEW

The North American Free Trade Agreement, modified by an Executive Agreement between the U.S. and Mexican governments, provides increased duty-free access during a 15-year transition period to the U.S. sugar market for Mexican "net surplus sugar production" beginning January 1994. Upon completion of this transition period, the U.S. and Mexican sugar markets will be merged into a common market.

Between years one and fifteen, Mexico's allowable duty-free exports to the United States, and U.S. duty-free exports to Mexico, will be the greater of 1) 7258 metric tons (mt); 2) the quantity currently allocated by the United States under the sugar program to "other specified countries and areas"; or 3) the quantity allowed under the definition of "net surplus producer" (FAS). For exports to exceed the current quota level of 7258 metric ton , each country must become a net surplus producer (production exceeding consumption). During years one to six of the agreement, in each year that Mexico or the United States is projected to be a surplus producer of sugar, duty-free access will be provided by the other country for the net production surplus, up to 25,000 mt. In year seven, the net production surplus will increase to 250,000 mt (FAS).

Under the U.S. tariff-rate quota system (TRQ), the initial 16 cent second tier tariff rate imposed on Mexican imports will be reduced by 15 percent during years one to six. Mexico has agreed to align its tariff regime with that of the United States, implementing a TRQ with rates equal to those of the United States, by year seven of the agreement (FAS). Mexico will also adopt the U.S. second-tier tariff as a common border protection to non-NAFTA sugar by year seven of the agreement. During years seven to fifteen, the remaining U.S. and Mexican tariffs on bilateral sugar trade will be reduced to zero (Rosson et al.).

In another key component of the agreement, rules-of-origin, require that for sugar to qualify for preferential tariff treatment it must be produced in the exporting country. The refining of raw sugar does not demonstrate origin.

However, both countries will allow duty-free access for raw sugar imported from the other country if it is refined in the importing country and re-exported to the producing country (FAS). Initial over-quota duties of $0.16 per pound on Mexican imports will be reduced and eventually eliminated (Rosson et al.).

High fructose corn syrup (HFCS), a product that is a close substitute for sugar in uses such as soft drinks, plays an integral part in the agreement. The Executive Agreement specifies that consumption of HFCS will be used in the determination of net surplus producer status. To achieve net surplus producer status and increased duty-free access to the United States market, Mexico's production of sugar must exceed its combined consumption of sugar and HFCS (American Sugarbeet Grower's Association). Both U.S. and Mexican duties on high fructose corn syrup are set to be phased out over ten years. This should allow United States agribusinesses to export additional HFCS to Mexico as per capita incomes in Mexico increase and import demand for sweeteners expands. It appears unlikely that Mexican capacity exists to keep pace with projected HFCS demand without additional investment in infrastructure and increased corn production (Rosson et al.).

As originally negotiated prior to modifications executed by the Executive Agreement, Mexican access in year seven would have been increased to 150,000 mt, with 10 percent increases annually over the remainder of the fifteen year transition. In addition, the NAFTA would have granted Mexico unlimited access for its exportable surplus sugar in years seven to fifteen whenever Mexico reached net exporter status during two consecutive years (Haley and Suarez).

However, the Executive Agreement eliminates the two-year unlimited access clause. As a result, the 250,000 mt access conceded in year seven is an absolute ceiling. Beginning in year seven, and for the remainder of the transition period for sugar, Mexico will be allowed to ship its net production surplus to the United States duty-free, up to a maximum of 250,000 mt. United States duty-free access to the Mexican market will, in turn, be determined by the United States net production surplus, also with a cap of 250,000 mt. The calculation of net production surplus for both countries will be carried out annually. For the purposes of this calculation, consumption of high fructose corn syrup is

Table 1: Duty-free Sugar Access Provisions of NAFTA.

NAFTA Sugar Provisions with Side Letter	
Mexican Access to U.S. Market	*Provisions*
Years 1-6 (1994-1999)	
Mexico not surplus producer[1]	Greater of 7,258 MT or "other country" share of import quota.
Mexico surplus producer[1]	25,000 MT
Years 7-14 (2000-2007)	
Mexico not surplus producer[1]	Greater of 7,258 MT or "other country" share of import quota
Mexico surplus producer[1]	250,000 MT

NAFTA Sugar Provisions without Side Letter	
Mexican Access to U.S. Market	*Provisions*
Years 1-6 (1994-1999)	
Mexico not surplus producer[2]	Greater of 7,258 MT or "other country" share of import quota.
Mexico surplus producer[2]	25,000 MT[3]
Years 7-14 (2000-2007)	
Mexico not surplus producer[2]	Greater of 7,258 MT or "other country" share of import quota
Mexico surplus producer[2]	Initially 150,000 MT, increasing 10% per year[3]

[1]Surplus sugar production is calculated as sugar production minus sugar and HFCS consumption.

[2]Surplus sugar production is calculated as sugar production minus sugar consumption.

[3]Maximums can be exceeded if Mexico has achieved net production surplus status for two consecutive marketing years.

Source: Economic Research Service, 1999; and Haley, 2000.

included with consumption of sugar for both countries. More specific details related to this issue are presented in Table 1 (Haley and Suarez).

Continuation of the "Rules-of-Origin" would continue to prevent transshipment of sugar from third countries. Implementation and continuation of the common external tariff discourages Mexico's substitution of imported sugar for its domestic needs to export Mexican produced sugar to the United States. In order to originate, all processing of sugarcane or sugar beets must take place in NAFTA territory. Unprocessed cane or beets may be imported for processing, but they must be re-exported to the original exporting country. To qualify for NAFTA preference, 100 percent of the sugar (production, processing, and refining) must be NAFTA in origin (FAS), a stipulation that may prove difficult to monitor.

The U.S. refined sugar re-export program will remain in place for exports to Mexico. U.S. shipments under the program will receive Mexico's MFN tariff rate, as opposed to the NAFTA preferential rate. The United States and Mexico will each allow duty-free access to imports of raw sugar that will be refined in the importing country and then re-exported to the original exporting country as well as refined sugar that has been refined from raw sugar produced in and exported from the other country (FAS). In recent years the United States has supplied 20-25 percent of the Mexican import market, mainly under the sugar re-export program.

THE PRODUCTION / MARKETING ENVIRONMENT

Increased capacity in the Mexican sugar industry is at the center of much of the dispute. During the four years immediately following the implementation of NAFTA, Mexican production increased by 1.7 million mt raw value (MTRV) to a record of nearly 5.5 million MTRV in 1998. These levels are projected to remain high with production of 5.04 and 5.15 million MTRV for marketing years 1999 and 2000, respectively (Haley and Suarez).

This increase in Mexican sugar production can be attributed, in part, to an increase in the amount of land devoted to sugarcane production combined with several technological and producer incentive measures that have been

implemented. Sugarcane area fell to less than 482,000 hectares in 1992, approximately 18 percent lower than 1987 levels. However, by 1997, a return to 1987 harvested area levels was accompanied by sugar production 22 percent higher than 1987 levels. This can be attributed to new technologies responsible for increased sugar recovery rates, combined with an expansion of the effective milling season from 130 to 175 days (Haley and Suarez). Additional enhancements to the infrastructure have been provided by the Mexican government. These include the provision of several forms of support which enables the Mexican sugar industry to maintain both high domestic prices and high production levels. Among these, a public development bank for the sugar industry, Financiera Nacional Azucarera SA (FINASA), supports the industry by providing over $US1.3 billion of financing to the Mexican sugar sector (Haley and Suarez).

The Mexican government also controls the quantity of sugar marketed domestically, establishing the amount of sugar that can be exported or must be held in stock. Exportable quantities are divided among sugar companies, with a penalty system used to discourage the domestic sales of targeted exports. In addition, the government provides domestic stockholding subsidies to keep sugar out of the domestic market. At the other end of the spectrum, the government supports the sugar sector through sugar import control. However, under NAFTA Mexico is required to adopt a tariff-rate quota (TRQ) system by the year 2000 with third country rates harmonized to the tariff levels maintained by the United States.

Although increased efficiency in the Mexican sugar industry has created the potential for increased exports to the United States, expanded U.S. HFCS production capability has compounded the problem. The U.S. HFCS industry is hopeful that NAFTA provisions will provide another market for it's production. Due to increased capacity, this industry has been plagued in recent years with excess production. Estimates show that HFCS annual production capacity has grown by 3.5 million tons between 1994 and 1997 (Haley and Suarez).

Although HFCS consumption has increased by more than 13 percent during this same time period, the increases have not kept pace with production

capacity. Prices have adjusted accordingly. The ratio of the HFCS-42 spot price to the beet-sugar wholesale price fell below 0.60 in the fourth quarter of 1995, dropped to 0.40 for 1997 and 1998, then increased to 0.42 in early 1999. The Bureau of Labor Statistics producer price index for the HFCS industry declined from 117.6 in the final quarter of 1995 to an average of 77.6 in 1998. Given this pressure on prices, the industry was faced with a difficult adjustment process; many small firms left the sector with others seeking arrangements with larger companies (Haley and Suarez).

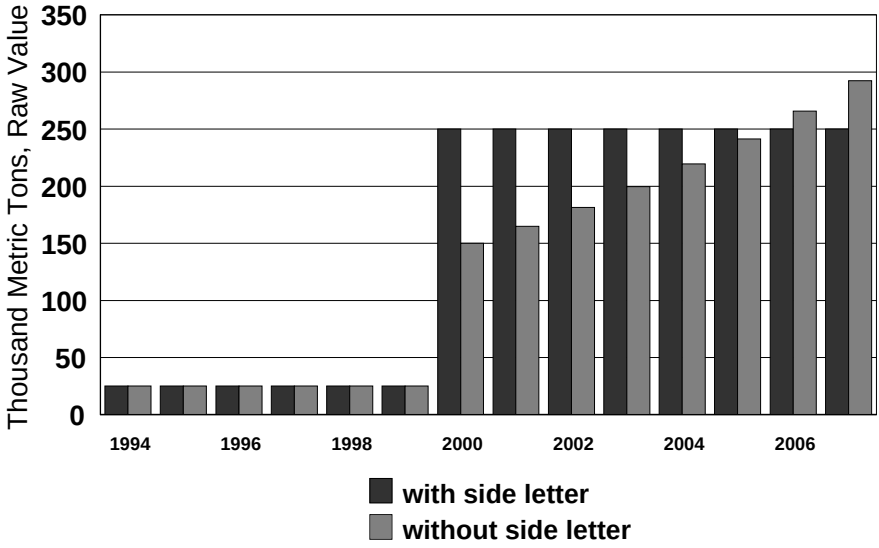
The prospect of increased HFCS exports to Mexico was welcomed by the U.S. industry. Given that HFCS-55 is used primarily in soft drinks and that annual sugar use by the Mexican soft drink industry was approximately 1.4 million mt in the late 1990s, the potential of a close market for HFCS excess capacity was welcomed by the U.S. industry. This can be seen in the data as HFCS-55 syrup and solids exports to Mexico rose over a three-year period from 52,000 mt to over 207,000 mt in 1998 (Haley and Suarez).

NAFTA SUGAR DISPUTES

Given the previous discussion it is not surprising that disagreement has emerged between the United States and Mexican sugar industries and the United States HFCS industry regarding interpretation of NAFTA. While trade in sugar and other sweeteners is addressed directly by provisions of NAFTA and other trade agreements, the actual process of implementing these agreements has created an uncertain future for sugar and HFCS trade between the U.S. and Mexico.

The original NAFTA document (1995) contained provisions related to trade in sugar that were opposed by many in the U.S. sugar industry. This opposition stemmed from the fear that NAFTA provisions allowing for increased HFCS exports to Mexico would displace sugar consumption in Mexico. This would then lead to a Mexican sugar surplus that would likely be exported to the United States. To secure U.S. Congressional support for NAFTA, the United States and Mexican governments exchanged side-letters in November of 1993, altering provisions of the original text. Since that time, a trade dispute center-

Figure 1: Duty-Free Mexican Sugar Exportable to the United States Under Alternative Policy Regimes, 1994-2007.



Source: FAS Online, 1998

ing on interpretation of the content and validity of the side-letter agreement, has emerged.

Net Surplus Production Status

Mexican sugar exports to the United States were provisional upon several conditions under the original text of the Agreement. During the fifteen-year transition period, Mexican exports were to be capped at no more than Mexico's projected net production surplus of sugar, calculated as sugar production less domestic sugar consumption. Mexico was allowed to ship, at a minimum, 7,258 MTRV of duty-free raw sugar. Duty-free access was limited to 25,000 MTRV for the first six years of the Agreement. Following this, the maximum duty-free access quantity was to become 150,000 MTRV in year seven, and the maximum duty-free quantity was to increase by 10 percent in each subsequent year. An important point to note is that these maximums could

be exceeded if Mexico achieved net production surplus status for two consecutive marketing years (Haley and Suarez).

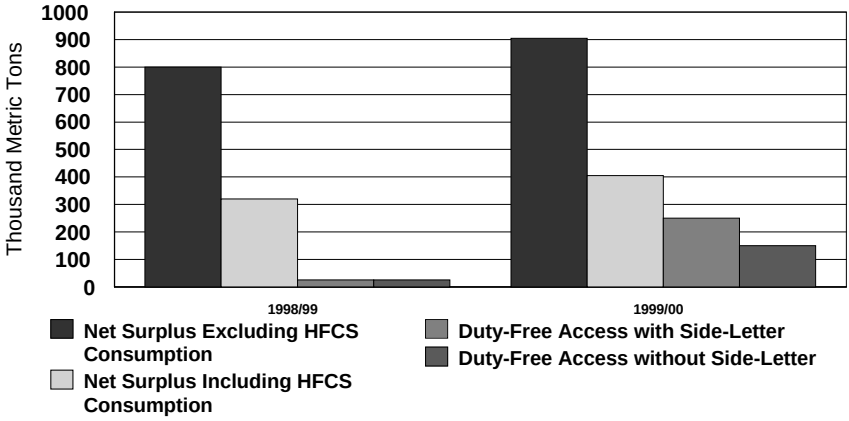
Key NAFTA sugar provisions were changed under the side-letter agreement. The sugar provisions in the NAFTA agreement modified by the side letter also link duty-free sugar access to a "Net Surplus" formula. However, under the amended agreement the net surplus is calculated as the sum of sugar and HFCS consumption minus the production of sugar. For the first six years, through September 30, 2000, duty-free access is limited to the amount of the net surplus but not more than 25,000 MTRV. After this time, duty-free sugar access is limited to the amount of net surplus, but not more than 250,000 MTRV from 2001 to 2007, regardless of Mexico's net surplus producer status. The NAFTA duty on sugar trade above the duty-free levels declines gradually to zero on January 1, 2008 (FAS). A comparison of both maximum access levels (with and without the side-letter) is presented in Figure 1.

The validity of the side letter is under dispute by the two countries. Mexico asserts that its version does not include HFCS consumption in the formula defining net surplus producer status. In addition, Mexico maintains that the side letter does not limit exports to 250,000 mt per year during 2001-2007. Based on Mexico's interpretation of the NAFTA agreement, the conditions have already been met to permit them to export total net surplus production to the United States on a duty-free basis (Haley and Suarez).

In early 1998 the Mexican Secretariat of Commerce and Industrial Development (SECOFI) requested consultations with the United States regarding the validity of the NAFTA side-letter. When no agreement was achieved in November 1998, when Mexico formally requested a NAFTA commission to settle the issue. In this process, the commission would consider several options for resolution; none of which, however, are binding unless both parties agree. If the Commission cannot resolve the dispute within 30 days after it has convened, or some other time agreed upon by both parties, either of the parties may request an arbitration panel to resolve the issue (Haley and Suarez).

Mexico has been a net exporter of sugar since 1994 and, as a result, NAFTA has allowed some duty-free access to the higher priced United States

Figure 2: Calculation of Mexican Net Surplus Production and Mexican Sugar Exportable Duty-Free to the United Sates Under Alternative NAFTA Interpretation, 1998/99 -1999/00.



Source: FAS Online, 1998; Economic Research Service 1999; and Haley, 2000

market. While Mexico's sugar production has been increasing throughout the 1990s, consumption has been declining. Since 1997/98 when net exports were estimated at 650,000 MTRV, Mexico has qualified as a net surplus producer and qualified each year for NAFTA duty-free exports up to 25,000 MTRV (Haley and Suarez).

Figure 2 presents comparisons of net surplus producer calculations and maximum access data under the alternative interpretations of the Agreement for years six and seven. It is interesting to note that in both years Mexico achieves a positive net surplus producer status, regardless of whether HFCS is included in the calculation. In addition, net surplus production is well over the duty-free limit, with or without the side letter. Given this information, it becomes clear that the side-letter provision limiting duty-free access to 250,000 MTRV regardless of net surplus production status will benefit U.S. sugar producers during the transition period (ERS, 1999-b).

HFCS Issues

Events associated with sugar-sweetener trade between the U.S. and Mexico have raised concern that the increased use of lower priced HFCS will displace domestically produced Mexican sugar. Since HFCS costs 10 to 20 percent less than sugar, switching from sugar to HFCS could result in significant cost savings to the agribusiness industry. Approximately one third of Mexico's total caloric sweetener use of 4.4 million mt is for processes that could utilize HFCS. However, many industrial consumers of sugar are closely associated with sugar producers and have less incentive to switch to HFCS (Salsgiver).

When the United States increased its use of HFCS in the 1970s and 1980s, the move was accompanied by the reduction of imports through the adoption of a tariff-rate quota system. Given the decline in domestic sugar consumption, Mexico's switch to HFCS is apt to result in increased sugar exports. Mexico's sugar industry will most likely attempt to control supply in the higher-priced domestic market, while exporting its surplus at the lower world price. Since the United States price is supported at a level that is significantly higher than the world price, the United States is an attractive export market for Mexican surplus production (Salsgiver).

HFCS Import Duties: The Broomcorn Dispute

The provisions of NAFTA relating to HFCS call for the elimination of Mexico's duties from the base tariff of 15 percent. The tariff is scheduled to be eliminated by 2004 through equal yearly reductions over ten years. Based on these provisions, a series of investigations and counter investigations has developed, due in part to the surge in Mexican imports of U.S. produced HFCS. In late 1996 the Mexican government announced increases in import duties on HFCS-42, HFCS-55, and crystalline fructose of 12.5 percent, 2.0 percent points above the scheduled rate of 10.5 percent. This action was designed to compensate for damage stemming from a U.S. increase in tariffs on Mexican broomcorn brooms. In late 1998, the 12.5 percent *ad-valorem* duty imposed by the United States was reduced to the NAFTA specific rate of 6 percent; as a result Mexico removed its retaliatory duties on United States HFCS imports (Haley and Suarez).

HFCS Import Duties: U.S. Dumping Allegations

In early 1997, at about the same time that HFCS import duties were being increased in the broomcorn broom dispute, Mexico's National Sugar Industry Chamber accused U.S. corn wet millers of dumping HFCS in Mexico. Mexico's SECOFI responded by initiating an antidumping investigation, and then imposed temporary tariffs on U.S. HFCS. The temporary tariffs, ranging from $66.57 to $175.50 per metric ton on two grades of HFCS, apply to shipments from Cargill Inc., A. E. Staley Manufacturing Co., CPC International Inc., and Archer Daniels Midland Co. U.S. HFCS producers argued that only producers of HFCS in Mexico, not sugar producers, should have legal standing to initiate a dumping claim against imported HFCS. After further investigation, SECOFI made the duties permanent in early 1998 (ERS, 1999-b).

During 1998, SECOFI also investigated charges by the Mexican sugar industry that HFCS-90 was being imported to avoid antidumping duties imposed on HFCS-55. Upon completion of a seven-month investigation, SECOFI imposed compensatory duties. Imports from A. E. Staley Manufacturing Company are charged $90.26 per metric ton, and imports from Archer Daniels Midland Company are charged $55.37 per metric ton (ERS, 1999-b).

Also in 1998, the U.S. Corn Refiners' Association (CRA) called for a review of Mexico's antidumping actions under Chapter 19 of NAFTA. Concurrent to these actions under NAFTA, the United States Trade Representative (USTR) announced its plan to utilize the World Trade Organization (WTO) dispute settlement process to challenge Mexico's actions. The USTR made two formal requests for the formation of a WTO panel (the first was blocked by Mexico). A preliminary ruling is expected by early 2000. If the United States wins the trade dispute, Mexico's imports of HFCS will likely continue to grow, thus exacerbating the dispute regarding Mexican sugar exports to the U.S. market (ERS, 1999-b).

In 1998 the USTR also initiated an investigation in response to allegations by the CRA that the Government of Mexico had denied fair and equitable market opportunities to U.S. HFCS exporters. The CRA asserts that the Mexican government encouraged collusion between the Mexican sugar industry and the Mexican soft drink bottling industry. The two parties allegedly conspired

to limit purchases of HFCS by the soft drink bottling industry to 350,000 mt per year in exchange for a 20-percent discount on sugar for soft drinks. The USTR concluded its formal investigation without determining that the allegations were actionable. The USTR did indicate that its investigation raised enough questions regarding the actions of the Mexican government to warrant further examination and continued consultation with the government on issues related to HFCS trade (ERS, 1999-b).

Canada – United States Sugar Disputes

While the focus of this chapter has been on disputes concerning Mexico and the United States, several sugar issues have also been in dispute between Canada and the Unites States. For example, in 1995 Canada initiated anti-dumping duties on U.S. sugar companies (ERS, 1997). These duties ranged from 69 to 85 percent. In turn, U.S. sugar exports to Canada fell from over 145,000 mt in 1994 (ERS, 1995) to only 5,505 mt in 1997 and 14,500 mt in 1998 (ERS, 1999-a).

Starting in 1995, Canadian sugar was allowed to enter the United States with a low-duty only as part of the U.S. TRQ for refined sugar. In 1997 refined sugar beyond the TRQ was charged the high-duty of 17.65 cents per pound. The U.S. refined sugar TRQ was not allocated, but was distributed on a first-come, first-served basis. As a result Canadian sugar exporters competed with other potential suppliers for a share of the total refined TRQ. In September 1997, the United States and Canada reached an agreement whereby Canada was allocated a quota of 10,300 MTRV for refined sugar originating in Canada. Under terms of the agreement, Canada is also permitted to compete for any quantity of the refined sugar TRQ that is not allocated among supplying countries and is not reserved for specialty sugar (ERS, 1997).

A compromise was also reached concerning trade in sugar-containing products. Canada alleged that certain products being shipped from the United States to Canada under the U.S. sugar-containing products re-export program were in violation of NAFTA. Canada also claimed that exports of these products from Canada to the United States had been adversely affected when, in 1995, the United States reclassified product into a TRQ for sugar-containing products. Beginning with the 1997/98 sugar-containing product TRQ, the United

States allocated 59,250 metric tons to Canada. The total annual sugar-containing product TRQ is 64,709 metric tons. Given these developments, Canada abandoned its NAFTA challenge to the U.S. sugar-containing product re-export program (ERS, 1997).

CONCLUSIONS AND IMPLICATIONS

These disputes make liberalized sweetener trade between Mexico and the United States uncertain in the near future. However, falling world sugar prices also have the potential to increase the amount of Mexican sugar entering the United States through high-tier quotas. NAFTA established a declining tariff schedule for high-tier raw and refined sugar imported into the United States from Mexico. During the NAFTA adjustment period through 2008, the maximum world price at which it becomes profitable to ship Mexican sugar into the U.S. market increases annually. According to Haley and Suarez, given the declining tariff schedule for raw sugar (assuming marketing costs of 1.1 cents per pound for bringing Mexican sugar into the United States, and a United States sugar price of 22 cents per pound), a world price below 7.3 cents per pound in 1999 would introduce the probability of high-tier imports from Mexico.

The TRQ policy has kept the domestic price of sugar high relative to the domestic price of corn. This relationship contributed to the substantial growth in corn sweetener demand, and HFCS has almost entirely displaced sugar in soft drinks. With the expected influx of Mexican sugar into the United States under NAFTA, domestic demand for HFCS will likely fall as sugar is substituted back for corn sweeteners (Uri and Boyd, 1994). Tanyeri-Abur, et al. (1993), analyzing the effects of a complete removal of U.S. import quotas, expect the domestic price of HFCS to drop by five percent, and domestic production to fall by almost two-thirds. This is an extreme analogy, but similar results would be expected under NAFTA. Sugar will become more competitive in domestic industries that use corn sweeteners.

However, most expect a surge of HFCS exports from the United States into Mexico. Mexico will gradually eliminate its fifteen percent tariff on corn sweeteners under NAFTA. By the year 2000, it is expected that a market for approximately two million mt of sugar will exist in Mexico. In addition, HFCS

is a lower priced product than refined sugar, and Mexico is short on high quality domestic refined sugar (Rivero, 1993). Hence, it is expected that NAFTA will have a negative effect on U.S. HFCS demand, but a positive effect on Mexican HFCS demand. NAFTA's effect on domestic production and the price of corn sweeteners remains to be seen. It is noteworthy that HFCS composes a modest share of total corn production, and thus corn prices would likely be unaffected by the NAFTA (Tanyeri-Abur, 1993).

It becomes clear that several significant disputes exist between Mexico and the United States regarding sugar and HFCS trade during the fifteen year NAFTA transition period. Certainly, both sides are acting in the interest of their producers. Will similar disputes arise following the transition period, given that free trade in sugar and agricultural based sweeteners is scheduled to occur at the end of year fifteen of the Agreement? A purpose of the transition period was to gradually ease the Mexican and U.S. sugar industries into a state of free trade in sugar. Although this objective is being achieved to some extent, the number of disputes and protests associated with the transition indicate that it is certainly not painless. Observers should not be surprised if these and other disputes related to sugar and agricultural-based sweeteners continue well past the transition period.

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Sparks Companies, Inc.

James Sullivan

The prospect of an expanding market for U.S. corn sweeteners triggered expansion of U.S. High Fructose Corn Syrup (HFCS) capacity in the mid-1990s. Sparks Companies, Inc. (SCI) estimates that utilization of HFCS production capacity declined from more than 95 percent in calendar 1994 to roughly 75 percent in calendar 1997. Although HFCS exports to Mexico accelerated during this time, shipments began to level off starting in 1997. Exports in 1999 were roughly 200,000 metric tonnes (mt), dry basis. Stagnating exports to Mexico were in response to dumping duties assessed on U.S. imports and an agreement between Mexico's sugar and beverage industry to curtail HFCS use.

Low capacity utilization and accompanying low HFCS prices were a bitter disappointment for U.S. corn refiners. One small corn refiner ceased operations. A farmer-owned refiner is now leased by one of the largest U.S. corn refiners, while another farmer-owned refiner is partially owned by the largest U.S. corn refiner. The three largest corn refiners control 67 percent of U.S. HFCS production capacity. Although domestic HFCS use has grown in the last five years, capacity utilization is still below 90 percent.

Of the roughly 1 million mt of sugar used by Mexico's beverage industry, 500,000 mt could be replaced quickly by HFCS if Mexico removed the dumping duties and bottlers ended their agreement with the sugar industry. Transportation and infrastructure issues make it unclear if and when the remaining 500,000 mt of sugar would be replaced. If U.S. HFCS exports grew by an additional 500,000 mt in 2000, U.S. HFCS capacity utilization would exceed 90 percent. When the HFCS dispute is resolved, we expect increased HFCS exports from the United States, tighter U.S. HFCS capacity utilization, and higher corn sweetener prices.

The U.S. government and the corn refining industry have pursued three avenues to bring an end to the HFCS dispute: a Section 301 investigation by the

U.S. Trade Representative (USTR), a NAFTA dispute settlement panel, and a WTO dispute settlement panel. The Section 301 investigation ended last May, but USTR did not take any immediate action against Mexico. The NAFTA panel should hold its hearing some time this spring. The WTO panel released a preliminary ruling in October and a final ruling in January.

The WTO panel found that Mexico's sugar industry had proper standing to request a dumping investigation. However, the panel also found that Mexico did not properly conduct its investigation to determine if the imports caused damage to Mexico's sugar industry. The panel recommended Mexico bring the dumping duties into compliance with WTO rules. Although the appeals process will take several months, the WTO report is a victory for U.S. corn refiners and should place additional pressure on Mexico to strike a deal with the United States on corn sweetener and sugar issues this summer or fall.

The U.S. sugar industry has prepared for NAFTA's critical "Year 7," which begins on October 1, 2000. Realizing the sugar import quota would be no lower than 1.2 million mt and that Mexico would receive a quota of 250,000 mt, U.S. cane sugar growers began to vertically integrate. The majority of Florida's cane sugar crop is now channeled to grower-owned cane sugar refineries. The U.S. industry realized that the initial implications of minimum GATT and NAFTA quotas would be weakness in the No. 14 raw sugar price. Although Mexico may ship either raw or refined sugar to fill its NAFTA quota, Mexican estandar sugar generally does not meet U.S. industrial specifications. Some industrial users have found success in melting Mexican sugar for use in select products, but liquid sugar accounts for less than 10 percent of U.S. sugar use.

The No. 14 market has come under extreme pressure, and this trend should continue well into next year unless the U.S. government takes some drastic policy action. Nearby No. 14 futures declined from 23 cents in mid-1999 to a low of 16.5 cents in November 1999. Current prices are close to 16.75 cents, basis May futures. SCI's preliminary fundamentals for 2000/01 indicate the U.S. sugar surplus could reach 650,000 short tons, raw value. In recent years, USDA has targeted a stocks-to-use ratio of 15.5 percent, but the ratio will exceed 18 percent in 1999/00 and approach 22 percent in 2000/01. Low raw sugar prices have pulled down refined sugar prices, as an independent cane

refiner sought to gain market share and other refined beet sugar sellers marketed a record beet sugar crop. The No. 14 raw sugar price declined by more than 6 cents per pound in less than a year, but refined sugar prices have declined by only 5 cents per pound. Thus, refining margins have improved and are expected to continue to firm as long as the bulk of the imports from Mexico are in raw form. Widening refining margins should entice Mexico's sugar industry to modernize and improve the quality of their sugar.

Low raw and refined sugar prices in the U.S. are expected to trigger another round of consolidation within the industry. Three refined sugar sellers currently account for roughly 75 percent of capacity. One seller is offering its beet sugar factories to local growers and has threatened to close two factories in California. Further contraction is expected in Hawaii. Despite current low prices, recent improvements in productivity, poor returns for alternative crops, and the perennial nature of sugarcane production suggest that sugar production will not contract in 2000/01.

Sugar producers and processors are expected to unite in the next few months and pressure the Clinton Administration for aid. Two actions that would dramatically reduce the surplus without tax payer expense include blocking imports of stuffed molasses (a sugar syrup imported from Canada) and "creatively" setting the 2000/01 import quota. The U.S. government may come under pressure to count Mexico's import quota as part of the GATT minimum or deny the larger quota altogether if Mexico does not comply with the WTO panel's recommendations. Either approach may damage relations with U.S. trading partners. In choosing its negotiating strategy, Mexico must balance the tradeoff between the amount of access to the U.S. market and the level of U.S. prices.

DAIRY DISPUTES IN NORTH AMERICA: A CASE STUDY

Tom L. Cox, Danny G. Le Roy, and Ellen W. Goddard

INTRODUCTION

Since the Great Depression, Canada and the United States have used different methods to realize the same policy objectives of raising dairy farm incomes and stabilizing milk prices. The "orderly milk marketing" conditions created in both countries isolated domestic milk markets from world markets. Consequently there were few dairy trade disputes before Canada and the United States negotiated the Canada-U.S. Free Trade Agreement.

Markets in North America, including agricultural markets, have become more integrated as a result of the North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT). The broad purpose of these agreements is to provide a framework for long-term reform of trade and domestic policies by increasing market orientation to enhance and stabilize incomes. However, the economy wide market-oriented approach conflicts directly with the interventionist and isolationist approach used to enhance and stabilize incomes of primary dairy producers. The conflicting approaches have produced more frequent dairy trade disputes. The purpose of this paper is to review dairy disputes related to the NAFTA with the objective of describing the context in which these disputes have occurred.

This paper is organized into four sections. The next section provides a background discussion of domestic dairy and trade policies in the United States and Canada. The third section identifies the salient features of three dairy trade disputes. It includes a description of the key issues, the initiator of the action, the action taken, the process of dispute analysis and the outcome of the dispute resolution process. The last section summarizes and concludes the paper.

BACKGROUND

The origins of current dairy trade disputes stem in part from the desire to prevent a repeat of the trade wars during the 1930s and the World War that followed. The collapse of world trade during the 1930s made a lasting impact on the negotiators of multilateral trade agreements following the War. The underpinnings of the GATT date from this era, when many countries, including Canada and the United States, pursued "beggar-thy-neighbor" policies by erecting high and discriminatory barriers to trade. The resolution to problems created by this policy approach and the underlying philosophy of the GATT is that open markets, non-discrimination and global competition are conducive to the national welfare of all economies.

Nevertheless, Canada and the United States continue to maintain large dairy trade barriers, as do most developed Organization for Economic Cooperation and Development (OECD) countries. Significant exceptions include New Zealand, and to a lesser extent Australia. Trade barriers are used with significant intervention in the domestic market to achieve a variety of policy objectives including income support, producer equity, price enhancement and price/income stability.

Protection

Table 1 summarizes producer subsidy equivalents (PSE) and consumer subsidy equivalents (CSE) for some OECD countries involved in dairy trade disputes. The most protected OECD dairy sector in terms of PSE is Japan, followed by Canada, the European Union (EU)and the United States. Table 1 also ranks the European Union at the OECD average level of producer subsidy equivalents with the United States slightly below and Canada slightly above.

The negative CSE values in Table 1 reveal that consumers and taxpayers pay for these interventions (a negative subsidy can be interpreted as a tax). It is necessary to recognize the transfer from consumers and taxpayers to producers to calculate changes in social welfare resulting from trade liberalization. Gains to consumers and taxpayers through lower prices and expenditures are measured against producer losses in prices and income. Producer transfers are fundamental to the political economy of trade liberalization and domestic policy reform. The benefits of domestic market and trade distortions are focused on a small subset of the population (producers). In contrast, the costs of distortions are diffused across a much broader segment of the population (consumers, taxpayers). The focused benefits/diffused costs paradigm suggests that producers have more incentive to organize and lobby on their own behalf and thus have more political clout in dairy policy debates.

Comparing the "Milk" versus "All PSE Commodities" columns in Table 1 highlights another important facet of U.S./Canadian dairy trade disputes. Dairy industries in both countries received more protection than their overall agricultural sectors which are both well below the OECD average in terms of PSE. This suggests an important tension underlying Canadian and United States attitudes toward dairy *vis-à-vis* general agricultural trade liberalization. As well, Table 1 indicates that the level of dairy PSE in Canada and the United States has declined since 1992-94 to 1995, due in large part to the GATT agreement. Canada and the United States would gain from multilateral increased market access and reduced export distortions in grains, oilseeds, and livestock products. However, this would likely generate producer losses in dairy, poultry, and eggs in Canada and dairy and sugar in the United States.

In addition to the political economy tradeoffs within the agricultural sector (as well as between producers and consumers), dairy trade tensions arise from two other fundamental forces: multi-lateral versus bilateral trade agreements and differences in the nature of domestic dairy interventions. In particular, the interface of domestic policies and multi- and bilateral trade policies are increasingly important sources of U.S.-Canada dairy trade tensions.

Table 1: Percentage PSE and CSE, by Country[1].

	Percentage PSE						*Percentage CSE*					
	Milk			*All PSE Commodities*			*Milk*			*All CSE Commodities*		
	1986-1988	*1992-1994*	*1995*	*1986-1988*	*1992-1994*	*1995*	*1986-1988*	*1992-1994*	*1995*	*1986-1988*	*1992-1994*	*1995*
Australia	31	29	25	10	10	10	-31	-29	-23	-9	-7	-6
Canada	77	72	57	51	32	22	-63	-58	-46	-35	-20	-12
EU	64	62	60	48	48	49	-54	-52	-47	-44	-38	-33
Japan	90	88	88	73	74	76	-77	-74	70	-57	-51	-51
New Zealand	12	2	1	18	3	3	-7	0	0	-8	-4	-6
United States	65	54	38	30	21	13	-52	-48	-33	-15	-13	-9
OECD average	66	62	60	48	42	40	-56	-53	-51	-40	-34	-32

[1]Estimate

Source: OECD Secretariat, 1998.

Policy Similarities: Price Supports, Border Protections, and Export Subsidies

Dairy policy in Canada and the United States is similar. Both countries use price support and purchase programs to maintain domestic prices above world price levels and to provide income support. The effect of these programs are included in the OECD PSE and GATT aggregate measures of support (AMS) which must be phased down 20 percent by 2000. Both the United States and Canada use export subsidies to balance domestic markets at prices above world price levels by moving excess production "off-shore." Export subsidization was reduced 36 percent in value terms and 21percent in quantity terms under the 1994 GATT agreement. Table 2 summarizes the GATT quantity commitments to reduced dairy export subsidies. Under the GATT, the United States and Canada are permitted to subsidize a significant quantity of exports of skim milk powder (and butter by the United States). However, the EU dominates the quantity of subsidized exports permitted under the GATT.

Another key similarity concerns border protection, in particular the import tariffs and quotas that comprise the GATT tariff rate quotas. The 1994 GATT increased access commitments are summarized in Tables 3 (reduced import tariffs) and Table 4 (increased import quotas). While "with-in quota" tariffs are generally small, the over quota tariffs are large (and, essentially prohibitive), especially for Japan, the EU, Canada and the United States. These prohibitive over-quota tariffs represent an ongoing source of dairy trade tensions in the GATT agreement as they essentially limit imports to the quota levels. As to the quota levels, Table 4 indicates that aside from European Union and the United States (cheese, butter and skim milk powder) commitments, there is very little change in access for these major products for Japan, Canada and Mexico. This partly reflects the fact that these latter countries imported more than 5 percent of domestic consumption in the GATT base period (1986-90).

Policy Similarities/Differences: Classified Pricing

Both the United States and Canada employ similar classified pricing to enhance producer revenue (price discrimination) at the expense of consumers in certain commodity markets (generally the fluid and or soft product markets). In the United States, classified pricing is regulated under federal and California

Table 2: Maximum Allowable Subsidied Exports for Selected Regions Under Alternative Scenarios (1000 MT).

	Cheese		***Butter/Butteroil***	
	BASE	***GATT 2000***	***BASE***	***GATT 2000***
West Europe	563	431	513	407
E. Europe/FSU	15	13	17	15
Australia	72	50	64	39
Canada	12	9	9	4
USA	4	3	47	21
	Skim Milk Powder		***Whole Milk Powder***	
	BASE	***GATT 2000***	***BASE***	***GATT 2000***
West Europe	374	298	594	480
E. Europe/FSU	145	119	0	0
Australia	106	68	102	65
Canada	55	45	6	5
USA	116	68	15	0

NOTES:

A. Data source: International Dairy Arrangement, Fifteenth Annual Report. November 1994.

B. BASE and GATT 2000 follow the URA of the GATT, assume linear changes.

Table 3: Import Tariff Reductions for Selected Regions.

			Cheese		*But./Butteroil*		*SMP*		*WMP*	
			In-Q	***Over-Q***	***In-Q***	***Over-Q***	***In-Q***	***Over-Q***	***In-Q***	***Over-Q***
W. Europe	BASE	specific duties	547	3,643	1,189	3,971	639	1,956	1,773	4,102
	GATT 2000		768	2,362	1,225	2,572	632	1,561	1,760	3,486
Japan	BASE	ad valorem	50%	50%	35%	35%	13%	15%	30%	30%
	plus	spcific duties	0	0	0	13,406	0	4,954	0	10,228
	GATT 2000	ad valorem	32%	32%	35%	30%	13%	13%	30%	26%
	plus	specific duties	0	0	0	11,397	0	4,210	0	8,691
Australia	BASE	specific duties or ad valorem	71	1,068	74	1%	37	1%	37	1%
	GATT 2000		71	905	0	1%	0	1%	0	1%
Canada	BASE	specific duties	56	3,794	193	3,483	48	1,720	48	3,315
	GATT 2000		24	3,231	83	2,915	21	1,462	21	2,820
USA	BASE	ad valorem	10.5%	0.0%	5.0%	5.0%	0.0%	0.0%	0.0%	0.0%
	plus	spcific duties	0	1,924	62	2,004	33	1,018	68	1,320
	GATT 2000	ad valorem	10.5%	0.0%	4.3%	4.3%	0.0%	0.0%	0.0%	0.0%
	plus	specific duties	0	1,636	62	1,703	33	865	68	1,122
Mexico	BASE	ad valorem	50%	95%	35%	35%	0%	139%	0%	139%
	GATT 2000		49%	89%	31%	31%	0%	131%	0%	131%

Notes:

A. Data source: International Dairy Arrangement, Fifteenth Annual Report. November 1994.

B. BASE and GATT 2000 follow the URA of the GATT, assume linear changes.

C. Under the URA, the tariff rates on the increased cheese and butter import quotas (called minimum accesss) are higher than the tariff rates on the initial tariff quotas (called current access), thus, the average tariff rates on cheese and butter in year 2000 increases from the BASE rates.

Table 4: Import Quotas for Selected Regions under Alternative Scenarios (1000 MT).

		Cheese	*Butter/Butteroil*	*Skim Milk Powder*	*Whole Milk Powder*
W. Europe	BASE	37.1	79.5	41.2	0.7
	GATT 2000	123.1	91.3	69.2	1.1
Japan	BASE	N/A	3.5	99.8	0.0
	GATT 2000	N/A	3.5	99.8	0.0
Canada	BASE	20.4	2.0	0.9	0.0
	GATT 2000	20.4	3.3	0.9	0.0
USA	BASE	116.4	7.5	1.3	0.5
	GATT 2000	136.4	13.1	5.3	3.4
Mexico	BASE	9.4	0.0	56.0	24.0
	GATT 2000	9.4	0.0	56.0	24.0

Notes:

A. Data source: International Dairy Arrangement, Fifteenth Annual Report. November 1994.

B. BASE and GATT 2000 follow the URA of the GATT, assume linear changes.

milk marketing orders (MMO). Federal MMO employ four classes of milk utilization: Class I (fluid or beverage milk), Class II (soft manufactured products such as cream cheese, yogurts, fluid creams, etc.), Class III (cheese) and Class IV (Class IIIa before the recent federal MMO "reforms": skim milk powder and butter). California MMO pricing is similar, with Class 1 (fluid), Class 2 (soft), Class 3 (frozen), Class 4a (SMP/butter) and Class 4b (cheese).

Classified pricing enhances revenue by charging higher prices in price inelastic markets. Higher prices are charged for raw milk used in Class I (1) and Class II (2 and 3) under the federal (California) MMO. Classified pricing therefore raises milk prices and increases milk production in regions with high Class I/II utilization, decreases Class I/II consumption (due to the higher prices) and results in more manufacturing milk (Class III/IV (4a/4b)) milk compared to the absence of classified pricing. The extra production of manufacturing milk tends to lower the price of manufacturing products, hence penalizing regions with low Class I/II utilization.

In addition, both federal and California MMO prices for Class IV (IIIa/4a) are administered at levels that are generally below the price for milk used in cheese (Class III/4b). With an attractive processor margin to attract milk into Class IV (IIIa under the old FMMO/4a in California) and with a price for skim milk powder set by Commodity Credit Corporation well above world market levels, this pricing is designed to short the domestic cheese sector. Given inelastic cheese demand, shorting the domestic cheese market can generate Class III revenue enhancement that more than offsets the milk producer revenues lost on the Class IV (IIIa/4a) market.

Revenues from all utilizations are pooled so that producers receive a "blend price" based on regional MMO milk utilization. This distribution scheme is the source of serious regional dairy disputes in the U.S. dairy sector. Regions with low Class I/II utilization suffer milk price and revenue losses due to the increased milk supply, lower Class I/II consumption, increased manufacturing milk and resulting lower manufacturing milk prices that determine the bulk of their milk revenues. In contrast, regions with high Class I/II utilizations reap most of the benefits of the classified pricing while the costs of the intervention are passed off to consumers and the manufacturing regions.

Canadian classified pricing works similarly, with the twist that production quotas allow a classified price pooling over milk utilizations within quota to be separated from milk utilizations over-quota. This characteristic is essential to the two–tiered export pricing scheme implemented by Canada in 1996. Canadian classified pricing includes: Class 1 (fluid milk and cream for the domestic market); Class 2 (industrial milk for the domestic ice cream, yogurt and sour cream markets); Class 3 (industrial milk for the domestic cheese markets); and Class 4 (industrial milk for the domestic butter, condensed and evaporated milk, milk powders and other markets. The two-tiered (domestic versus export) nature of Canadian classified pricing occurs explicitly in Class 5 (Special Milk Class) items. These classes are defined as raw milk used to produce the following items:

Class 5(a), cheese ingredients for further processing for the domestic and export markets;
Class 5(b), all other dairy products for further processing for the domestic and export markets;
Class 5(c), domestic and export activities of the confectionery sector;
Class 5(d), specific negotiated exports including cheese under quota destined for the United States and United Kingdom, evaporated milk, whole milk powder and niche markets;
Class 5(e), surplus removal.

Policy Similarities/Differences: The Export Implications of Classified Pricing

The export implications and GATT legality of classified pricing schemes in the United States and Canada are a contentious issue. Many consider the cross-subsidization of manufactured milk and product prices to be implicit export subsidies maintained and administered via government intervention. Clearly the recent WTO Panel rulings with respect to the Canadian Class 5d and 5e pricing supports this view. The explicit two-tier aspect of this pricing — that is, these lower valued classes were clearly targeted to the export versus the domestic market — was particularly damning. What is not so clear, as in the case of U.S. classified pricing, is whether it is the two-tier aspect alone that causes these classified pricing schemes to violate GATT export subsidy commitments. Cox

et al. (2000) estimate that complete removal of federal and California classified pricing would increase cheese prices $4/cwt-$6/cwt and skim milk powder price $10/cwt-$15/cwt under competitive market assumptions. This is a measure of the cross-subsidy from the fluid/soft markets to the manufactured product markets caused by U.S. classified pricing. This is clearly an implicit consumption subsidy to the manufactured products. While these implicit cross-subsidies generally do not make the United States competitive in world markets, they likely are sufficient to move products across regions within the United States and perhaps even into Canada. In any case, these consumption subsidies reduce the costs of subsidized exports (i.e., they lower the difference between domestic and world prices) and add some degree of price competitiveness to offset within or over quota import tariffs.

To the extent these cross-subsidized products are exported, the implicit consumption subsidies associated with U.S. classified pricing become implicit export subsidies. The big difference with the Canadian Class 5d/5e scheme is that these implicit subsidies are not targeted specifically to the export market; that is, they are not two-tiered as the domestic and export price are both cross-subsidized. The GATT legality of this type of classified pricing has not been assessed by the WTO. However, there are some indications that the European Union could make this an issue in the next Round of WTO negotiations (Dobson, 1999b).

Policy Differences: Milk Production Quotas

Lastly, one key difference in U.S. and Canadian dairy policy concerns the use of milk production quotas, a quantity versus price related policy tool. Canada shares this approach with the EU and California milk marketing order dairy policies. Production quotas raise the issue of quota rents (the monetized value of the right to produce milk in a heavily protected domestic milk sector) and the property rights that tend to become associated with this type of intervention. Inter- and intra-regional pressure to expand milk production beyond current quota levels is motivated by size economies (production quotas tend to inhibit the adoption of size related, efficiency enhancing technology), interregional competition (between Canadian regions why should the prairie provinces import dairy products from Quebec if they can be produced locally?) and with U.S. regions (California, Northwest, Northeast, etc.), and dissatisfaction

with the historically based original quota allocation. Liberalization (elimination or expansion) of milk production quotas raises issues of compensation and transition paths. Similar issues characterize the EU milk production quota debate.

CASES

Dairy trade disputes in North America typically involve Canada and the United States with the United States initiating the dispute against some aspect of Canadian dairy policy. Since 1986 there have been at least three differences of opinion between the two countries regarding dairy trade. The first was the GATT dispute over yogurt and ice cream. Later, the United States challenged Canada's ability to convert import quotas to tariffs under the NAFTA. The most recent dispute challenged Canada's two-tiered pricing system under the GATT/WTO. This section reviews each of these disputes using a case study methodology. For each dispute, the focus is on the initiator of the action, the action taken, the process of the dispute analysis and the outcome of the application process.

Ice Cream and Yogurt GATT Dispute

The Canadian government was requested to add ice cream and yogurt to its Import Control List before 1988. Ice cream and yogurt had not been included on the List as the quantity imported was negligible relative to domestic consumption. During the late 1980s, however, there was an increased awareness about the Canadian market in the United States, largely because of the CUSTA negotiations. Processors in the United States realized that Canadian tariffs (at the time about 15 percent) on ice cream and yogurt would be coming down. The tariff reduction and low manufacturing milk prices in the United States relative to Canada implied a potential for yogurt and ice cream exports into Canada (Matte, 1997). To preclude this outcome, the Canadian government added ice cream and yogurt to its Import Control List on 28 January 1988[1]

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[1] Specifically, the following items were added to the Import Control List:

HS code	Item
2104.00.00.10	Ice Cream Novelties
2105.00.00.20	Ice Cream
2105.00.00.90	Other Ice Cream
2105.00.00.90	Ice Milk Novelties

A notice issued pursuant to the Canadian Export and Imports Act, dated March 25, 1988 stated that import permits were required for any imports of ice cream and yogurt. It required importers seeking permits for any of the restricted products for the remainder of 1988 to document their import performance with respect to these products in 1984, 1985, 1986 and 1987. No quota levels were established for 1988. Permits were requested for 3,536 tons of ice cream and for 2,279 tons of yogurt. Permits were issued for 349 tons of ice cream and for 1,212 tons of yogurt.

During September and October 1988, the United States and Canada held consultations pursuant to Article XXII [2] of the GATT on quantitative restrictions imposed by Canada on imports of various ice cream and yogurt products. As these consultations did not resolve the matter, the United States, in a communication dated 8 December 1988, requested a panel be established to examine the matter under Article XXIII:2 of the GATT.

The United States considered the Canadian restrictions to be inconsistent with the obligations of Canada under the General Agreement. In particular, the permit system and quotas violated the prohibition of import restrictions in Article XI:1, and could not be justified as an exception under Article XI:2.[3] In addition, the implementation of the restrictions was inconsistent with Articles X and XIII. This infringement of the provisions of the General Agreement constituted *prima facie* a case of nullification or impairment of benefits accruing to the United States under the GATT. The United States requested the Panel to

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2105.00.00.90	Ice Milk
2105.00.00.90	Other Ice Milk
2105.00.00.90	Products Manufactured Mainly of Ice Cream or Ice Milk
2106.90.90.00	Ice Cream Mix
2106.90.90.00	Ice Milk Mix
0403.10.00.00	Yogurt

[2] Article XXII provides for consultations between parties that have a trade dispute, which is a necessary condition for invoking Article XXIII. Article XXIII is the GATT's dispute settlement provision, allowing parties to address actions that are perceived to nullify or impair a concession.

[3] Article XI requires the elimination of quantitative restrictions. Exceptions such as XI.2.c.i applied.

recommend that Canada eliminate its quotas and permit scheme on imports of ice cream and yogurt.

Canada maintained its placement of quantitative import restrictions on ice cream and yogurt were consistent with Canada's rights and obligations under Article XI:2(c)(i). The administration of these restrictions was fully consistent with Articles X and XIII. Thus, Canada's actions did not nullify or impair any benefits accruing to the United States. Canada requested the Panel to find that the quantitative restrictions on ice cream and yogurt were consistent with Canada's rights and obligations under Article XI, as well as Articles X and XIII.

The United States recalled that Article XI:1 prohibited the restriction of imports regardless of whether such restrictions were made effective through quotas, import licenses or other measures. The Canadian import permit scheme thus fell within these provisions. The permit scheme established by the Export and Import Permits Act and the Notices to Importers operated to restrict imports. Permits were not freely granted to all qualified importers and were valid only for a limited time. Depending on the means of transportation involved, importers sometimes could not obtain a valid permit until the goods were in transit. The uncertainty and limitations imposed by the scheme could deter exporters from undertaking the planning, promotion and investment activities necessary to develop and expand markets in Canada for their products. The permits therefore had restrictive effects on trade in addition to those caused by the quota, and in the absence of justified quotas, could not be reconciled with Article XI.

Canada maintained that the permit system was not trade restrictive. Import permits were readily granted to applicants who qualified by meeting certain criteria, the principal one being historical import performance and reasonable allowance was made for new entrants. Permitted imports in 1988 exceeded the import level of the previous year.

On 12 September 1989 the Panel concluded that Canada's restrictions on the importation of ice cream and yogurt were inconsistent with Article XI:1 and could not be justified under the provisions of Article

XI:2(c)(i). In particular, the Panel found that ice cream and yogurt did not meet the requirements of Article XI:2(c)(i) for "like products" "in any form" to Canadian raw milk because they did not compete directly with raw milk nor would their free importation be likely to render ineffective the Canadian measures on raw milk production. The Panel also found that restrictions of imports of ice cream and yogurt were not necessary to enforce the milk supply management system. Canada was requested either to terminate the restrictions or to bring them into conformity with the GATT. Because the Uruguay Round was well underway and was mandated to deal specifically with agricultural trade, Canada decided to withhold action on the report pending the final outcome of that current round of the GATT talks. Canada later converted the import restrictions to tariffs that offered an equivalent level of protection just as they would do for all dairy products once the Uruguay Round Agreement was finally reached.

NAFTA Tariffication Dispute

This dispute involved a complex interrelationship of the CUSTA, the NAFTA, the GATT, and the WTO Agreement on Agriculture. In early 1990, informal discussions took place between the United States and Mexico to create a bilateral United States-Mexico free trade agreement or to extend the CUSTA to include Mexico. A commitment eventually was made to begin negotiations on the NAFTA in June 1991. While Canada, the United States, and Mexico were negotiating their trilateral deal, the Final Act, which contained the legal text for the GATT, was tabled in Geneva in December 1991. Over the next two years, there were major struggles in the GATT negotiating process. Agriculture, services, market access, anti-dumping rules, and the proposed creation of a new trade institution were sore points. At times, agricultural trade liberalization appeared to be an insurmountable objective. Canada also was in a difficult position. While extolling the benefits of free trade in support of its red meats, grains and oilseeds sectors, it defended its protectionist supply management systems for dairy, poultry, and eggs.

NAFTA negotiations concluded in August 1992. Because of slow progress on agricultural trade reform at the GATT negotiations, the three NAFTA parties agreed to construct a series of bilateral arrangements. The

provisions of Chapter 7 of the CUSTA, which stipulated Canadian rights with respect to supply management, remained operative between Canada and the United States. Canada and the United States then negotiated separate arrangements with Mexico regarding market access. Canada and Mexico eliminated all barriers to agricultural trade except in dairy, poultry, and eggs.

The simultaneous GATT negotiations solidified the notion of converting all non-tariff barriers to tariffs, including import quotas that were allowable for supply-managed industries under Article XI. Canada was forced to concede Article XI on 15 December 1993 when an agreement was finally reached. However, the agreement provided a level of tariff protection to Canada previously provided by import quota restrictions. Therefore, there was no risk of import competition for the supply-managed industries at that time. Even with the required percentage reductions in the tariffs (see Table 3), there was no threat to these sectors as a result of the agreement other than the gradually increasing minimum access requirements (see Table 4).

There were a number of key elements to this new GATT agreement for the agricultural sector. First, all non-tariff barriers would be converted to tariffs. It was agreed that a country would reduce its tariffs by an average of 36 percent over six years. During the same period, the total aggregate measure of support would be reduced by 20 percent. The value of export subsidies would be reduced by 36 percent, and the total volume of subsidized exports would drop by 21percent. Once the tariff equivalents and final figures for market access were tabled, the agreement was signed in Marrakesh, Morocco and came into effect on 15 April 1994.

On 2 February 1995 the United States requested consultations with Canada pursuant to Article 2006(4) of the NAFTA concerning the Government of Canada's application of customs duties higher than those specified in the NAFTA to certain agricultural goods that are within the meaning of NAFTA. After failing to resolve the matter, on 14 July 1995, the United States Trade Representative Michael Kantor, requested the

establishment of an arbitral panel pursuant to NAFTA article 2008. In its submission, the United States identified as the subject matter of the dispute

> *...the duties being applied by the Government of Canada ... to certain agricultural goods (generally dairy, poultry, eggs, barley and margarine, including products thereof) that are originating goods as defined in the North American Free Trade Agreement …*

The goods at issue were specified in detail by reference to the relevant *Harmonized Commodity Description on Coding System* number in a 10 July 1995 letter from the United States Trade Representative to Roy MacLaren, the Canadian Minister of International Trade. The goods identified in this letter included milk, yogurt, buttermilk, whey, butter, and other milk fats and oils, cheeses, curd, ice cream and other preparations containing milk and milk products.

The United States contended that Canada was applying, with respect to over-quota imports of these goods from the United States, tariffs in excess of those agreed to by Canada under the NAFTA. The United States alleged that Canada increased its tariffs on some of the goods in question on 1 January 1995 and on the remainder of the goods on 1 August 1995, contrary to its NAFTA undertakings.

Canada did not dispute the fact of its imposition of tariffs with respect to over-quota imports of certain goods originating from the United States from January 1, 1995. However, where the United States characterized the Canadian action as an increase in tariffs contrary to the NAFTA, Canada acknowledged only that it established tariff-rate quotas for the agricultural products in question. Canada maintained it was required to establish these tariffs by the Agreement on Agriculture concluded in the context of the Marrakesh Agreement establishing the WTO. By a letter jointly signed by their Trade Representatives on 21 September 1995, the United States and Canada agreed on the terms of reference for the dispute settlement Panel in accordance with Rule 4 of the Model Rules and NAFTA Article 2012.

The central contention of the United States regarding the tariffication issue is that Canada applied tariffs to over-quota imports of specified agricultural products of U.S.-origin contrary to its commitments under the NAFTA. In the submission of the United States, these over-quota tariff rates were described as "significantly in excess of the NAFTA bound rate of duty and significantly above the rate in existence on 31 December 1993."

The United States invoked NAFTA Article 302(1) and (2), which provides:

1. Except as otherwise provided in this Agreement, no Party may increase any existing customs duty, or adopt any customs duty, on an originating good.
2. Except as otherwise provided in this Agreement, each Party shall progressively eliminate its customs duties on originating goods in accordance with its Schedule to Annex 302.2.

The United States contended that Canada's conversion of import quotas to tariffs constituted a breach of NAFTA Article 302(1). Existing customs duties were those, which, pursuant to NAFTA Article 201(1), were "in effect on the date of entry into force of this Agreement". Any increase in tariffs above the rate in effect on 31 December 1993-the day preceding the entry into force of the NAFTA on January 1, 1994. By creating new tariffs, therefore, Canada was in violation of Article 302(1).

Canada maintained that, while it imposed tariffs on over-quota imports of specified United States origin goods in the period in question, the tariffs were imposed in consequence of an obligation to tariffy existing non-tariff barriers to trade in the goods in question pursuant to the WTO Agreement on Agriculture. This agreement entered into force between Canada and the United States on 1 January 1995. The tariffs applied to over-quota imports of U.S.-origin goods were therefore measures equivalent in protective effect to the non-tariff barriers that had been applied to the U.S.-origin goods prior to the period in question rather than new restrictions on imports.

Canada also contended that, under the NAFTA, the disputing Parties agreed that in-quota trade in agricultural goods between them would continue to be governed by the regime established by the Canada-United

States Free Trade Agreement. Over-quota trade would be governed by the arrangements that would emerge from the Uruguay Round. As the tariffs were imposed pursuant to the WTO Agreement on Agriculture obligation to convert existing non-tariff barriers into tariff equivalents, their application to the trade in agricultural goods between Canada and the United States was consistent with the Parties' commitments under the NAFTA. This challenge was the first test of the dispute settlement mechanism agreed to in the NAFTA. This challenge was likely sparked by increasingly disgruntled dairy producer groups in the United States who looked northward and saw their Canadian counterparts receiving higher prices for raw milk (Matte, 1997). On 2 December 1996, the Arbitral Panel created to adjudicate the disputed determined that Canadian tariffs conformed fully to the provisions of the NAFTA. The Panel concluded that the intention of the Parties was that FTA Article 710 was not limited in its application to the GATT agreements negotiated under the GATT as they existed at the time that the FTA or the NAFTA entered into force.

GATT/WTO Dispute: Canada's Classified and Two-Tiered Export Pricing

Before 1995, the proceeds of levies paid by producers were used to fund the Canadian Dairy Commission's losses from exporting dairy surpluses. Following the signing of the WTO Agreement on 15 April 1994, the Canadian Dairy Commission (CDC) developed alternatives to these producer levies. With this in mind, a Dairy Industry Strategic Planning Committee was established. The Canadian Dairy Commission chaired this Committee and provided research and secretariat support for it. In October 1994, the Committee recommended the implementation of a classified pricing system based on the end use of milk, national pooling of market returns, and coordinated milk allocation mechanisms.

A Negotiating Subcommittee of the Canadian Milk Supply Management Committee was established, with representation from all provinces, to resolve how to implement a "special milk classes" scheme. This subcommittee presented its recommendations to federal and provincial Ministers of Agriculture in December 1994, who agreed that some form of pooling of milk returns was urgently required to enable the dairy industry

to meet Canada's international obligations and changing market conditions. Ministers also agreed that the CDC Act should be amended to allow the Commission to administer the Special Milk Classes permit and national pooling arrangements. The necessary amendments were passed in July 1995.

The Special Milk Classes Scheme replaced the producer-financed levy system that was eliminated in 1995, is embodied in a Comprehensive Agreement on Special Class Pooling. The CDC, the provincial producer boards and the provinces that participate in the National Milk Marketing Plan are the signatories of the Comprehensive Agreement on Special Class Pooling that became effective on 1 August 1995.

Under Canada's national classified pricing system, the pricing of milk is based upon the end use to which the milk is put by processors as discussed in the Background section above. In 1997, New Zealand and the United States argued before the WTO that Canada unfairly prices milk used for export markets. New Zealand and the United States claimed the Canadian two-tier pricing policy indirectly subsidizes exports thus violating Article 10 of the Uruguay Round Agreement commitment on subsidy reduction. Under the old program, Canadian farmers paid an in-quota levy to finance export subsidies. Export subsidies allowed Canada to sell dairy products on the world market at a lower price than could be realized domestically. Under the new program, farmers accept a lower price for milk used to make products destined for export markets than for milk sold domestically in Canada. The returns for both types of sales are pooled into one payment to all farmers.

With the new pricing program, Canada has not increased its subsidies but dairy exports have expanded. The important difference between the old and new pricing schemes in Canada is that the old program would have been subject to export subsidy disciplines, while Canada considered the new program to be consistent with the Uruguay Round Agreement.

The source of contention between the nations involved was that while the World Trade Agreement included producer funded levies as export subsidies, it made no reference to two-tiered or classified pricing systems. The Canadian position was that a two-tier pricing system is consistent with the commitments

of the World Trade Organization. The position of the complainants was that Canada circumvented the Uruguay Round limits on export subsidies with its two-tier price system. Producer groups in the United States initiated a 301 process that lead to the formation of a WTO panel to resolve the dispute.[4] The panel began hearings in March 1998.

On 17 March 1999 the WTO panel made its findings public. The panel decided the system of providing low-cost milk to processors is an export subsidy. Specifically, the decision affected Class 5d and 5e, which provide milk to processors at less than domestic prices only if they promise to export the product. For the 1997-98 dairy year, the volume of milk sold in class 5d and 5e represented 9.64% of total milk production in Canada. The panel ruled that "basically the way Canada is administering those classes and the way the government intervenes in those classes are such that based on the definition in the Agreement on Agriculture, they should be considered export subsidies." In other words, when the domestic price is set above the price charged for exports, while domestic producers are paid an average or pooled price, exports are implicitly subsidized.

The panel also ruled that Canada's limitation of fluid milk imports under the tariff rate quota system to cross border shopping only, was inconsistent with its obligations under the WTO. At issue was the way in which the tariff rate quota for fluid milk is administered. The burden of proof is on Canada to demonstrate that it is meeting its tariff rate quota commitment. This is the problem. The volume of fluid imports arising from cross border shopping is not transparent.

In July 1999, Canada appealed the panel decision to the WTO Appellate Body. The Appellate Body upheld the previous decision regarding the two-tier pricing system. It also ruled that Canada could continue to limit imports of fluid milk under the TRQ to cross border purchases by Canadian consumers.

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[4] Section 301 of the Trade Act of 1974, as amended, permits the United States Trade Representative to investigate and sanction countries whose trade practices are deemed "unfair" to U.S. interests. It contains both mandatory and discretionary provisions and specific timetables for the United States Trade Representative to take action.

On 23 December 1999, Canada, the United States, and New Zealand jointly announced the terms under which Canada's subsidized exports of dairy products will be reduced. Under the agreement, Canada will immediately comply with its WTO export subsidy commitments on butter, skimmed milk powder, and other dairy products. Moreover, Canada has committed to reduce substantially the amount of milk made available to cheese producers during the remainder of the current marketing year (ending July 30, 2000) and to cease issuing permits for such milk on 31 March 2000. Beginning in the 2000/01 marketing year (Aug./July), Canada will not be able to export more than 9,076 tons of cheese. This total is less than half of the volume exported in recent years.

SUMMARY AND CONCLUSIONS

The purpose of this paper was to review dairy disputes related to the NAFTA with the objective of describing the context in which these disputes have occurred and will likely continue to arise. The similarities of U.S. and Canadian dairy policies is striking: both countries use intervention prices, border protection (via tariff rate quotas) and export subsidies to maintain domestic prices well above world market levels. Both countries use sophisticated classified pricing schemes to price discriminate against consumers of products with relatively more inelastic demands and use the resulting revenue enhancement to enhance average farm milk prices. This biggest differences between U.S. and Canadian dairy interventions concern the level of intervention (Canadian classified prices are about 50 percent higher than U.S. classified prices, butter/skim milk powder intervention prices and over quota import tariffs are generally higher than those in the United States), the use of production quotas, and the associated two-tiered export pricing scheme implemented to ease internal pressures to increase Canadian production quotas.

The paper described three dairy trade disputes that ranged more broadly than just the NAFTA: the GATT ice cream and yogurt dispute; the NAFTA tariffication dispute; and the GATT/WTO dispute concerning Canada's two-tier pricing system for raw milk. These disputes figure prominently in the historical evolution of agricultural trade dispute resolution mechanisms under the GATT, the NAFTA and the Uruguay Round GATT agreements as each

represented one of the earliest implementations of these mechanisms under the alternative trade liberalizations.

Unfortunately, solid economic analyses of the impacts of these dispute resolutions in the dairy sector are scarce. In contrast to the livestock and grains disputes analysed in those case studies, the evidence is strong that the North American dairy sectors have not developed the constructive, cross-border dialogues on trade disputes that characterize these other agricultural sectors. Cross-border university collaborations are perhaps particularly well suited to providing economic benchmark analyses within which a more solid understanding of the impacts of dairy trade disputes can be realized. Given the heavy politicizing that distorts much of the cross-border dairy dispute dialogues, multi-country, "third party" economic analyses could do much to help improve these dialogues – assuming the respective disputants don't shoot the messengers. This remains an increasingly important and more urgent agenda for further research and cross-border collaboration.

The history of dairy trade disputes suggests that, in each case, the dispute resolution mechanism operated as intended though the smoothness (and timeliness) of the resolution process improved with each succeeding round of liberalization. These case studies should provide some comfort to those who espouse the reasonableness of this type of resolution dispute process. As well, with feedback from the major players (farm, processor and perhaps even consumer groups) on both sides of the border, suggestions for further improving the evolution of these dispute resolution processes/mechanisms is warranted. Hopefully, the discussions at these workshops, and the distribution of their results, will further these cross-border collaborative agendas.

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APPENDIX 1

Timeline

Year	Month	Event
1966	October 31	Canadian Dairy Commission established.
1970		Market Sharing Quota (MSQ) plan for industrial milk.
1974		Canadian Dairy Commission for the first time pays a direct subsidy on all MSQ shipments.
1975		Direct subsidy capped at $6.03/hL.
		Introduction of cheese import quota of 22,727 tonnes.
1978		Cheese import quota reduced to 20,400 tonnes.
		(CDC annual report states 'other than casein, buttermilk powder and some dairy product mixed in combinations with other products such as animal feed, the only other import allowed during this period was cheese under quota.')
1982		Import controls on cheese, casein, animal feed, whole milk powder, skim milk powder, buttermilk powder and evaporated and condensed milk.
		Cheese import quota 20,400 tonnes (60% EC) Sweetened condensed milk 25,800 tonnes (Australia) Buttermilk powder 907 tonnes (New Zealand) Casein - permits issued upon request, no casein production in Canada Butter - only permits are issued when there has been insufficient production of milk Dry skim milk, dry whole milk and dry whey - may not be imported
1985		Products which are blends or mixtures of at least 50% dairy products become subject to import control
1986	May / June	Free Trade negotiations begin.
	September	Uruguay Round negotiations begin.
1988	January 2	Free Trade Agreement signed.
	March 25	A notice to importers states that import permits are required for any imports of ice cream and yogurt. The notice was issued pursuant to the Canadian Export

		and Import Permits Act. It required importers seeking permits for any of the restricted products for the remainder of 1988 to document their import performance with respect to these products in 1984, 1985, 1986 and 1987. No quota levels were established for 1988. Permits were requested for 3,536 tonnes of ice cream and for 2,279 tonnes of yogurt. Permits were issued for 349 tonnes of ice cream and for 1,212 tonnes of yogurt.
	Sept. 7 / Oct. 7	United States and Canada hold consultations pursuant to GATT Article XXII on quantitative restrictions imposed by Canada on imports of ice cream and yogurt products.
	December 8	The United States requests a Dispute Panel to examine the quantitative restrictions imposed by Canada on imports of ice cream and yogurt products under GATT Article XXIII:2.
	December 20	A GATT Council agrees to establish a panel on the ice cream and yogurt matter.
1989	January 1	Free Trade Agreement enters into force.
	January 17	A Notice to Importers is issued which established annual global quotas for calendar year 1989 as follows: (a) ice cream, ice milk, ice cream mix, ice milk mix or any product manufactured mainly of ice cream or ice milk - 345 tonnes (b) yogurt - 330 tonnes The notice further stated that the main criterion for determining the size of quota allocated to individual importers would be the documented level of their imports during 1985, 1986 and 1987. Some quantities could, however, be made available for new importers. Individual import permits are required for each shipment and are issued through an on-line automated system. Permits normally have a validity period of 30 days around the date of arrival specified by importers (5 days prior to and 24 after), but are charged to the importers' quota allocations only if they are used.

	May 11 / Jul. 17	Dispute Panel meets with parties from Canada and the United States regarding the dispute over ice cream and yogurt.
1990	September 12	The Dispute Panel concluded that Canada's restrictions on the importation of ice cream and yogurt are inconsistent with Article XI:1 and cannot be justified under the provisions of Article XI:2(c)(i). In particular, the Panel found that ice cream and yogurt do not meet the requirements of Article XI:2(c)(i) for «like products» «in any form» to Canadian raw milk because they do not compete directly with raw milk nor would their free importation be likely to render ineffective the Canadian measures on raw milk production. The Panel found further that the restriction of imports of ice cream and yogurt is not necessary to the enforcement of the Canadian program for raw milk.
1991	June	North American Free Trade Agreement negotiations begin.
1992	December 17	North American Free Trade Agreement signed.
1993	December 15	Uruguay Round Negotiations conclude.
1994	January 1	North American Free Trade Agreement enters into force.
1995	January 1	World Trade Organization Agreement enters into force.
		Import quotas on Canadian dairy products converted to tariffs.

Product	Base Tariff	Final Bound Rate (2000)
Fluid milk	283.8%	241.3%
Cheddar	289.0%	245.6%
Butter	351.4%	298.7%
Yogurt	279.5%	237.5%
Ice Cream	326.0%	277.1%
Skim milk powder	237.2%	201.6%

Low rate tariff quota commitments are applicable to the following products and quantities:

Product	Tariff Quota	With-Quota Tariff	
		US	Other
Fluid Milk	64,500 tonnes	free	10.5%
Cream – Not Concentrated	394 tonnes	free	12.5%
Concentrated or Condensed Milk or Cream	11.7 tonnes	free	4.09¢/kg
Butter	1,964 tonnes		
	3,274 tonnes	free	12.5%
Cheese	20,412 tonnes	free	4.09¢/kg
Yogurt	332 tonnes	free	9.0%
Ice Cream	429 tonnes		
	484 tonnes	free	9.5%
Powdered Buttermilk	908 tonnes	free	4.79¢/kg
Dry Whey	3,198 tonnes	free	5.52¢/kg
Other Products of Milk Constituents	4,345 tonnes	free	9.0%

Feb. 2	The United States requests consultations with Canada pursuant to Article 2006(4) of the North American Free Trade Agreement concerning Canada's application of customs duties higher than those specified in the NAFTA.
July 14	The United States Trade Representative Michael Kantor requests the establishment of an arbitral panel pursuant to NAFTA Article 2008.
August 1	Direct subsidy payment reduced by 15% to $4.62/hL
	New milk class pricing and pooling system implemented.
	Option Export Program introduced wherein a milk volume of up to 5% of total industrial and fluid quota holdings in a province and up to 10% of an individual producer's quota holdings can be made available for approved export activities.

1996	March 22	The disputing parties provide the arbitral panel with written submissions. The central contention of the United States is that Canada is applying tariffs to over-quota imports of dairy products of US origin contrary to its commitments under the NAFTA. Canada contends that, while it imposed tariffs on over-quota imports on US origin dairy products, the tariffs were imposed in consequence of an obligation to tariffy existing non-tariff barriers to trade in the goods in question pursuant to the WTO Agreement on Agriculture, which entered into force January 1, 1995.
	April	Quebec producers vote not to implement the Optional Export Program in that province.
	August 1	Direct subsidy reduced 15% to $3.80/hL.
	December 2	Final report of the arbitral panel. The Panel decides that FTA Article 710 has the effect of bringing into the NAFTA the replacement regime for agricultural non-tariff barriers that was established under the WTO. This consists of an obligation not to introduce or maintain such non-tariff barriers and the right to apply the tariffs that resulted from tariffication, as set out in their tariff schedules to over-quota imports of agricultural products, together with the obligation to reduce those tariffs and ensure certain minimum volumes of imports. The Panel decided NAFTA Article 302(1) did not diminish these rights.

APPENDIX 2: 1995 Supply and Disposition ('000 kgs).

HS Code	*Commodity*	*Production Canada*	*Imports into Canada from the US*	*Total Imports into Canada the U.S.*	*Exports from Canada to the U.S.*	*Total Exports from Canada*
0402.20	Fluid milk over 1% fat, but not over 6% fat	2,775,106*	88	105	-	714
0402.10	Milk powder, not exceeding 1.5% fat	71,073	97	1,949	1,763	40,248
0403.10	Yogurt	95,190	300	310	14	139
0405.00	Butter	92,515	316	548	40	6,296
0406.90.11	Cheddar Cheese	116,869	61	1,131	759	5,312
0406	Specialty Cheese	184,267 616	16,037	4,079	6,509	
2105.00	Ice Cream	187,000**	414	417	19	4,112

HS Code	*Commodity*	*Production U.S.*	*Imports into U.S. from Canada*	*Total Imports into U.S.*	*Exports from U.S. to Canada*	*Total Exports from U.S.*
0401.10	Fluid milk over 1% fat		-		88	
0402.20	Fluid milk not over 6% fat					
0402.10	Milk powder, not exceeding 1.5% fat	560,835	1,763		97	
0403.10	Yogurt	640,315	14		300	
0405.00	Butter	573,061	40		316	
0406.90.11	Cheddar Cheese	1,422,076	759		61	
0406	Specialty Cheese	1,732,577	4,079		616	
2105.00	Ice Cream	3,266,638	19		414	

* According to Statistics Canada 2689056KL of fluid milk was produced in Canada in 1995. Conversion rate 1hL =103.2kg.
** According to Statistics Canada 339963KL of ice cream was produced in Canada in 1995. Conversion rate from Lucerne Foods, Edmonton.
Source: USDA/FAS

NATIONAL DAIRY COUNCIL OF CANADA

Kempton Matte

Canadian dairy processors have participated in three disputes, not necessarily by choice. They were:

- Ice cream and yogourt import prohibition by Canada under the GATT (January 1988 to December 1989).
- NAFTA import tariffs for U.S. dairy products versus tariffication under the new WTO (July 1995 to December 1996).
- the Special Classes for Export Purposes (5D & 5E) Program, and fluid milk import restrictions also under the new WTO (October 1997 to October 1999).

In each case the predominant political interest was to protect the protectionist consensus of dairy farmers, reflected in supply management in the Canadian market.

Ice Cream And Yogourt Import Prohibition

In the first case, so fearful were the dairy farmers of having to face a GATT panel that they indicated a willingness to government to give the United States access to a substantial portion of the Canadian ice cream and yogourt markets in order to reach a settlement. This outraged product manufacturers who were interested in trade liberalization. Manufacturers urged that one of two courses of action be undertaken:

- negotiate a bilateral access agreement whereby both parties would acquire access rights with some relationship to market size; or
- fight the battle at the GATT.

Since the farmers did not wish to see a trade precedent set regarding access, the GATT route was clearly the only politically acceptable course of action. In spite of Canada's best efforts in presenting its case, the GATT panel ruled against Canada's prohibition of imports of ice-cream and yogourt. Canada then chose not to implement the panel ruling pending the outcome of the Uruguay Round.

NAFTA (Article 2006) And Tariffs

This dispute arose because of the expectation that U.S. tariffs would decline relative to GATT tariffs. Canadian tariffs on U.S. dairy products were in fact on a declining path when the Uruguay Round adopted tariffication. Canada then applied the new WTO agreed tariffs to all its trading partners including the United States.

As members of the supply management community, dairy processors found themselves reluctantly drawn into the defence of a tariff structure designed to eliminate any possibility of increasing trade flows. As before, the political imperative was protecting the system inside Canada favoured by the dairy farmers.

Though undertaken reluctantly, there were two main reasons why processors agreed to participate in, and share the high costs of, defending the tariffs. First, under the agreements in force at the time, losing the tariff protection meant lost market because there would have been no opportunity for processors to access additional U.S. market. If tariffs were reduced, the domestic markets would have been opened up to an influx of U.S. product at a time when raw milk prices in the United States were decidedly lower than in Canada.

Second, dairy farmer leadership, being well funded and astute lobbyists, positioned this dispute as an unfettered attack on the family dairy farm in Canada. Politics being what it is, the government, as well as dairy processors, simply had no choice but to step up to the bar.

The NAFTA panel ruled in Canada's favour and the high tariffs continue to protect our domestic system.

Outcomes

As indicated in the Cox and LeRoy (2000) paper, at this stage in the process (December, 1996) Canada had lost one dispute and won one. But did we learn something in the process? And did we make any adjustments?

During the first dispute, dairy processors became convinced that if ice cream and yogourt are not "like products" to milk, and if we experienced a negative outcome (which was confirmed), then we would likely lose other trade

challenges. This would mean that our markets would open up and the domestic supply management system would have to adjust. Processors therefore began to look seriously at their ability to compete in a more price sensitive environment. What they found was a need to rationalize operations, modernize plant base and squeeze costs out of their operations. The mantra became "only those with the sharpest pencils will survive". A dialogue of similar tone was attempted with the farm leadership but they remained convinced that they needed to make no substantive changes to their current structures and methods.

As a result of this situation, processors began to consolidate facilities and operations. This move was dramatically visible in western Canada but also very active in eastern Canada. These changes included product line rationalizations but more importantly, mergers, amalgamations, and joint ventures on a commodity or product basis, as well as licencing agreements for brand sharing and marketing. All of this occurred in a mature market stilted by low or no growth.

Dairy farmers reacted to these developments with a mixture of bemusement and fear: bemusement because they had always claimed the processor sector was unable to co-operate and, indeed, unable to creatively market product; with fear because now their only customers were growing in scale by buying market share, and were becoming more vocal about their needs, and more critically, the needs of the market and consumers. Resistance to policy driven price increases on the part of processors further exacerbated the growing divide within the industry.

Special Classes For Export And Fluid Milk Import Restrictions

We lost a critical element of the third dispute, which by the way, processors spent hundreds of thousands of dollars defending alongside dairy farmers providing proof there is no escaping the political reality of our domestic supply situation. While we won the right to restrict imports of fluid milk to non commercial purchases, we were obligated to remove the previous ceiling on such imports. It was determined however that our milk classes 5d and 5e were in fact subsidies and a redesign of our export structure is therefore required. Processors, while still supporting supply management for the domestic market, are now clearly pushing for a truly market driven structure for the export busi-

ness including the elimination of the marketing boards monopoly rights on raw milk supply for exports.

Impacts

Trade. The NAFTA impact on dairy cross-border trade was negligible due to the defacto exclusion of dairy by both countries.

Investments. There were huge impacts because NAFTA was seen as a precursor of much more open markets and the possible demise of dairy supply management. They showed up as:

- consolidations and plant rationalization;
- adoption of "state of the art," world-based systems and configurations;
- an influx of management from non-dairy firms;
- an influx of European trained, experienced senior management; and
- significant expansion into the United States by co-operative joint ventures (DFA), and by firms such as Saputo who now do most of their business in the United States.

Dispute Resolution

GATT Panel. This approach has been demonstrated to be cumbersome, have little respect for time lines, and result in enormous slippage from one phase of the process to another. It is very long and drawn out in time, and expensive.

NAFTA. There was a major delay initially because of a lack of roster from which to select the five panelists. Overall it is a legalistic, but effective mechanism with little if any ability for political interference once the process begins. However, it is still an expensive process for NGO's participating directly with the support of trade or legal counsel.

WTO. This approach is subject to the same roster considerations as the NAFTA process. Nonetheless, this process functioned as advertized, i.e., the time lines were known and relatively little slippage occurred. There was no evidence of political interference in any way. The WTO dispute Settlement Body preserved its reputation for thoroughness and professionalism. The cost

implications remain very significant and are a major burden for NGO's and certainly would be for developing countries, especially if they did not have "in house" expertise. Most simply do not have that capability.

Further Cooperation Between The United States And Canada

The jury is out - it is taking much too long to resolve the dairy harmonization differences for farm and plant inspections, or equivalency discussions for regulatory and standards issues. Also, there remains the whole, and larger, question of quantitative market access for dairy where each side of the 49th parallel gleefully engages in calling the other protectionist when, truthfully, both are!

CASE STUDY GENERAL DISCUSSION

Dispute Resolution Corporation. This private voluntary dispute resolution mechanism was established by a tri-national committee of the three governments. A new corporate entity was set up to function as an arbiter of disagreements on commercial transactions. Individual companies interested in participating in this process sign up as members of the new corporate entity. This mechanism has been used most effectively in fruits and vegetables where there is technical expertise in areas such as grades and standards by the participating governments and industry participants. In addition, Perishable Agriculture Commodities Act (PACA)-type systems are used in the arbitration setting of the new corporation even though these laws are not available in all countries.

Mexican Tomato Floor Price. The question was raised as to whether the floor price agreement on tomatoes, established some time ago by agreement of the United States and Mexico, might become a precedent for future settlements. While this remedy defused the issue at the time, a floor price remedy is not viewed by the U.S. Department of Justice or USDA as a desirable outcome. The policy position is very clear that this remedy not be applied in the future.

Antidumping and Countervailing Duties. There was discussion at several points in the workshop, including in this session, on whether antidumping and countervailing duty mechanisms work, or are even suitable for use, in agriculture. The burden of the duties and process costs fall on producers, industry associations, and firms. Most cases are long, protracted and very expensive. The process is by nature adversarial and legalistic. The only contribution of the free trade agreement is to provide an appeal mechanism which may extend the period of cost and uncertainty. Because the legislation and rules derive from industrial sectors, many of the concepts, definitions and measurement requirements of an action are unsuited to agricultural production and

markets. Discussion generally indicated unsuitability of antidumping and countervailing duty actions to the agricultural sector.

Wheat and Grain Disputes. One of the most contentious issues in grains disputes is the Reference Price for Dumping (often referred to as 'the acquisition cost'). In a dumping action, whether the Canadian Wheat Board (CWB) engages in dumping can turn on what price is used as the reference price. Payments to producers by the CWB (annual pooled returns) are based on sales throughout the year and transparency of selling price does not exist. ITC ruled in a 1994 action that the relevant reference price was the 'initial' payment which, by convention in Canada, is targeted to be about 70-75 percent of the final payment. If, as is often argued, 'final' pooled returns paid to producers is taken as the acquisition price, the very process of pooling means that some (statistically half) of all sales are made below acquisition cost. Any pooling or forward contracting process in a variable market will generate these consequences. What is the appropriate reference price is left unanswered.

Increased U.S. Subsidies. As supplemental lump sum (decoupled) payments and loan deficiency payments increase relative to the other countries, more contentious relationships can be expected to develop. This occurs because costs of production in the United States relative to Canada can be expected to increase. With subsidies, there is less adjustment to low market prices in the United States (relative to Canada), and some of the benefits of higher returns are capitalized into inputs especially land. The eventual pain of adjustment, if it occurs, will also be greater in the United States than in Canada. Overall, the pain for all countries increases because production levels do not adjust.

The EU as a Trade Distorting Force. EU policies were recognized as a major disruptive market force that makes rationalization of trade relationships within NAFTA very difficult. For example, EU wheat production and subsidized exports lower all wheat prices; extremely heavily subsidized EU oats represent one-third of U.S. imports, pushing down domestic prices. However, U.S. policies have also become a disruptive force. Clearly, there is a need for more effective negotiation with other countries if NAFTA is to make progress.

Cattle/Beef Disputes. The unstable nature of agriculture, specifically the cyclical pattern of livestock prices and production, mean that there will be periods when below-cost sales occur. Similarly, market determined prices in an exporting region will always be below those in an importing region. In this economic environment, it is essential that there be some mechanism for sorting out which charges of dumping really make sense, and which relate to market reality. Trade remedy law does not do a good job of reflecting basic economic phenomena. Are there reasonable options outside of TRL, preferably within NAFTA, that would be more effective in resolving disputes?

Reasons for the R-CALF Dispute. The difficult financial situation of cattlemen over several years, and the frustration of many in the United States with lack of government or association contribution to a solution were significant contributors to the formation of R-CALF. It was also argued that once the process was underway, the involvement of CWB issues provided the opportunity to keep the heat on Canada and the CWB. If there had been a continental barley market, this dispute may not have been taken place. If the current feeder cattle program which has increased the flow of U.S. feeder cattle into Canada had been in place earlier, this dispute may not have occurred. Opening the border was viewed as the answer.

The Avocado Dispute. It was expected that the opening of the U.S. market for avocados would benefit small producers. There was considerable discussion of whether these benefits to small producers were realized. Only 57 growers were certified as being approved orchards. Small Mexican producers could have benefitted because of increased demand, which raised the general price level. While it is clear that fruits and vegetables are dominated by a few firms throughout, all producers may benefit. Because of the importance of avocados to California, there was a significant political factor involved in the settlement of this dispute even though scientific evidence was applied.

Sugar. Sugar policy in the United States has generated significant economic rents for producers and created an entire industry dependent on public support. An indication of the current magnitude of producer rent is the fact that the U.S. price is 21 cents/lb. at a time when the world price is between 5 and 6 cents/lb. An additional amount would be added for higher prices on HFCS.

It was also indicated that sugar companies on balance have high debt and financial problems, with attempts to sell facilities to producer groups. The effect of NAFTA on opening up access to the United States for Mexican sugar was to reduce, on a one-to-one basis, sugar from other countries. This situation contributed to elimination of sugar production in some areas of Canada, and it suggests that any opportunities for access of Cuban sugar would be reduced.

Dairy. Most discussion focused on Canadian supply management. It was reported that very recent data show the value of dairy quota to be accelerating, at $27,000/cow in British Columbia and $23,000/cow in Ontario. It was suggested that dairy policy has been a rural adjustment policy, and concerns are expressed about the means of protecting the capital value if deregulation occurs. It was suggested that the likelihood of significant regulatory change was greater in poultry than in dairy. There was no agreement on the interconnection in Canada between poultry, dairy and other agricultural policy.

Section 4

What Have We Learned?

The objective of this session is review the report card, explore developments in cross-border producer group discussions, and look ahead to evolving trade relations.

STATES/PROVINCES DIALOGUE ON AGRICULTURAL TRADE AND POLICY ISSUES[1]

Nithi Govindasamy and Kevin Dunlevy

INTRODUCTION

Over the past year, Canadian Provinces, U.S. states and Mexican states have embarked on a number of initiatives and activities designed to encourage communication on cross border agricultural trade and policy issues. These initiatives and activities have involved agricultural producers, politicians and government officials from both sides of the border. Their motivation is the mutual recognition that sub-national jurisdictions could play a useful and substantive role in managing the growing but somewhat fractious agricultural trade relationship within NAFTA.

The purpose of this paper is to describe these initiatives, outline the institutional mechanisms that have been set up, assess the effectiveness of actions taken and provide a road map for future actions. While some mention will be made of U.S./Mexican bilateral initiatives, emphasis will be placed on

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[1]Editors Note. This paper provides a detailed listing of trade and policy issues, differences and perceptions in the western half of Canada and the United States. The source of this material is several cross-border meetings held since the fall of 1998. Most of this material comes from direct contact with primary producers. It represents a comprehensive definition of an important aspect of trade disputes between the United States and Canada.

the activities of U.S. states and Canadian provinces. Specific details of the major public meetings are summarized in the appendices.

BACKGROUND

During the summer and into the fall of 1998, rising cross border tensions in agriculture culminated in border blockades and a general disruption of trade between Canada and the United States. Among the reasons cited for this sudden deterioration in the bilateral agricultural trading relationship were:

- declining commodity prices and a deteriorating farm income situation, particularly in Northern Tier U.S. states;
- a general perception by farmers in Northern Tier U.S. states of unfair Canadian trade practices;
- a perception by farmers and certain State governments that the U.S. federal government was not paying sufficient attention to the plight of the agricultural industry in the Northern border states;
- a perception by farmers in Northern border states that trade liberalization under the Canada/U.S. Free Trade Agreement (FTA), and subsequently the North American Free Trade Agreement (NAFTA), had disproportionately benefitted Canadian producers; and
- a belief by U.S. producers and some State governments that border blockades were the quickest way to get the attention of both federal governments to eliminate trade barriers and resolve bilateral trade irritants.

(USDA/AAFC, 1999; Waddell, 1999).

The border blockades did raise the political profile of bilateral agricultural trade in both capitals. They also provided an admission that the Canada-U.S. agricultural trade relationship could not be taken for granted, and that it required more careful management. A period of intense political activity at the highest levels of both governments culminated December 2, 1998 in the signing of the *Record of Understanding Between the Governments of Canada and the United States of America Regarding Areas of Agricultural Trade* (ROU). The ROU was designed to address 17 specific bilateral trade irritants as well as set up a broad institutional framework to regularly consult on all pertinent agricultural trade issues. The intent was to establish a comprehensive consulta-

tive mechanism to provide early warning of impending trade problems such that trade irritants could be resolved before they became full blown trade disputes. However, this intent did not prevent the concurrent filing and subsequent trade litigation of Canadian cattle exports (the R-CALF Case).

In accordance with the ROU, a Consultative Committee on Agriculture (CCA), staffed at the senior officials level was created in April, 1999, to facilitate implementation of the specific provisions of the ROU, as well as serve as an ongoing bilateral mechanism for discussion and cooperation on agricultural issues. In recognition of the importance of agricultural trade for states and provinces and a desire by provinces and states to be more fully involved in federal decisions affecting agricultural trade, the CCA mechanism encouraged the establishment of a Provincial-State Advisory Group (PSAG). The PSAG is to act as an advisory body to both federal governments on matters affecting agricultural trade and function as the forum for producers and exporters to bring forward their trade and policy issues either for resolution at the PSAG level or to be forwarded for federal attention.

STATES/PROVINCES INITIATIVES

States and provinces directly affected by the border blockades of 1998 made a commitment to intensify ongoing bilateral activity and work to strengthen existing mechanisms, in order to prevent further disruptions to trade. Premiers and Governors increased the frequency of visits to each others' jurisdictions. In December 1998, Premier Klein of Alberta and Governor Racicot of Montana committed to sponsoring a producer conference, which was subsequently held in Great Falls, Montana on June 1, 1999. Present were approximately 200 participating producers, representing all commodity sectors. The conference was an opportunity for direct producer-to-producer contact and discussion regarding cross border trade issues and business opportunities. The Alberta and Montana governments conducted comprehensive surveys of producer groups to help identify primary issues of concern, prior to the conference. The results of the survey provided focus to the discussions by producers. With process facilitation services provided by both governments, producers were able to engage in meaningful dialogue on trade irritants. Fact sheets on Canada/U.S. trade, addressing various commodity and value adding sectors, assisted in the discus-

sions and helped to dispel some misconceptions. The presence and active participation by the Alberta Premier and the Montana Governor added to the political significance of the event and seemed to satisfy the majority of producers that governments were indeed concerned about their issues. The objectives, issues and results of that conference are reported in Appendix 2.

A parallel meeting on June 2, 1999 of State Directors/Commissioners of Agriculture from North Dakota, South Dakota and Minnesota with Ministers of Agriculture from Alberta, Saskatchewan and Manitoba along with officials from British Columbia and Idaho provided a unique opportunity for spirited and frank discussions at the political level on cross border issues. It quickly became apparent at that meeting that there was less than full information on contentious issues such as government subsidy practices and sanitary and phytosanitary regulations. There was agreement that more information would be sought from federal authorities to enable a more informed discussion at the July meeting of the States-Provinces Agricultural Accord (ACCORD). Nonetheless, there was agreement that European Union export subsidy practices were a mutual concern and that Canada and the U.S. should make this issue their highest priority at the World Trade Organization (WTO) meetings in Seattle in December, 1999.

The issue of better managing bilateral agricultural trade was also on the agenda of the Western Premiers/Western Governors Annual Meeting held June 15, 1999. The need for formalizing closer working relationships between Provinces and States was well recognized. Premiers and Governors agreed on much closer communication on agriculture and the need to engage informally to diffuse potential trade disputes. They have followed up on this commitment with more frequent discussions on agricultural issues and will reinforce the need to continue this process at the upcoming Western Premiers/Western Governors Conference in May, 2000.

The heightened level of activity at the producer, political and officials level and the desire to engage constructively on cross border and international trade issues was carried forward to the Annual ACCORD meeting in Salt Lake City on July 15, 1999. The ACCORD is a trilateral consultative body made up of the Board of Directors of the United States National Association of State

Departments of Agriculture (NASDA), the Canadian provincial Ministers of Agriculture and the Mexican Association of Secretaries of Agricultural Development (AMSDA). The Accord mechanism between Canada and the United States predates the FTA. Meeting for the first time in 1986, the parties recognized that specific bilateral agricultural trade irritants are often regional in nature. The ACCORD was to facilitate provincial and state dialogue on specific trade issues to amicably resolve emerging trade irritants before they escalate into larger, more difficult bilateral trade disputes. Mexican states joined the ACCORD process in 1995.

The July 15, 1999 meeting of the ACCORD was an opportunity to review the effectiveness of the organization in managing the trilateral trade relationship and to propose new structures to revitalize its role. At Alberta's suggestion, a new structure was adopted. Three working groups were created to address U.S./Canada, U.S./Mexico and Canada/Mexico trade issues and irritants. Specific goals and approaches were adopted and co-chairs selected to lead the efforts. It was agreed that the U.S./Canada Working Group would also serve as the PSAG. Co-chairs of the PSAG are the Director of the Montana Department of Agriculture and Saskatchewan's Minister of Agriculture. This proposed structure for input into the federal process was subsequently accepted by both federal governments.

Agricultural representatives of 44 states and provinces from the NAFTA countries also took the opportunity to develop common positions for the WTO negotiations and detailed these in letters to the three federal governments. Among the recommendations was a call to all three governments to focus on eliminating export subsidies and work toward progressive reduction of trade and production distorting domestic subsidies worldwide. A more complete report on the ACCORD meeting is provided in Appendix 3.

On November 15, 1999, the States of Minnesota, North and South Dakota along with Manitoba and Saskatchewan sponsored the Northern Plains Producer Conference in Fargo, North Dakota. More than 200 farmers and ranchers from these jurisdictions engaged in discussions on trade and policy issues, similar to the dialogue followed at the Montana/Alberta Agricultural Opportunities Conference. The issues identified by producers included the need to

harmonize Canada/U.S. regulations pertaining to pesticide registration and use, the need to explore joint cross border marketing mechanisms and joint efforts to educate consumers on the benefits and safety of genetically modified foods. Recommendations arising from this conference have been forwarded to both federal governments, and a second meeting has been scheduled for late 2000. A more detailed discussion of this conference is provided in Appendix 4.

On January 19, 2000, the State Legislature of Idaho teamed up with the Pacific NorthWest Economic Region organization and the Canadian Consul General's Office in Seattle to host the Idaho/Canada Agricultural Summit, in Boise, Idaho. More than 100 producers, legislators, businesses and government officials engaged in a discussion of agricultural trade issues with particular emphasis on cattle/beef and potatoes. Recommendations arising from this conference are being channeled through to the Consultative Committee on Agriculture. A more detailed report of this meeting can be found in Appendix 5.

In preparation for the July, 2000 ACCORD meeting, the PSAG expects to meet in Washington D.C. on March 2, 2000. It is anticipated that PSAG will prioritize the many trade issues identified at producer conferences, agree on which priority areas provinces and states can work on (many of the issues identified are already on the work plan of the CCA and will simply require progress reports) and set specific time lines for completion. Meanwhile, both provinces and states have asked the CCA to include a number of additional items for discussion at the scheduled CCA meeting in February. These include an assessment of both nations anti-dumping legislation and use with respect to agricultural trade, and a review of the activities of the NAFTA Working Group on Subsidies. The purpose is to find an effective NAFTA strategy to discourage third countries from selling export subsidized product within the NAFTA territory.

ASSESSMENT

The many efforts of sub-national jurisdictions to facilitate increased communication and dialogue among producers and agri-businesses on cross border trade issues over the past year have been acknowledged as being useful in promoting better understanding of the bilateral agricultural dynamic (Peck,

2000). This view is being communicated by producer groups to both state and provincial governments. Nevertheless, there continue to be misconceptions in particular areas of trade and policy including, but not limited to, grains and potatoes. Political attention at the highest levels to a better management process for a growing trilateral relationship in agriculture has galvanized national and sub-national bureaucracies to dedicate resources to this effort.

Market upturns in cattle and beef coupled with Canadian imports of more than 140,000 head of feeder cattle under the Restricted Feeder Cattle Entry Program so far this season have greatly reduced the temperature in cross border trade tension in this commodity. New and mutually profitable business relationships between Canadian feedlots and U.S. cattle producers have been key factors. This is despite the complications and strained relationships precipitated by the U.S. anti-dumping and countervail investigations on Canadian cattle and potentially troublesome issues such as proposed country of origin labelling requirements.

The various producer conferences and exchanges at the political and officials levels, initiated at the sub-national level, have been invaluable in promoting candid discussions, issue identification and prioritization, but it is too early to assess the effects of actions taken. Federal agencies responsible for plant and animal health regulations, and trade policy issues in general, must not only be cooperating more fully but must be seen to be cooperating by interested stakeholders on both sides of the border. This emphasizes the need for a greater level of information dissemination.

The various mechanisms that have been set up to address Canada/U.S. trade issues and their roles need to be communicated more effectively to producer groups and agri-businesses on both sides of the border. In addition, the number and significance of trade irritants that have been successfully resolved through the CCA process need to be publicized more effectively. In particular, changes to Canadian import regulations for slaughter swine, expansion of the Restricted Feeder Cattle Entry Program, transhipment of U.S. grains through Canada and closer cooperation in pesticide review (and joint registration) are all accomplishments that would not have been possible even a year ago.

The dialogue that has begun has created an increased level of expectation by producer groups for faster delivery of results. National and sub-national jurisdictions will be under increasing pressure to continue the momentum and pace of resolving remaining trade irritants, particularly in this election year in the United States. It is acknowledged that some groups in both countries will be reluctant to avail themselves of the mechanisms created for informal dispute resolution but will continue to rely on seeking redress through the use of contingency protection legislation.

THE ROAD AHEAD

National jurisdictions in both countries will need to sustain the spirit of "inclusion" displayed so far in encouraging sub-national jurisdictions to play a greater role in management of the bilateral agricultural trading relationship. This is particularly relevant in the case of U.S. states which do not have the joint constitutional responsibility for agriculture as in Canada. The spirit of cooperation and the level of transparency pursued so far in national/sub-national relations in matters of agricultural trade will need constant attention.[2]

The failure in Seattle to launch a broad, comprehensive round of World Trade negotiations and the uncertainty surrounding new agricultural negotiations will put pressure on both countries to address the "tough" issues left over from the FTA. These include access issues related to dairy, poultry and eggs for Canada, and sugar, peanuts, cotton and dairy for the United States. Obviously, "state trading", grain marketing, differences in domestic agricultural policies and programs, and the relevance of contingency protection legislation will also be featured. The CCA and PSAG processes may lend themselves to an expansion of the bilateral agenda to include discussion and potential negotiation of a comprehensive free trade agreement in agriculture.

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[2]Editors Note: On March 24, 2000 the North Dakota Wheat Commission announced that it is proceeding with legal action against unfair Canadian trading practices in relation to wheat by the Canadian Wheat Board. See the Gray, Alston and Sumner paper for other U.S. actions against the CWB.

It seems reasonable to hypothesize that with tariff elimination for most products and efforts to harmonize plant and animal health standards and regulations, the pace of greater integration of both countries' agricultural sectors will accelerate. There will be increasing pressure to move toward full policy harmonization.

CONCLUDING COMMENTS

The summer of discontent (1998) in Northern Tier U.S. states raised the political profile of Canada/U.S. agricultural trade relations. In response, national and sub-national governments organized and facilitated bilateral producer meetings and set up various consultative mechanisms to deal with trade and policy issues on an ongoing basis. These efforts have contributed to a reduction in cross-border trade tensions, promoted healthy dialogue, and in some cases new business ventures, resolved some irritants and ensured an open border with no recent disruptions in trade.

Coordinated and sustained work is required to maintain this momentum and satisfy increasing expectations from both sides of the border. There is a recognition that the work begun under the FTA will need to be completed. Remaining "difficult" issues in bilateral agricultural trade will test the resilience and effectiveness of these institutional mechanisms. It is too early to assess whether these institutional mechanisms are sufficiently developed to deal with the most difficult issues.

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APPENDICES

APPENDIX 1

States-Provinces Initiatives (June, 1999 - March, 2000)

- Montana-Alberta Agricultural Opportunities Conference, June 1-2, 1999, Great Falls, Montana.
- States/Provinces Agricultural ACCORD, July 15-17, 1999, Salt Lake City, Utah.
- Northern Plains Producer Conference, November 15-17, 1999, Fargo, North Dakota.
- Idaho-Canada Agriculture Summit, January 19-20, 2000, Boise, Idaho.
- Canada-U.S. Consultative Committee on Agriculture meeting, and Grains Consultations, February 1, 2000.
- Provinces/States Advisory Committee meeting, March 2, 2000, Washington, D.C.
- National Association of States Departments of Agriculture's Mid-year Conference, March 2-6, 2000, Washington D.C.

APPENDIX 2

Montana-Alberta Agricultural Opportunities Conference
(Great Falls, Montana, June 1-2, 1999)

Objectives:

- to foster greater communication and build personal relationships among producers on both sides of the border;
- to, jointly, explore cross border and global business opportunities;
- to discuss outstanding trade irritants and suggest policy changes to both levels of government; and
- to dispel trade myths and foster a better understanding of the bilateral agricultural dynamic.

Issues Identified and Discussed

- ***Cattle***

- harmonization of grading, inspection, production inputs, health protocols, and financial services;
- need for unlimited access to U.S. feeder cattle year round;
- country-of-origin labelling on meats;
- lack of harmonization on pesticide and veterinary drug usage;
- harmonization of regulations to facilitate grading equivalency; and
- reciprocity of grading/meat inspection.

- ***Grain:***

- access to cross border infrastructure;
- grading standards;
- the Canadian Wheat Board;
- exchange rate issues; and
- European Union subsidies.

- ***Finance:***

- lack of education and information on mechanics of finance and hedging, federal/state/provincial programs and subsidization, marketing, transportation; and
- jurisdictional and regulatory obstacles preventing banks from participating in cross border business.

- ***Other Crops:***

- non-uniform transportation requirements and grading standards between Canada and the United States; and
- standardized labelling and pricing standards for crop protection chemicals used in the United States and Canada.

- ***Other Livestock:***

- need for auditing procedures for WTO member countries committed to reducing internal support systems over time;

- trade restrictions and technical barriers regarding animal health regulations (CFIA, APHIS, State), food safety issues, veterinary drug use (FDA, Health Canada) and delays of trade remedies regarding these problems; and
- recognition and removal of trade distorting programs.

Results/Resolutions:

- agreement to continue to develop informal mechanisms to address trade irritants;
- agreement to provide feedback on suggested changes to animal health regulations to respective national governments;
- agreement to pursue joint agri-industry development opportunities;
- agreement to encourage national governments to pursue regional approaches to animal and plant diseases;
- agreement to expand the North West Cattle Project (NWCP, renamed the Canadian Restricted Feeder Cattle Import Program), and extend similar projects in other sectors;
- agreement to work toward harmonization in respective potato sectors;
- agreement to explore opportunities for enhanced inter-modal transportation;
- agreement to regularize conferences and include other western provinces and states;
- establish cross-border working groups to develop plans of action; and
- conference organizers will prepare a detailed final report for public release on both sides of the border.

A future conference will be held in Alberta where action plans will be presented.

APPENDIX 3

States/Provinces Agricultural ACCORD
(July 15-17, Salt Lake City, Utah)

Objectives:

- to use the States/Provinces agricultural ACCORD to reduce impediments to the free flow of agricultural products, and resolve trade disputes by reasoned input of states and provinces;
- to develop unified positions on issues important to agriculture through North America;
- to provide federal officials with provincial/state/regional perspectives and proposals; and
- to support increased trade of food and agricultural products among the United States, Canada and Mexico.

Issues Identified and Discussed:

- fruit fly control and eradication;
- trade in beef products;
- spread of medfly into Mexico;
- U.S./Canada dispute settlement process;
- U.S./Canada crop and livestock harmonization;
- biotechnology; and
- harmonizing North American Inspection rules.

Results/Resolutions:

- agreed on common objectives covering a number of important issues which will arise during the Seattle Ministerial for the next WTO round;

- organized (by country pairs) three trade issues and irritants working groups;
- urged federal officials to support an intensified effort to control Mediterranean fruit fly in the state of Chiapas and to support the role of state-level resources in fruit fly control programs;
- continued ongoing working group efforts in areas such as red meat trade, crop and livestock harmonization (the United States and Canada), and fruit pre-clearance programs would be continued under the new bilateral working group structure; and
- recognized the need for increased education and information with respect to biotechnology.

APPENDIX 4

Northern Plains Producer Conference
(November 15-17, 1999, Fargo, North Dakota)

Objectives:

- a meeting of producers from Manitoba, Saskatchewan, North Dakota, South Dakota and Minnesota to discuss cross-border trade and policy issues and opportunities, develop a mutual understanding of the Canadian and U.S. agriculture industries, establish a regional producer network to formulate solutions to issues, problems and concerns, and to dispel agricultural trade misconceptions.

Issues/Resolutions:

Cattle:

- need to harmonize health regulations and food safety protocols;
- need to harmonize transportation regulations;
- eliminate all subsidies through WTO;
- increase joint trade in U.S. and Canada products with rest of the world;
- equalize input costs between provinces, states and nations; and
- improve access to and exchange of genetic material.

Dairy:

- create a communications strategy based on facts, statistics, and trends that achieves “sharing of markets versus stealing of markets”; and
- identify various communication vehicles (e.g. Ag Extension Service).

Grains:

- end export subsidies and dumping that lower prices;
- harmonize chemical use between Canada and the United States;
- create grower owned/controlled Canadian/U.S. market alliances ;
- investigate feasibility of a cross border durum and barley cartel;
- reduce the influence of currency fluctuations in U.S./Canada trade; and
- facilitate common competitive transportation systems.

Oilseeds:

- achieve GMO (and non-GMO) access to other countries;
- develop new products for all commodities through research and development;

- facilitate tariff reduction/access to markets (eg. China and the WTO);
- harmonize regulatory conditions (eg. hemp, NAFTA labelling); and
- encourage promotion and market development activities.

Other Crops:

- standardize crop input availability and price;
- cooperate to promote and market GMO, non-GMO products, agricultural-based fuels; and
- facilitate formation of joint value-added ventures.

Other Livestock:

- encourage cross-border processing ownership to support New Generation Co-op's;
- facilitate movement of breeding stock for genetic enhancement subject to maintenance of health standards; and
- provide public support for producer initiatives to develop international marketing.

Pork:

- regionalize health protocols;
- facilitate matching slaughter plant capacity/shackle space expansion with producers' needs;
- encourage value-added by further processing; and
- reduce incidence of state/federal government trade sanctions which impact producers.

Poultry:

- producer profitability/margins must be improved;
- encourage added value at producer level;
- develop poultry trade positions regarding humane and environmental concerns; and
- establish niche markets for chickens related to religious (kosher) and size (Cornish game hens) segmentation.

APPENDIX 5

Idaho-Canada Agriculture Summit
(January 19-20, 2000, Boise, Idaho)

Objectives:

- to engage in a dialogue on Canada/U. S. agricultural issues with particular reference to trade in cattle and potatoes.

Issues:

- the need to work together on agricultural issues;
- U.S. opposition to ministerial exemptions for potatoes and Canadian opposition to U.S. marketing orders for potatoes;
- year round access for U.S. feeder cattle to Canada without testing;
- U.S. claims of subsidies for potato production in Canada;
- support for animal health re-certification requirements by CFIA and USDA;
- an overview of free trade and globalization impact on U.S. industry and jobs;

- the need for greater regional cooperation and trust;
- the need to include business communities, lawyers, accountants and the investment community in bilateral discussions; and
- use of European Union agriculture subsidies/impact on North American trade.

Results/Resolutions:

Cattle:

- each federal government needs to review and reconcile production and trade statistics in cattle and beef;
- states and provinces involved in the Restricted Feeder Cattle Entry Program need to develop more rigorous statistics;
- the Restricted Feeder Cattle Entry Program should be expanded for year round access;
- cattle producers need to visit and learn more about each others' systems; and
- federal endorsement requirements on cattle trade should be replaced by state and provincial certification.

Potatoes:

- Canadian ministerial exemptions and Marketing orders in the United States remain a problem in bilateral trade, despite the Ad Hoc Potato Committee's recommendation to keep the status quo;
- both federal governments must move quickly to harmonize seed certification requirements or seek recognition of equivalency; and
- a bilateral working group consisting of industry and legislators will be formed to identify and prioritize other issues, and to implement the recommendations above.

Montana Grain Growers Association

Herb Karst

In my earlier paper many of the economic and social differences in grain trading between the United States and Canada were outlined. In a 1992 study of variable costs of production between Toole County, Montana and Warner County, Alberta it was determined that most production expenses are equivalent cross border. Taxation policies tended to slightly alter that balance. But agricultural trade across the border is far from free. As major currency shifts occur, the relative value of grain can make marketing on one side or the other more attractive. But while some grains and farm inputs tend to trade freely, others are almost completely closed to cross border trade. I will take a quick look at various commodities and how they either are or are not possible to trade cross border.

Inputs

The major expenses in producing grain are machinery, fertilizer, fuel, herbicides, insurance, and the freight costs of reaching our customers. As for machinery trade, when the Canadian dollar plunged in value in 1998, new and used machinery on Canadian lots became a bargain to U.S. farmers. From values of near 75 U.S. cents, the Canadian dollar declined to under 65 U.S. cents in less than a year. While this machinery can be purchased by a U.S. farmer, by late 1998 U.S. customs was limiting the ability of Canadian retailers to provide warranty service across the border. In spite of this limitation, though, cross border sales to U.S. farmers continues.

Fertilizer is also traded quite freely across the border. In point of fact, for much of the northern plains, Canada remains the source for nitrogen fertilizer while much of their phosphorus is imported from the state of Idaho. This trade has been historic and seems to cause few trade concerns. Similarly, fuel trades quite freely across the Canada/U.S. border. Once again currency fluctuations can drive some of this trade but there remains few impediments to cross border arbitrage.

The trade in farm chemicals is much more contentious. Until a recent push for a more cooperative approach, the availability of farm chemicals was often vastly different on either side of the 49th parallel. Registrations for some chemicals of identical chemistry for wheat, barley, and canola in the United States lagged years behind their release in Canada. As U.S. producers were denied the newer, cheaper and more effective products, they chafed as grain raised with the benefit of those herbicides and insecticides was imported past their fields. Alternative technology, such as herbicide resistant varieties were likewise slow to be licensed by the EPA. Recently a push in part fueled by the 1998 border protests led to a pledge of great cooperation between the licensing agencies of the United States and Canada. The December 1998 Memorandum of Understanding recognized that pesticide harmonization was a worthy goal. What is disconcerting, though, is that nearly every chemical used by border states grower is less expensive in Canada than in the United States. Manufacturers cite high U.S. registration costs as one explanation but in reality they concede that higher price supports in the U.S. give them more room to price at levels that might create resistance in Canada. Grain prices are capitalized into more than land values it seems. Smuggling of chemicals of legal chemistry but not necessarily of legal formulation has led to two major arrests of farmers in Montana. The border limitation is simple. If the container contains an EPA registration number it may be legally imported; if it does not, regardless of identical chemistry and formulation, it is forbidden entry.

Freight costs associated with grain movements also vary greatly by nationality. In spite of the repeal of the Crow Rate subsidy, freight costs associated with grain movement from Alberta remain about half of the similar movement from Montana to port position. In response to the much higher freight tariffs imposed by BNSF, one company recently built a rail spur connecting a Montana elevator with the Canadian Pacific railway. In that town grain prices jumped 20 cents per bushel even as the company charges a higher handling fee due to its investment and the greater difficulty in loading Canadian freight cars.

Crop insurance is likewise considerably cheaper cross border, at least in a recent comparison between Montana and Alberta producers adjacent to the border. While hail insurance rates were $3-$5 per hundred dollars of coverage in Canada, the farmers immediately across the fence were paying $10-$15 per

hundred for the same coverage. While no explanation of the relative rating systems was obtained, it does point out how vastly different costs of production can be depending on national origin. Truck freight costs also vary widely from country to country as does it from province to province and state to state. What has caused some cross border tensions, however, has been the exemptions which allow Canadian trucks to use designated portions of U.S. highways at weights far above those allowed U.S. carriers.

Grain

While the full implementation of our trade agreement has left virtually no tariffs on grain imports, not all grain can be traded freely. Feed barley and malting barley can flow freely into the United States as can milling wheat. An end-use certificate tracks quantities of these grains to assure they do not qualify for our export credit or food for peace programs. U.S. feed barley and corn likewise trade quite freely into Canada but a destination has to be declared before entry. Importing milling wheat and malting barley, however, create more problems in the Canadian system. Since these imported grains have to be kept physically separate from Canadian grain which may be bound for export, there is little marketing opportunity for these commodities except for direct shipment to malt plant or flour mill. Until such time as the Canadian system has a cash pricing system to closer tie CWB projected pool returns to cash prices, the Canadian system will remain largely opaque and untested.

Conclusion

The removal of tariffs and import quotas has not led to a complete integration of the U.S. and Canadian grain producing and marketing systems. It is imperative that emphasis be placed on creating more harmony. Additional cents per bushel translate into dollars per acre. These inequities have in part fueled many of the recent protests. Likewise reciprocal sales opportunities are a necessary part of price arbitrage. Trade in canola and hay have been quite harmonious since there are few restrictions on movements. Only when we achieve a perception of fairness in production and sales can we expect border protests to quiet.

TRADE LIBERALIZATION UNDER NAFTA: WHERE FROM HERE?

Karl D. Meilke and Karen Huff

INTRODUCTION

The theme for this workshop is *Trade Liberalization Under NAFTA: A Report Card on Agriculture.* This paper strays from the narrow focus of the NAFTA trading relationship and focuses initially on the general environment for trade liberalization. The multilateral environment is the "canvass" against which the NAFTA and other regional trading relationships will evolve. It is worth noting that a decade following the signing of the Canada-United States Free Trade Agreement, approximately $Can.1 billion per day of goods and services are exported from Canada to the United States. Two-way trade in agri-food products between Canada and the United States totals about $Can. 2 billion per month. Most of this trade takes place in a frictionless and duty free environment. However, the existence of this workshop suggests that there are still trade irritants, and that these troublesome issues often involve agri-food products.

If you take a long view of trade liberalization, it is apparent that the global trading system is in an extremely interesting transition period. Following the Great Depression and after World War II, industrial tariffs averaged about 40 percent; now they average about 4 percent. In some sense, the work started in the 1940s to lower tariffs on industrial goods is nearly complete.

While it is not entirely correct to say agri-food was excluded from the trade liberalization process, until the Uruguay Round of trade negotiations (completed in 1994) not much of substance was accomplished until then.

The agricultural trade situation is now at the point where industrial goods trade was 50 years ago - just starting the process towards trade liberalization. However, since agri-food trade can also be considered "trade in goods" most of the lessons that were learned from liberalizing trade in industrial products continue to hold.

AGRI-FOOD TRADE FOLLOWING THE URUGUAY ROUND

Most economists would agree that considerable progress was made towards liberalizing trade in agri-food products during the Uruguay Round of trade negotiations. The operative word in this sentence is "towards" since the degree of actual liberalization was likely modest. A comparison of the producer support estimates from the start of the Uruguay Round (1986-88) and the preliminary figures for 1998 illustrate this point (OECD, 1999)[1]. In nominal dollars, the producer support estimate for the OECD countries has increased from $US 246.6 billion in 1986-88 to $US 273.6 billion in 1998 (Table 1). However, in inflation adjusted terms support has declined by 18.1 percent. Changes in support levels since 1986-88 vary widely across countries. The largest percentage increase in support has been in Mexico, where transfers have increased from $US 1.7 billion to $US 4.6 billion (170 percent). Canada has reduced its support significantly (-42.8 percent) while the European Union (EU) has increased its support by 30.3 percent and the United States by 13.5 percent.

Another way to judge protection in the agri-food sector is to look at tariffs. Wainio, Gibson and Whitley (1999) have recently provided some information on agri-food tariff structures for the Quint Countries (Australia, Canada, EU, Japan and the United States). The most striking feature of their analysis is

[1] The OECD has recently changed their terminology from producer subsidy equivalent to producer support estimate. These figures exclude about $US 60-65 billion in general services support (research, infrastructure, marketing and promotion, etc.) provided to the agricultural sector.

Table 1: Producer Support Estimate by Country ($US billion).

Countries	*1986-'88*	*1998[p]*	*Percent change*
Australia	0.9	1.2	33.3
Canada	5.6	3.2	-42.8
European Union	99.6	129.8	+30.3
Japan	52.1	49.0	-6.0
Korea	12.2	12.8	+4.9
Mexico	1.7	4.6	+170.6
New Zealand	0.5	0.0	-100.0
United States	41.4	47.0	+13.5
OECD-24(nominal)	220.6	251.1	+13.8
OECD-24 (real)[a]	298.7	251.1	-15.9
OECD (nominal)	246.6	273.6	+10.9
OECD (real)[a]	334.1	273.6	-18.1

Source: OECD, 1999.

[a] Constant 1998 dollars using the United States GDP deflator.

[p] Preliminary figures.

that average ad valorem tariffs are quite low, ranging from 3.8 percent in Australia to 9.5 percent in Japan. However, as the authors point out, many agri-food products are protected by specific tariffs, or some combination of ad valorem and specific tariffs. They use Canada to illustrate the effect of excluding specific tariffs from the average tariff rate calculations. Canada's average tariff rate, including only ad valorem tariffs (762 tariff lines) is 4.8 percent, but it jumps to 25.3 percent (917 tariff lines) when the ad valorem equivalent of specific tariffs is included. Some over-quota tariffs in the agri-food sector are truly staggering as illustrated by the tariffs for dairy products, that range from a low of 61 percent for cheese in the United States, to a high of 595 percent for butter in Japan (Table 2).

WHAT HAPPENED IN SEATTLE?

The Third WTO Ministerial Meeting in Seattle was meant to kick-off the next round of multilateral trade negotiations. However, the meetings were adjourned with no agreement having been reached. The reasons for the collapse were many and varied but had little to do with the protesters who filled the streets of Seattle and dominated the evening news broadcasts. The cover of *The Economist* magazine captured the true significance of the Seattle meetings

Table 2: Over-Quota Tariffs for Dairy Products in Selected Countries

Country	*Butter*	*Cheese*	*Milk Powder*
Canada	351%	237 %	289%
EU15	134%	93 %	89.4%
Japan	595%	—	398%
USA	84.2%	61%	40.4%

Source: WTO

best[2]. Under the heading "The Real Losers in Seattle" was the picture of a poor child in a developing country. Some would have included a picture of a North American grain farmer in the background.

Selling freer trade is always a difficult task. Trading relationships are complex and highly controversial. The push towards trade liberalization in agri-food, services, investment, and intellectual property are still in the beginning stages[3]. It is not unusual to see moves towards freer trade interrupted by periods of no progress, or even backsliding. Hence, the failure of Trade Ministers to launch a new round in Seattle is not particularly unusual or surprising. In fact, for economists with memories of the Uruguay Round of trade negotiations, it is reassuring that agri-food trade was not the issue that caused the negotiations to be suspended. However, disagreements about the extent and pace of liberalization in agri-food remain deep-seated between the European Union and Japan on the one side, and the major agri-food exporters, including some developing country exporters on the other side.

What did cause the negotiating collapse, and what does it mean for North America? The failure to reach an agreement was caused by the lack of political will and leadership - primarily by the United States and the EU - to forge the compromises necessary to launch a new Round. There was no re-

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[2] *The Economist*, December 11, 1999. *The Economist* carried an excellent series of articles dealing with globalization and the WTO negotiations in the November 27, December 4, and December 11, 1999 issues.

[3] Negotiations on a Multilateral Agreement on Investment were held by the OECD, however, when an agreement could not be reached some WTO member countries were hoping to revive these negotiations in the WTO.

spected world leader willing to make the strong case for freer trade[4], and for example, to point out:

- the benefits of specialization, and the gains from trade;
- the benefits of liberalized trade in restraining imperfect competition;
- the benefits of liberalized trade for all countries, rich and poor;
- the benefits of liberalized trade for the environment;
- the benefits of a transparent, rules based and nondiscriminatory trading regime; and
- the institutional reforms that would result in the WTO being better able to fulfill its mandate.

Negotiations on agri-food and services, as a result of the Uruguay Round Agreement, are mandated to begin in 2000. However, with no decision on the scope of the next round of negotiations and no deadline, it will be difficult to make progress. Realistically, it seems unlikely a new round will be kicked-off prior to the Fourth Ministerial Conference scheduled for late 2001. Having said this, the agri-food trade issues seem much clearer than they did at the start of the last round. So far, no one has suggested moving away from the negotiating agenda or "modalities" established during the Uruguay Round. At least with respect to the old agenda of agri-food trade, the question is one of "how-far and how-fast." In the next section, the old agenda of agri-food trade liberalization is discussed and the key issues are highlighted. Following this, the views of developing countries are presented, and the intersection of their concerns with the new trade policy agenda is outlined.

THE AGENDA FOR AGRI-FOOD TRADE LIBERALIZATION

The negotiating modalities that were put in place during the Uruguay Round were designed to facilitate the future liberalization of agri-food trade in the areas of export subsidies, market access, and domestic support through the Agreement on Agriculture; and some forms of non-tariff barriers to trade through

[4] A number of political events resulted in negotiators from the European Union and the United States, as well as WTO officials, being ill prepared to launch a new Round in December: a lame duck President in the United States and an election campaign well underway; a new European Commission as a result of scandals in Europe; and a protracted debate in the WTO about naming a new Director General.

the Agreements on Sanitary and Phytosanitary Regulations[5] and Technical Barriers to Trade[6].

Export Subsidies

Constraints on both the volume and quantity of agricultural products that qualify for export subsidies were established during the Uruguay Round. In the next round, export subsidies on agricultural products will be totally eliminated or sharply curtailed. The major debate will hinge on the question of "elimination" versus "reduction" of export subsidies, as well as various methods for circumventing the export subsidy disciplines using export credits, food aid and gray area measures.

Market Access

All non-tariff barriers to trade were converted to bound tariffs during the Uruguay Round[7]. The policy instrument used to accomplish this feat, was the tariff rate quota[8]. Tariff rate quotas, which are two-tier tariffs, have many of the same characteristics as import quotas, and in some respects increase rent seeking by import quota holders (Moschini 1991, Meilke and Larivière 1999).

The next round will have to deal with the intertwined issues of: 1) reductions of with-in quota tariff rates, 2) expansion in minimum access quantities, and 3) reductions in over-quota tariffs. Analyzing tariff rate quota regimes is a difficult modeling task, and the economic effects can vary greatly depending on the policy instrument that is changed (Larivière and Meilke 1999). In addition, the administration of tariff rate quotas and preferential access

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[5] Trade in genetically enhanced organisms (biotechnology) was not an issue during the Uruguay Round of negotiations, but trade in these products is subject to the rules contained in the Agreement on Sanitary and Phytosanitary Regulations.

[6] For the history of agricultural negotiations under the GATT/WTO the reader is referred to Josling, Tangermann and Warley. The future negotiating agenda is discussed in Josling, and in the guide prepared by the Canadian Agri-Food Trade Research Network (Gervais et. al 1999).

[7] Bound tariffs cannot be increased without the importing country paying compensation to the exporting nations. Countries often "apply" tariffs lower than their bound rates.

[8] Tariff rate quotas were justified as a way to insure that minimum access opportunities were not reduced when tariffs replaced import quotas.

schemes will be given considerable scrutiny. For example, the size of Canada's over-quota tariffs on dairy products are prohibitive, but perhaps no more protectionist than the practice of allocating country specific import quota to countries that do not have the ability to fill the quota (i.e. the United States ice cream quota allocated to Jamaica that goes repeatedly unfilled). How to tackle tariff mountains will be high on the negotiating agenda as will tariff escalation. There will also be attempts to adopt zero-for-zero schemes for certain commodity sectors (Meilke and Swidinsky 1998)[9].

Domestic Support

The constraints on domestic support, that apply at the sector level, have seldom been binding or constraining. The creation of the amber, blue and green boxes for domestic support has had the effect of encouraging countries to move protection from the most trade distorting forms, i.e. open-ended market price supports coupled with border measures, towards less trade distorting forms of support. This influence is illustrated in Table 3 where the OECD-24 producer support estimate is decomposed, according to the type of support. In 1986-88, almost 90 percent of the support and protection provided to producers came in the form of market price supports, or payments based on output or area planted. By 1998, the fraction of support coming from these most trade distorting domestic policies had dropped modestly to 83.7 percent. The fastest growing category of support is payments based on historical entitlements.

As a result of the incentives built into the Uruguay Round Agreement, the domestic debate on trade liberalization, at least in countries with lower levels of support, is likely to focus as much on "equity" concerns as it is on "trade distortions." The argument will be that any money given to farmers makes them more competitive and is thus trade distorting. On one level, this is a spurious argument, because direct payments, especially when they are tied to fixed assets, e.g. land, will be quickly capitalized into asset values. These payments then make producers in that country less competitive and more " at risk" from the removal of support. However, there is a "wealth" effect that encourages production and makes the removal of protection extremely difficult. In

[9] The term zero-for-zero is used to indicate a commodity which receives no export subsidies and is not protected by border measures. Commodities suggested for zero-for-zero include oilseeds and products, pork, and malting barley.

Table 3: OECD-24 Producer Support Estimate, by Type of Support ($US billion).

Type of Support	*1986-88*	*1998*[p]	*percent change*
Total	220.6	251.1	13.8
Market Price Support	169.8	167.2	-1.5
Payments based on:			
- output	12.7	9.2	-27.6
- area planted	15.3	33.9	121.6
- historical entitlements	0.2	9.8	4,900.0
- input use	17.0	19.9	17.0
- input constraints	3.0	7.2	140.0
- whole farm income	1.1	1.5	36.4
- miscellaneous	1.5	2.5	66.7

Source: OECD, 1999.

[p] = preliminary

addition, when payments that appear to be decoupled from production decisions are *de facto* provided in a counter cyclical fashion it becomes very difficult to argue that these payments are only minimally trade distorting. Low-cost and low-subsidy agri-food exporters are going to push for an elimination of blue box payments and tighter discipline on domestic support. Countries with high levels of support will push for a continuation of the green box and its expansion to take into account "multifunctionality".

Sanitary and Phytosanitary Regulations

The Agreements on Sanitary and Phytosanitary Regulations and Technical Barriers to Trade play an important role in regulating the trade in agri-food products. Trade in agri-food products produced using biotechnology was not an issue during the Uruguay Round of trade negotiations but today this issue is front page news. Canada and the United States insist that trade barriers can only be put in place when sound science supports their use. The European Union argues that the risks resulting from the use of products produced using biotechnology are unknown and therefore the precautionary principle should apply. The compromise forged in Seattle was to create a working group on biotechnology, but this agreement died with the postponement of the talks. However, the draft Cartagena Protocol on Biosafety adopted at the Extraordinary Conference of the Parties (EXCOP) to the Convention on Biological Di-

versity in Montreal, this January, contains a number of important provisions: 1) it allows countries to invoke the precautionary principle; 2) it calls for shipments of GMOs to carry a label saying “may contain GMOs”; and 3) it leaves the relationship between the Protocol and the WTO Agreements vague. The issues surrounding biotechnoloy are too complex to explore further in this short paper, but they are bound to be divisive when the trade talks resume (Phillips and Kerr 2000).

One of the lessons that came out of the Seattle meetings is that the views of developing countries can no longer be ignored nor can these countries be pressured into another agreement. These are considered in the next section.

DEVELOPING COUNTRY CONCERNS

Since the completion of the Uruguay Round of trade negotiations more than 30 new countries have joined the WTO. The current membership consists of 135 countries, most of them in the developing world. The developing countries are not homogeneous, ranging from agricultural exporters who are members of the Cairns Group to countries that are large net food importers.

Traditionally, the GATT/WTO has made decisions based on consensus. When the membership was smaller and more homogeneous this method of decision-making served the GATT/WTO well. However, with a larger and more heterogeneous membership it is unclear if “consensus” can continue to be the way all decisions are made. Even if consensus decision-making continues, a way will have to be found to give developing countries greater voice in the processes leading up to decision documents. Developing countries argue that during the Uruguay Round they took on additional obligations, particularly in the area of intellectual property, but they have not benefitted as much from trade liberalization as they were promised, particularly in clothing, textiles and agri-food trade where developed country markets remain heavily protected (Anderson 1999, Huff 2000). They also feel that new technologies are important to their economic progress and that the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) has erected barriers to acquiring this new knowledge.

Developing countries feel that as soon as they become competitive in developed country markets they are often subjected to anti-dumping actions. At best, fighting an anti-dumping action is expensive, and at worst it excludes developing country products from developed country markets. As a result, developing countries are asking developed countries to renew their commitments to live up to the Uruguay Round agreement, particularly for textiles and clothing, before they will commit to a new round of negotiations. In addition, they would like the developed world to extend tariff free access, for all goods, to the least developed countries.

The developing world fears that developed countries will use stringent environmental and labour regulations as thinly disguised protectionism. The developing world sees its large endowment of unskilled labour as its major comparative advantage in gaining access to developed country markets. Developing countries can not compete in the high-growth, high-technology markets dominated by the major developed countries. The developing world's comparative advantage lies in supplying goods that require, and can be produced with its abundant supply of unskilled labour.

In the past, developing countries have been offered "special and differential" treatment in the GATT/WTO. This allowed developing countries longer periods of time to phase-in trade liberalization measures and/or made them subject to less stringent rules. Perhaps it is time to rethink the way special and differential treatment is handled by giving developing countries early and preferential access to developed country markets[10]. The new agenda of trade liberalization, including biotechnology, environment, labour, investment policy and the restructuring of the WTO combine with the anti-trade stance of the Civil Society and some developing countries, to make agreement on a broad multilateral trade liberalization agreement difficult[11]. It is the options to multilateral

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[10] Developing countries currently benefit from numerous preferential trading arrangements, such as the generalized system of preferences. However, these schemes are normally designed to protect developed countries' most import sensitive sectors.

[11] The Civil Society is a term used to describe a large group of non-governmental organizations (NGO's) who champion causes from the environment and organized labour, to sustainable development. It is not uncommon for these groups to hold an anti-trade stance.

liberalization for North America that are considered in the remainder of this paper.

REGIONALISM AND MULTILATERALISM

While a way to begin a new round of trade negotiations will be found, the lag in starting the negotiations and the complexity of the agenda suggests that new disciplines on agri-food trade will not come into effect until late in this decade. In the mean time, countries will be looking for ways to advance their trading interests. These efforts, at least for the NAFTA countries, will proceed in one of four ways: 1) bilateral trade accords; 2) expansion of the NAFTA Agreement to a larger regional grouping, most likely through the Free Trade of the Americas Initiative; 3) the deepening of the NAFTA through the creation of a customs union; and 4) the creation of a monetary union. Before considering these options it is useful to review a few points.

Regional integration agreements are WTO legal if they include substantially all goods, create no new barriers to trade with non-members and all trade is free between the members of the agreement. However, regional integration agreements seldom comply completely with these criteria. Viner (1950) showed that a customs union can be either welfare enhancing or welfare reducing depending on the size of its trade creation and trade diversion effects. Since Viner's work, numerous studies have examined the conditions under which customs unions will be welfare enhancing, and when they will be welfare decreasing[12]. In general, as long as the volume of trade between member and non-member nations increases, countries outside the customs union benefit (i.e. little or no trade diversion). If in addition to no trade diversion with non-members, the volume of trade among member nations increases (trade creation), their welfare is enhanced. However, free trade agreements create distortions that do not exist in customs unions. With a free trade agreement each nation maintains its own external border protection. As a result, complex rules of origin are necessary to keep "foreign" products from entering the FTA through the country with the lowest external tariff. While rules of origin are difficult to

[12] For a guide to this literature see Krueger (1999) and dell'Aquilla, Sarker and Meilke (1999).

administer for all goods, they may be unenforceable for many raw agricultural products. Lax rules of origin should reduce the likelihood of trade diversion from non-members but also reduce trade creation with members.

The debate within the economics profession on the question of whether regional integration agreements are building-blocks or stumbling-blocks to multilateral trade liberalization has been heated. Krueger (1999) provides a summary of the arguments and they won't be repeated here. However, two facts are worthy of mention. First, world trade in manufactured goods and processed agri-food products has become more regionalized since the 1960's. In fact, the patterns of increasing regionalism for manufactured products and processed agri-food product trade are quite similar (Anderson and Norheim 1993, dell'Aquilla, Sarker and Meilke 1999). In both cases, increased regionalism is consistent with growing openness and multilateral interdependence. It is this effect that dominates the empirical studies surveyed by Robinson and Thierfelder (1998). They found that trade creation greatly exceeds trade diversion in virtually all of the regional integration agreements studied. The counter example is raw agricultural product trade. Like trade in processed agricultural products, trade in raw products has become more regionalized. However, in this case there is clear evidence of the impact of trade and domestic policies on regional trading patterns. For raw products, the pattern of regionalism is consistent with losses in welfare borne mainly by the European Union, and raw agricultural product exporters (dell'Aquilla, Sarker and Meilke 1998).

THE ROAD AHEAD

The failure to launch a new trade round in December 1999 represents a pause in the move towards more liberal trading relationships. However, the claimed "success" of the Civil Society in derailing the Multilateral Agreement on Investment and their presence in Seattle means the conduct of trade negotiations will never be quite the same. Countries do not engage in trade negotiations to enhance global welfare, they engage in trade negotiations to promote their own special interests. If, in the process world welfare increases, that is well and good, but self-interest is the driving force. Consequently, countries are always examining alternatives to multilateral freer trade, and this is even more the case when the multilateral process is stagnant or stalemated. Some of

these alternatives will be pursued in tandem with multilateral efforts. Each of these alternatives involves regional integration agreements, and each has different implications for agri-food trade for the NAFTA countries.

Bilateral Accords

Each of the NAFTA countries has bilateral trade agreements with non-NAFTA countries. In fact, for agri-food the NAFTA agreement is a set of bilateral accords rather than the trilateral agreement that governs trade in manufactured goods. As a consequence, agri-food trade between the United States and Mexico will be tariff free after the implementation period, but this will not be the case for Canada-United States, or Canada-Mexico trade (Meilke and van Duren 1996). Recently, Mexico negotiated a bilateral accord with the EU. As a result, Mexico will have preferential access to the two largest markets in the world, the United States and the European Union[13]. According to press releases, all industrial tariffs on Mexico-EU trade will fall to zero by 2007. However, for agri-food only 62 percent of trade will be fully liberalized. The Mexico-EU agreement illustrates the problem with bilateral accords; it is just too easy to take significant portions of agri-food trade off the table. In addition, given the sensitivities of agri-food trade within the NAFTA countries, additional bilateral accords are going to raise questions about the origin of agri-food products and about third countries using bilateral accords as a backdoor into the NAFTA relationship. Some of these problems could be avoided by the conversion of the NAFTA into a customs union.

North American Customs Union

The movement from a free trade area to a customs union is a logical next step in the deepening of the North American accord[14]. In many respects, the creation of a customs union with the three current members of NAFTA is a more logical step than the expansion of the free trade area. Data on the degree

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[13] An argument could be made that Mexico is now the “hub” in a hub-and-spoke model of trade (Wonnacott 1991).

[14] A customs union is a regional integration agreement where member countries have common external tariffs (Markusen, et. al 1995). A deeper form of integration involves the creation of common institutions and policies, as in the European Union. For this discussion, the weaker form of integration, involving only common external tariffs is assumed.

of divergence of MFN tariffs among Canada, Mexico and the United States, at the individual product level, is required to determine the size of the adjustments a customs union would require. If external tariffs were lowered to the level applied by the member country with the lowest MFN tariff there would be no concern about trade diversion.

A major sticking point is likely to be Canada's tariff rate quotas for supply managed products. The price gap between Canada and the United States for milk remains significant, although for chicken it is much smaller than in the mid-1980s. Meilke, Sarker and Le Roy (1998) argue that North American free trade in dairy products would involve a significant loss in milk production quota value in Canada, but that trade in dairy products between Canada and the United States would be small. It will be interesting to see how much milk is produced outside of Ontario's domestic milk quota under the recently announced export regime (Core 2000). If the quantities are significant it will provide additional evidence that Ontario milk producers can compete within an open North American market. The full integration of North American agri-food trade seems inevitable, but whether it will precede or lag multilateral liberalization is difficult to predict.

Expansion of the NAFTA

The negotiations to create a 34 country Free Trade Area of the Americas[15] (FTAA) were initiated in April 1998. The 34 countries include: tiny island nations like St. Kitts; the poorest-of-the-poor such as Haiti with a GDP of less than $500/person; major agri-food exporters like Argentina and Brazil; and an industrial giant, the United States with a GDP of about $31,000/person. Creation of the FTAA involving nearly 800 million people is a huge undertaking with a stated completion date of 2005. The negotiating agenda for the FTAA is essentially the multilateral agenda with all of the problems and advantages that brings. Negotiations on agri-food will be more difficult than among the three NAFTA countries. Argentina and Brazil are unlikely to accept domestic agricultural subsidies in Canada and the United States that are several times larger than theirs. In addition, they are unlikely to agree to poor FTAA member coun-

[15] For a discussion of the potential for the formation of the FTAA, see Burfisher (2000) and Furtan (2000).

tries accepting agri-food export subsidies from the European Union, or from other nations within the FTAA. Given the complexity of the issues to be resolved it is difficult to see the FTAA negotiations being completed prior to the next round of multilateral negotiations unless there is a complete breakdown of the multilateral process.

Monetary Union

There has been some discussion in Canada of the formation of a monetary union with the United States. It has taken the European Union more than 30 years to progress from a customs union to a monetary union and it is unlikely that moves towards a monetary union in North America will proceed much quicker. Partly it is a symbolic issue, with nationalists arguing a monetary union is yet another example of their country giving up a sovereign right.

However, in economic terms, flexible exchange rates create a shock absorber that would not exist with a fixed exchange rate regime. Some argue that the existence of a flexible exchange rate between Canada and the United States has allowed Canada to become increasingly unproductive, postponing the inevitable economic corrections that must take place. Others argue that flexible exchange rates give the government one more policy lever that it can use to keep Canada out of a deep and long lasting recession. There is some truth in both arguments. The long secular decline in the Canada/United States exchange rate from 99 cents Canadian to the U.S. dollar in 1974, to $1.48 Canadian to the U.S. dollar in 1999 is a sign of reduced productivity in Canada relative to the United States. However, the nearly 15 percent devaluation of the Canadian dollar between October 1997 and October 1998, and its revaluation by eight percent since then was more easily accommodated in a flexible exchange rate regime.

CONCLUSIONS

Little is certain about the future direction of trade liberalization in the agri-food sector. The multilateral negotiations on agriculture will be handled by the WTO Committee on Agriculture, with the first session scheduled for March 23-24, 2000. Technical work is required to define the scope and the mandate for the agricultural negotiations. However, some member countries

have already announced they will not attend the sessions. The developing countries remain skeptical of the process and the civil society is antagonistic. On the plus side many developing countries share the NAFTA countries desire for more open agri-food markets.

If the multilateral negotiations fail to make progress then the NAFTA countries will explore other alternatives. The most dangerous route would be for the NAFTA countries to enter into a series of bilateral accords. These could undermine the multilateral trading system and possibly NAFTA itself. Conversion of the NAFTA into a customs union seems a logical next step, but the special trade arrangements for Canada's supply managed commodities are a stumbling block.

Negotiating the FTAA presents many of the same issues as negotiating at the multilateral level, with the exception that the European Union is not involved. For this reason, finding compromises within the FTAA countries will be easier than at the multilateral level, but the huge differences in agricultural support within the FTAA will be a problem. Unfortunately, most of the problems confronting agri-food trade can not be solved within a Western Hemisphere free trade area that is dominated by the interests of agri-food exporters. What is needed, is a strong multilateral effort in agriculture that pays more than lip service to achieving meaningful reductions in tariffs and a clear path towards the elimination of harmful subsidization practices.

Achieving agri-food trade liberalization has always been difficult. On that score nothing has changed. The current situation of extremely depressed prices for many agricultural products heightens the urgency for trade liberalization, while at the same time making it more difficult. At best, the failure to launch a new round in Seattle only postponed the benefits of more open markets. In the short run, however, there is a danger that countries wishing to assist their economically depressed farmers will resort to unacceptable domestic support programs, increased use of contingent protection and antidumping actions, as well as backsliding in their current reduction commitments. The traditional problem of selling freer trade in agri-food products domestically, plus the emergence of other flash points like biotechnology, investment policy and intellectual property rights, provide the opportunity for groups like the Policy Disputes

Information Consortium to highlight the benefits of further market liberalization through the provision and exchange of research and information.

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LOOKING TO THE FUTURE: CONFLICT AVOIDANCE AND RESOLUTION IN NAFTA'S AGRICULTURAL TRADE

Linda M. Young

INTRODUCTION

The increase in agricultural trade between the United States, Canada, and Mexico has been accompanied by tension and conflict over trade and policy in several commodities. This tension is caused by a myriad of factors that spring from the perceptions and concerns of producers and a few politicians. Some of these concerns can be explained in economic terms and others cannot. Without ranking or judging these concerns the list includes:

- the desire of domestic producers to protect national domestic markets from imports, particularly when trade flows are largely in one direction;
- differences in polices between countries, that sometimes result in a lack of reciprocal access;
- fears, well founded or not, that imports may carry a pest or disease that would spread and be harmful to the domestic industry;
- anxiety that imports are due to government subsidization in the exporting country;
- worry that agriculture is losing its uniqueness in the policy process and will no longer receive government subsidization;
- tension caused by the rapid pace of globalization and the increasing importance of the WTO; and
- fears that U.S. agriculture is not competitive in world food markets.

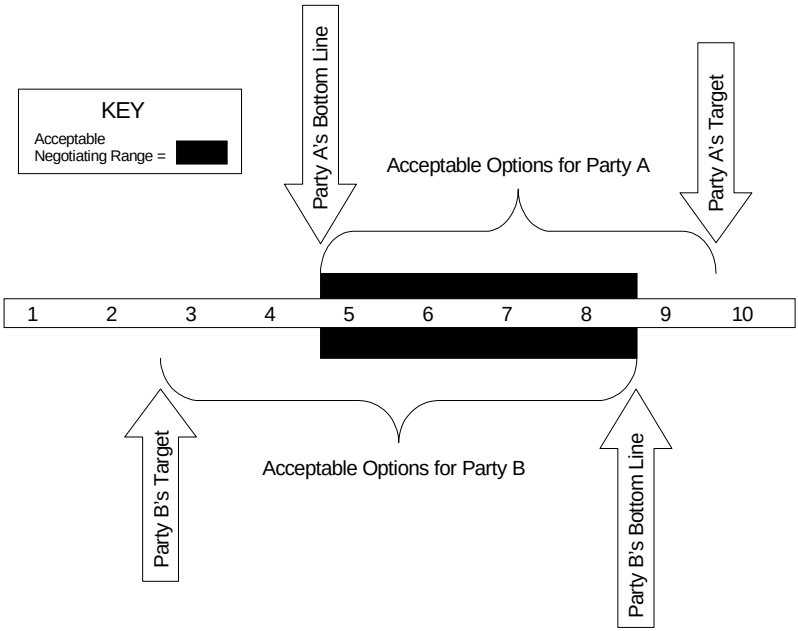
For some agricultural industries, overlaying the tension caused by imports are generally poor economic conditions within the industry.

This paper discusses the effectiveness of current mechanisms to avoid and resolve agricultural trade disputes between the United States, Canada, and Mexico- -members of the North American Free Trade Agreement (NAFTA). It begins with a brief discussion of elements of dispute resolution (CDR, 1999; Moore, 1996; Deutsch, 1973). It then examines current efforts and mechanisms to avoid and resolve disputes, and presents a preliminary evaluation of the extent to which these efforts meet certain desirable characteristics of dispute resolution.

ELEMENTS OF CONFLICT RESOLUTION

The literature on conflict resolution presents ideas about different strategies for negotiations over an issue. *Positional* and *interest based* bargaining are the basis for contrasting models of dispute resolution and are useful for our purposes as they provide a baseline with which to evaluate available dispute resolution strategies within NAFTA. In positional bargaining, negotiators begin by selecting and ranking positions to be presented in the negotiation (CDR, 1999; Fisher and Ury, 1991). Positions are alternate solutions to an issue that meet the particular interests or needs of one party. Both negotiators present their initial position (with their maximum anticipated gain) and then, through a series of incremental concessions, arrive at a compromise (Figure 1). When positional bargaining is used, the parties usually do not regard their interests (underlying needs and concerns) as interdependent. Usually positional negotiators give current and future relationships relatively low priority. In positional bargaining resources are generally regarded as fixed, leading to the conclusion that if one party gets more, another gets less. Highly adversarial relationships often result. A benefit of positional bargaining is that trust and the full disclosure of information between parties is not required. Another benefit is that positional bargaining may be useful in division of fixed-sum resources (CDR, 1999). A disadvantage of positional bargaining is that the rapid presentation of positions may cut off exploration of the underlying needs of the parties, and may shortchange investigation of more innovative ways to meet those needs.

Figure 1: Positional Bargaining.

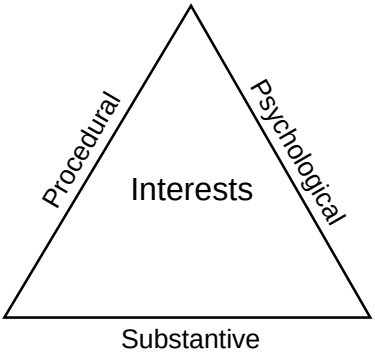


Source: CDR 1999.

The adversarial and fixed-sum nature of the negotiation may also damage the parties relationship.

Interest based bargaining approaches to conflict resolution focus on satisfying as many of the needs or interests of the disputants as possible. This is achieved by exploring the interests of the parties and evaluating multiple solutions in an attempt to satisfy the greatest possible number of needs. When possible, resources as not regarded as fixed and negotiators use cooperative problem-solving efforts to investigate solutions. Interest based negotiation requires trust and may uncover divergent values and interests. Due to the process used, interest based negotiations may require more time than positional bargaining. Advantages include solutions that meet specific needs, unanticipated beneficial outcomes, and strengthening of ongoing relationships.

Figure 2: The Triangle of Satisfaction.



Source: CDR 1999.

Successful resolution of disputes requires a framework that addresses the *substantive psychological*, and *procedural* aspects of disputes (Figure 2). Lasting solutions to disputes may be hindered by inadequate fulfillment of any of the three aspects. Substantive aspects include the objective needs at hand. For the purpose of this discussion, substantive issues include access to markets, trade rules, import levels, and economic conditions within an industry. Psychological aspects include the need for disputants to be included in the resolution process and for the process to be perceived as fair. Another psychological need is to address issues of bias and stereotypes, which is critical for the creation of long lasting relationships. Finally, procedural aspects address the mechanics of how the dispute is resolved. Questions about mechanics include whether or not the dispute resolution structure is appropriate for the dispute and if parties agree on the process. For the issues considered in this paper, it is also important that the settlement options produced are congruent with existing obligations held by the parties. For example, industry representatives may agree on a regulatory change without being empowered to implement the change.

DISPUTE AVOIDANCE

Anticipation and early resolution of conflict may bring many of the benefits of settlement without the costs associated with a full blown conflict. The disputes initiated by R-CALF discussed by Loyns, Young, and Carter in an earlier workshop paper are hypothesized by this author to be partially caused by an inaccurate assessment by U.S. producers of their interests. While this dispute has already occurred, perhaps the underlying argument can usefully be applied to avoid disputes in other industries, or further disputes in the cattle industry. Regulatory harmonization is also discussed as a mechanism useful in dispute avoidance.

Identification of Interests

Progress on substantive issues must begin with the accurate identification of issues. Three categories of interests for NAFTA's agricultural industries are proposed. *Competitive interests* can be summarized as when one party swims the other party sinks. *Cooperative*[1] *interests* exist when goals are linked so that everyone sinks or swims together (Deutsch, 1973). Some cooperative interests may be pursued jointly, while others must be pursued separately due to institutional factors. The interests of the Canadian and U.S. beef industries are used as an example (Table 1) (Young, 2000).

U.S. and Canadian beef producers have a number of cooperative interests that they can jointly address. The most important may be increasing consumer demand for beef by improving its quality, healthfulness, reputation for safety, and price vis à vis substitutes. This is a cooperative interest, not a competitive one, as given the integrated nature of the market, an increase in the demand for beef within the United States or Canada will be beneficial to producers of both countries. One caveat must be considered, i.e., this applies to beef that is not differentiated by quality attributes linked to location, which at most constitutes a very small portion of the market.

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[1] The term cooperative is appropriate here due to a long history of use in the dispute resolution and game theory literatures. However, while the interests are cooperative, or alternatively, common to both parties, the parties may not be cooperating in their actions.

Table 1: Sample Interests of U.S. and Canadian Beef Industries.

Type	*Criteria*	*Examples*
Cooperative	Industries have a joint interest in outcome, joint pursuit appropriate.	Increased domestic and export beef demand.
Cooperative but separate	Both industries have an interest in the outcome, but separate pursuit of outcome appropriate.	Federal government regulations for meat inspection—influence reputation for safety.
Competitive	Industries pursue competitive outcomes separately.	Beef demand linked to attributes including location, i.e., made in Montana.

Producers from the two countries also have an interest in a reduction of transactions costs for movement of cattle and beef across the border. To the extent that transactions costs can be reduced, efficiency is achieved in the movement of cattle to processing plants and of boxed beef to market, lowering basis costs and optimizing efficient utilization of plant capacity. Producers in some locations may also gain from access to a packing plant across the border, whose entry into their market increases competition for slaughter cattle.

The cooperative nature of U.S. and Canadian beef interests also holds true of U.S. and Canadian beef export markets. The U.S. and Canadian industries depend on increases in export demand for market growth and share a cooperative interest in reducing trade restrictions through multilateral trade negotiations. It is true that U.S. beef prices would increase if imports were reduced or eliminated while exports continued unfettered. However, this is not the environment that U.S. beef producers operate in and is unlikely to occur in the future.

The U.S. and Canadian beef industries also have cooperative interests that must be independently pursued by each industry. For example, meat inspection and food safety regulations influence beef demand, a cooperative interest of the industries. However, as these policies are determined by national governments, they are influenced by the national industry. Finally, the U.S. and Canadian industries also have competitive interests. In this category would

fall competition for markets where demand is influenced by quality attributes linked to location.

An obstacle to recognition of the interdependence of the U.S. and Canadian beef industries is the deeply rooted historical concept of a market as synonymous with the nation- state. This concept developed due to trade barriers that at one time isolated the U.S. market, as well as the markets of other nations. Some trade barriers were imposed by the government, including taxes, tariffs, quotas, and foreign exchange controls. Natural trade barriers included the cost and adequacy of transportation and communication to assess demand in foreign markets and to make transactions. In addition, reflecting national preferences, federal government regulations and policies influenced the market environment and made it distinct from other national market environments. The nation-state is the basis of international trade law and trade agreements. For the U.S. beef industry, these factors were reinforced by a large domestic market and little historical dependence on the export market. Many of these factors have changed, due to changes in policies and technology, coincident with an increase in globalization. Industries may benefit from consideration of when the market is synonymous with the nation-state and when it is not.

The existence of cooperative interests for many industries within the three NAFTA countries necessitates rethinking current ways of organizing producer groups. One possibility is to form producer groups that correspond with the cooperative interests of the U.S., Canadian, and Mexican industries. National commodity groups would continue to pursue separate cooperative and competitive interests.

The transition from national commodity groups to the creation of strong and viable trinational commodity groups is difficult for several reasons. The existence of a group depends on the perceptions held by members that they are a distinct entity due to their commonalities, an awareness and active pursuit of cooperative interests, and a history of interactions between group members. Commodity groups have existed for a long period of time on the basis of the national market. The movement to a trinational market came quickly and without a corresponding shift in the identity of commodity groups. Another factor impeding the development of trinational commodity groups is the ambiguous

commitment of national governments to free trade. While a commitment was made by member governments to free trade, many mechanisms exist to buffer it, leading to confusion over the size of the market, and the role of government.

Regulatory Harmonization

The avoidance of disputes in agricultural trade is also achieved through regulatory harmonization. The harmonization of regulations in itself removes a substantive reason for disputes. Equally important, the process of harmonization involves representatives of government and industry from all three countries, and by doing so creates ongoing relationships that are critical in avoiding disputes. Some efforts to harmonize regulations occur through NAFTA, which provided ongoing processes to harmonize regulations and policies of all three member countries. NAFTA mandated committees to increase the compatibility of a wide range of policies (NAFTA, 1993).

The Committee on Standard Related Measures and the Sanitary and Phytosanitary Committee are composed of designees from the appropriate agency of the member governments (Lennox, 1999; Garvey, 1999). Committee power is limited to making recommendations to member governments. Operation of committees on the basis of consensus is key in ensuring the recommendations are taken back to the home country agency and adopted.

The purpose of the Sanitary and Phytosanitary (SPS) Committee is to pursue equivalence of the three countries SPS measures. Under the umbrella of the SPS Committee, the NAFTA Technical Working Group on Pesticides is working to develop a coordinated pesticide regulatory framework among NAFTA partners, to address trade irritants, to build national regulatory/scientific capacity, to initiate joint review of applications, and to coordinate scientific and regulatory decisions on pesticides (Environmental Protection Agency, 1999). The Working Group on Pesticides has initiated procedural changes to facilitate joint reviews of pesticide applications and has developed a protocol to prioritize its work on regulatory differences causing trade disputes.

Regulatory changes have also been industry led. The Restricted Feeder Cattle Project, formerly known as the North West Pilot Project, is an example (Young and Marsh, 1998). The project resulted in the reduction of sanitary

requirements for feeder cattle exports from the United States into Canada, reducing the cost of trade. The Canadian Cattlemen's Association worked with the National Cattlemen's Beef Association, the Montana Stockgrowers's Association, and with state and federal agencies from each country, including the U.S. Animal Plant Health Inspection Service, and the Canadian Food Inspection Agency, to change sanitary regulations for feeder cattle moved into Canada. In addition to Montana and Washington, the pilot project now includes Idaho, North Dakota, Hawaii, and Alaska. This project facilitated the export of 105,374 feeder cattle from the United States to Canada between October 1, 1999 and December 17, 1999. While increased market integration of the northwestern states and provinces in the feeder cattle market did not prevent the R-CALF suits (as discussed earlier by Loyns, Young and Carter), recognition of the benefits of improved commercial relations with Alberta did moderate producer support of R-CALF within the state of Montana.

An example of an industry led effort involving all three NAFTA countries is provided by the development of the Fruit and Vegetable Dispute Resolution Corporation (FVDRC). Article 707 of NAFTA mandated the creation of a subcommittee to address private commercial disputes for NAFTA partners, with reference to the perishable produce industry. The subcommittee is composed of representatives of industry and government from all three nations, and began its work in 1996 (Chancey, 2000). The subcommittee decided to address discrepancies in the systems of the three countries for dealing with disputes arising from private commercial transactions in fruits and vegetables, including issues of nonpayment and grading. The committee used a consultative process to develop a trinational corporation to provide standards and dispute resolution services to the industries of the three countries (Ash and Chancy, 2000). Ash and Chancy summarize the lessons learned in the development of the trinational corporation: (1) that a strong vision of mutual goals and interests is required; and (2) that national identities need to be de-emphasized with a greater focus given to universally acceptable values and objectives.[2]

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[2] For further information see the Fruit and Vegetable Dispute Resolution Corporation homepage: http://www.fvdrc.com.

Evaluation of Current Dispute Avoidance Processes

The examples given above, including the NAFTA subcommittees, the FVDRC and the Restricted Feeder Cattle project, can be viewed as processes that contribute to dispute avoidance (Table 2), although this goal is more explicit for some cases than for others. In each case, both industry and government are actively involved from a number of countries. The work of these committees follows that model of interest based negotiations as it emphasizes ongoing relationships, provides an opportunity for members of industry to become educated about the other's interests, and to create ongoing ties. The ongoing nature of their work is important in reducing issues of stereotypes and bias that may have existed at the beginning. In some cases, the committees had substantial leeway in designing processes used to complete their mandate. The substantive work accomplished by the committees, namely the development of regulations that fit the needs of all three countries, contributes to changing the identity of the market from a national to a trinational market. To the extent that their work facilitates trade- -as with the Restricted Feeder Cattle Project- -increased commercial ties will also work to create a trinational market. Finally, removing regulatory incompatibilities between countries, which tend to result in unequal access to markets, will also contribute to avoiding conflict over this issue. However, substantive progress may be slow, while committees may reach consensus on what types of regulatory changes need to be made, representatives of each country must work with their own institutions to implement regulatory changes. The processes discussed in this section address to varying degrees the substantive, procedural and psychological issues required to avoid conflict.

DISPUTE RESOLUTION

The primary processes used for resolving disputes within NAFTA are formal dispute processes, including national trade remedy law and NAFTA processes, and consultations between governments. As NAFTA processes are discussed in an earlier paper by Burfisher, Norman and Schwartz they will not be discussed further here.

Table 2: Elements of Dispute Resolution.

	Substantive Aspects			***Psychological Aspects***			***Procedural Aspects***		
Current Processes	Identify Interests	Provide Data	Address Interests	Stakeholder Participation	Address Bias and Stereotypes	Create or Maintain Ongoing Relationships	Structure Appropriate	Parties' Agreement on Process	Congruence with Existing Obligations
Dispute Avoidance									
NAFTA[1] Committees	Potentially	Potentially	Potentially	Potentially	Some	Some	Potentially	Gov-Yes Ind-Some	Yes
Industry-Led[2]	Potentially	Potentially	Potentially	Potentially	Potentially	Potentially	Yes	Mostly	Yes
Dispute Resolution									
Government[3] Consultations	Potentially	Limited	Limited	Limited	Limited	Limited	Partially	Gov-Yes	Yes
USITC/USITA[4]	Sometimes	Sometimes	Sometimes	Limited	No	No	Sometimes	No	Yes
NAFTA Dispute Settlement Procedures	Sometimes	Sometimes	Sometimes	Limited	No	No	Sometimes	Gov-Yes Parties-?	Yes

Notes:

[1] An example is pesticide harmonization.

[2] An example is the Fruit and Vegetable Dispute Resolution Corporation.

[3] An example is the December 1998 Record of Understanding.

[4] An example is the R-CALF dispute.

U.S. Trade Remedy Law

Countervailing duty and antidumping suits result from petitions brought by U.S. industry groups for consideration by the U.S. International Trade commission (USITC) and the U.S. International Trade Administration (USITA). These processes have been described in other papers and those details will not be repeated here. In this process, evidence is presented to a panel which makes a decision. Several similarities can be found between positional bargaining and the application of trade remedy law. The structure of the process ensures that one party wins and the other loses, without investigation of the parties' interests and other solutions that might meet their needs. Due to the assumption that resources are fixed, and due to the processes used in presenting evidence, parties are forced into an adversarial relationship.

The processes used by the USITC and USITA in the application of trade remedy law strive to be predictable, rule-based and fair. In order to achieve fairness between industries and over time, strict and unvarying timetables and economic definitions are used.

However, use of antidumping and countervailing duty suits does not encourage industry groups to undertake a meaningful investigation of the underlying issues or interests. Industry groups do not need to, as these investigations, once initiated, are obligated to use prescribed definitions and criteria in making their determinations. The lack of correspondence between underlying issues and the criteria used in antidumping and countervailing duty investigations may result in misattributed conflict, namely, debate over the wrong issue or between the wrong parties (Deutsch, 1973). For example, in the R-CALF case for reducing imports from Canada is a position, however, one that would not address the multitude of underlying interests (Young, 2000).

Government Consultations: the December 1998 Record of Understanding

Government consultations are an important mechanism for the resolution of disputes. There are many examples of government consultation within NAFTA (ERS, 1999), and the consultations leading to the December 1998 Record of Understanding Between the United States and Canada is an example.

In response to the blockade against U.S. imports of Canadian agricultural goods implemented by some northern tier state governments in the fall of 1998, the Canadian and U.S. governments began high level consultations to discuss an array of trade concerns. These consultations resulted in the Record of Understanding that was signed in December, 1998 (Record of Understanding, 1998). The Record of Understanding contains seventeen action points, addressing a wide range of issues, focused on but not limited to trade in meat and grains. Many of these issues were regulatory in nature, and no large changes in agricultural policy were adopted.

The consultation involved representatives of a wide array of government agencies from both countries. For the United States, the Office of the Trade Representative and the Department of Agriculture, and for Canada, the Department of Foreign Affairs, and Agriculture and Agri-Food Canada took the lead. Other agencies were involved in many of the discussions due to their role in implementing policy changes, including the Animal and Plant Health Inspection Service and the Environmental Protection Agency for the United States, and from Canada, the Canadian Food Inspection Agency, Health Canada, and the Canadian Pesticide Management Regulatory Agency.

The agenda for the consultations was set and decisions were made by consensus. The United States has announced formation of an interagency team to monitor implementation of the Record of Understanding (Palmer, 1999). The team includes representatives of the USTR, USDA, the National Economic Development Council, the State Department, the Commerce Department and the Customs Service. High level consultations contrast to the work of the NAFTA committees by their sporadic nature and the lack of an institutionalized process. These processes, due to their flexibility and the possible involvement of a wide rang of stakeholders, have the potential to identify interests of the parties and to explore a wide range of integrative solutions (Table 2). However, in the example given, the consultations leading to the Record of Understanding, the parties who initiated the dispute were not involved in the solution.

Evaluation of Processes for Dispute Resolution

Informal negotiations and various forms of government consultations are useful in addressing disputes due to their flexible nature, including flexibil-

ity about who is included and the process used. Once conflict reaches formal dispute processes, rule based procedures are used. These procedures are less likely to address the interests at stake and are more likely to damage the relationship between parties. The provision of other processes to resolve disputes needs to be investigated.

Dispute resolution may be facilitated by the USITC and USITA (and their counterparts in Canada and Mexico) requiring mediation of some disputes. This would be particularly appropriate when previous investigations did not produce evidence of uncompetitive conditions or the violation of trade laws. Mediation, through the use of interest-based negotiation as described earlier, might be a useful avenue for interest groups to find resolution to the continuing problems in regulatory and policy harmonization. Implementation of these policy changes would require actions on the part of government that might continue to be slow. However, the intense interaction between groups required by the process of mediation might assist in shifting the basis of identity from being based on nations to being based on cooperative interests.

Development of the appropriate procedures for mediation would pose difficult questions. One question is which groups would be involved in the process. Returning again to the R-CALF dispute, who would be involved in the mediation on the U.S. side? Would the appropriate party be the leadership of R-CALF, the elected leadership of the U.S. Cattlemen's and Beef Association, or some combination of the two? Other questions exist around the scope of issues to be considered and implementation of the settlement options.

CONCLUSIONS

Progress in reducing the level of conflict within NAFTA will require working on issues of dispute avoidance, management and resolution simultaneously, as each plays an important role. As the author's research in this field is preliminary, these ideas are offered with the purpose of facilitating discussion, while recognizing that further refinement and research is required.

Dispute avoidance can be facilitated by:

1. an accurate identification of the interests held by different parties, and a recognition of the interdependence that exists in many cases;
2. promoting industry groups based on their cooperative interests;
3. the creation of joint industry and government processes to address substantive issues; and
4. recognizing that stakeholders should be involved in the designing of dispute avoidance processes and in negotiations on the actual issues.

Ongoing disputes may exist in cases where strong differing national preferences result in incompatible policy regimes. Dispute management is beyond the scope of the paper, but is an important area for further work. Some preliminary ideas on the management of disputes include:

5. fragmenting the issue into the smallest possible pieces, and addressing individual problems (such as a lack of reciprocity) where possible;
6. recognizing areas of agreement;
7. acknowledging that not one, but several principles may be involved (for example, the principle of self-determination and the principle of a free market);
8. addressing data problems by jointly designing processes for data collection, clarifying areas of disagreement, and identification of criteria for assessment; and
9. agreeing to disagree when necessary, while creating spheres of influence to contain the problem.

The resolution of disputes may be improved by:

10. having a number of processes for dispute resolution;
11. clearly articulating the purpose of each process, so that the appropriate process is used in each case;
12. using integrative, interest based approaches first, with the goal of involving stakeholders in the crafting of a solution; and finally,
13. regular use of mediation or government consultations to attempt to settle a dispute before moving to judicial processes.

A focus of further research might be to develop a more comprehensive conceptual framework of the models of dispute resolution and their advantages and disadvantages for various types of disputes. This research may be further informed by the development of collaborative public processes used to resolve disputes in public policy, particularly natural resource questions (Schellenberg, 1996; Dukes, 1996; Ross, 1993). Progress in better management of disputes between NAFTA partners will require the active involvement and commitment of academics, industry and government.

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AGRICULTURAL TRADE LIBERALIZATION UNDER NAFTA: REPORTING ON THE REPORT CARD

Gary F. Fairchild and Pierre Aubin

INTRODUCTION

The format of the Sixth Agricultural and Food Policy Information Workshop was somewhat unique. The focus of the workshop was to determine "what we have learned from the experience of NAFTA." The overarching objective of the workshop was to assess how well NAFTA objectives have been achieved as they relate to the agri-food sector, and consider what this conclusion suggests for future agreements. To this end, the workshop was designed around the concept of a "report card on agriculture under NAFTA." Workshop participants were asked to fill out a report card, in the form of a written questionnaire, at the beginning of the workshop. The responses were summarized during the workshop and presented during the final session.

At the conclusion of the final session, workshop participants again were asked to complete the same report card in an attempt to judge whether or not the discussions of trade and policy developments under NAFTA and the reviews of agricultural commodity disputes during the workshop had an influence on participant assessments of how well NAFTA objectives have been achieved.

The results of the pre-workshop and post-workshop "report cards" are presented and compared in this paper. The pre-workshop responses are denoted as the "first" report card and the post-workshop responses as the "second" report card. An example of the report card is included in an appendix. It should be noted that the report card is not intended to be a statistically-representative sample of opinions in the three NAFTA countries, either separately or in total. The results, therefore, are not directly projectable to any of the respective populations. Rather, the report cards are intended simply to reveal the opinions of a group of interested and reasonably-well-informed representatives from university agricultural colleges, agricultural agencies of government, and production agriculture in Canada, the United States, and Mexico. The results tend to be both interesting and informative with respect to what we have learned from the experiences of NAFTA.

REPORT CARD RESULTS

Which Country Do You Represent?

Canada, United States, and Mexico were represented in the first report card by 41, 49, and 10 percent of participants, respectively, compared to the second report card representation of 44, 47, and 9 percent, respectively. Forty-one workshop participants completed the first report card compared to 34 participants who completed the second report card. Canada and the United States had nearly equal representation, together accounting for about 90 percent of participants in both report cards, compared to Mexico with about 10 percent in both report cards.

Overall Benefit to Agriculture in Own Country?

Workshop participants were asked to what extent NAFTA has benefitted their country in terms of facilitating trade in agriculture generally? Interestingly, in the first report card, three-fourths of Canadian and Mexican participants felt that NAFTA had been a large benefit and one-quarter believed that it had been a small benefit (Table 1). Only 20 percent of U.S. participants thought NAFTA had produced large benefits, while 80 percent felt there had been small benefits.

Table 1: Extent to Which NAFTA Generally Has Benefitted Agriculture in Own Country-Percent Response for Each Report Card by Country and Total.

Country	*Canada*		*United States*		*Mexico*		*Total*	
Report Card	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*
Response	*%*		*%*		*%*		*%*	
Large Benefit	76	53	20	7	75	67	49	33
Small Benefit	24	47	80	93	25	33	51	67
No Change	—	—	—	—	—	—	—	—
Small Deficit	—	—	—	—	—	—	—	—
Large Deficit	—	—	—	—	—	—	—	—
Don't Know	—	—	—	—	—	—	—	—

Source: Compiled from response data.

Information shared at the workshop seems to have had an impact on opinions as to NAFTA's general benefits, particularly among Canadian and American participants. In the second report card, only 53 percent of Canadian respondents now felt that there had been a large impact benefit compared to 47 percent who felt there was a small benefit. Among Mexican respondents, 67 percent now believed there to be large benefit compared to 47 percent who felt there was a small benefit. Shifts among U.S. respondents resulted in seven percent indicating a large benefit and 93 percent a small benefit. Trade theory suggests that when economies merge, the smaller economy is expected to experience a larger relative benefit. Participant responses across countries seem to support this assumption. It should be noted that no one selected the no-change, small-deficit, or large-deficit categories.

Overall Benefit to Agriculture in Other Countries

When first asked about the extent to which NAFTA generally has benefitted agriculture in other countries, 53 percent of Canadians thought there was a large benefit and 47 percent felt there was a small benefit (Table 2). Mexicans felt even more strongly that other countries had benefitted from NAFTA, with 75 percent indicating a large benefit and 25 percent a small benefit. Participants from the United States painted a somewhat different picture with only 30 percent suggesting a large benefit to other countries, 60 percent believing there to be a small benefit, with five percent each indicating no change and don't know.

Table 2: Extent to Which NAFTA Has Generally Benefitted Agriculture in Other Countries--Percent Response for Each Report Card by Country and Total.

Country	*Canada*		*United States*		*Mexico*		*Total*	
Report Card	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*
Response	*%*		*%*		*%*		*%*	
Large Benefit	53	20	30	56	75	33	44	38
Small Benefit	47	80	60	38	25	67	51	59
No Change	—	—	5	—	—	—	2	—
Small Deficit	—	—	—	—	—	—	—	—
Large Deficit	—	—	—	—	—	—	—	—
Don't Know	—	—	5	6	—	—	2	3

Source: Compiled from response data.

The learning which apparently took place during the workshop was both substantial and contradictory, based on a comparison between responses to the first and second report card. While the all-country average response remained relatively stable, respondents from both Canada and Mexico tended to shift from a majority belief that other countries had received a large benefit from NAFTA, 53 percent and 75 percent, respectively, to a position in which a majority believed that only a small benefit had been received by others, 80 percent and 67 percent, respectively.

Responses from U.S. participants shifted in the opposite direction between the first and second report cards. The percent of Americans believing others received a large benefit increased from an initial 30 percent to 56 percent in the second report card, while the percent believing NAFTA to have been a small benefit to others declined from 60 percent to 38 percent. Overall, the percent of all respondents believing the agriculture in other counties received a large benefit declined slightly form 44 percent to 38 percent from the first to the second report card, while those thinking it had a small benefit to others increased form 51 percent to 59 percent. Again, small overall changes tend to mask significant changes within countries.

Benefit to the Primary Agricultural Sector of Own Country

Workshop participants were asked whether or not NAFTA had benefitted the primary agriculture sector of their country. As illustrated in Table 3, based on the all-country average, the majority (66 percent) initially believed

Table 3: Benefit to Primary Agriculture Sector of Own Country Derived from NAFTA--Percent Response for Each Report Card by Country and Total.

Country	*Canada*		*United States*		*Mexico*		*Total*	
Report Card	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*
Response	*%*		*%*		*%*		*%*	
Large Gain	47	47	10	13	25	33	27	29
Small Gain	47	53	80	69	75	33	66	59
No Change	—	—	—	13	—	—	—	6
Small Loss	—	—	10	6	—	33	5	6
Large Loss	—	—	—	—	—	—	—	—
Don't Know	6	—	—	—	—	—	2	—

Source: Compiled from response data.

that their primary agriculture sector had received a large gain, while 27 percent believed there had been a small gain, and six percent indicated a small loss. Also in the first report card, Canadians were evenly split between a large gain and a small gain, while Americans and Mexicans strongly believed that there had been a small gain, 80 percent and 75 percent, respectively. The remainder of U.S. responses were divided between a large gain and a small loss, while the other Mexican responses were in the large-gain category.

The second report card did not produce significant changes for the all-country averages, but there were major changes for Mexico with some shift from small gain to small loss. U.S. responses witnessed some shift toward no change. Perhaps the assumption that a smaller economy often gains more than a large country from a free-trade agreement helps explain the Canadian indication of a large gain for their primary agriculture sector compared to the United States. However, this certainly does not help explain the Mexican response, which was very similar to the U.S. response.

Workshop participants were asked about the benefit of NAFTA for seven agri-food sectors and sub-sectors in their economy. Their responses differed considerably both across sub-sectors and countries. While some responses may be due to varying levels of participant information on particular sub-sectors, it can also be argued that varying responses across countries may be an indica-

Table 4: Benefit to Food Processing Sub-Sector of Own Country from NAFTA--Percent Response for Each Report Card by Country and Total.

Country	***Canada***		***United States***		***Mexico***		***Total***	
Report Card	***1st***	***2nd***	***1st***	***2nd***	***1st***	***2nd***	***1st***	***2nd***
Response	***%***		***%***		***%***		***%***	
Large Gain	71	87	30	25	100	100	54	59
Small Gain	24	13	60	75	—	—	39	41
No Change	—	—	5	—	—	—	2	—
Small Loss	—	—	—	—	—	—	—	—
Large Loss	—	—	—	—	—	—	—	—
Don't Know	6	—	5	—	—	—	5	—

Source: Compiled from response data.

tion of which country(s) has a competitive advantage or disadvantage in particular sub-sectors.

Benefits to the Food Processing Sub-sector

In the first report card, respondents from both Canada and Mexico indicated that their food processing sub-sector had benefitted from NAFTA with 71 percent of Canadians and 100 Percent of Mexicans indicating a large gain (Table 4). Twenty-four percent of Canadians felt there had been a small benefit. Respondents from the U.S. also believed that their food processing sub-sector had benefitted, but only 30 percent thought there had been a large gain compared to 60 percent who indicated a small gain. Overall, 95 percent of those participating in the first report card thought NAFTA had been a large (54 percent) or small (39 percent) benefit to their food processing sub-sector.

The second report card did not result in any significant changes in the all-country responses, however, there were changes in both Canada and the United States (Table 4). Canadian respondents indicating a large gain to the food processing sub-sector increased from 71 to 87 percent, while Americans shifted some from the large-gain, no-change, and don't know categories to the small-gain category. Mexicans remained steadfast in their belief that NAFTA had been a large benefit to their food processing sub-sector. Several factors may lie behind these responses. Canada and Mexico may have competitive advantages in food processing or at least they may focus on the food processing

Table 5: Benefit to Beverage Processing Sub-sector of Own Country from NAFTA--Percent Response for Each Report Card by Country and Total.

Country	*Canada*		*United States*		*Mexico*		*Total*	
Report Card	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*
Response	%		%		%		%	
Large Gain	41	27	5	6	50	—	24	15
Small Gain	29	67	35	75	25	67	32	71
No Change	6	—	15	—	—	—	10	—
Small Loss	—	—	—	—	—	—	—	—
Large Loss	—	—	—	—	—	—	—	—
Don't Know	24	7	45	19	25	33	34	15

Source: Compiled from response data.

industry in their export sector more than does the United States. It may also be a large country/small county issue.

Benefits to the Beverage Processing Sub-sector

A great deal of uncertainty across countries was evident in the first report card on the beverage processing sub-sector, as 34 percent overall, and 24, 45, and 25 percent of respondents from Canada, United States and Mexico, respectively, did not know what the impact of NAFTA had been (Table 5). This may reflect a general lack of knowledge among workshop participants about the beverage processing sub-sector. Of those offering an opinion, the majority of Canadians and Mexicans felt there had been a large gain, while the majority of Americans believed there had been a small gain with the remainder indicating either a large gain or no change.

The second report card witnessed a much higher percent (up from 32 to 72 percent overall) indicating a small gain to the beverage. This increase came from decreases in the large-benefit, no-change, and don't-know categories. All three countries registered dramatic shifts to the small-gain category. Apparently considerable learning occurred during the workshop.

Benefits to the Grains and Oilseeds Sub-sector

On the question of NAFTA's benefit to one's own grains and oilseeds sub-sector, Canadian responses in the first report card all fell in the large-gain (47 percent) and small-gain (53 percent) categories, compared to 15 and 55

Table 6: Benefits to Grain and Oilseeds Sub-sector of Own Country from NAFTA--Percent Response for Each Report Card by Country and Total.

Country	***Canada***		***United States***		***Mexico***		***Total***	
Report Card	***1st***	***2nd***	***1st***	***2nd***	***1st***	***2nd***	***1st***	***2nd***
Response	***%***		***%***		***%***		***%***	
Large Gain	47	33	15	6	—	—	27	18
Small Gain	53	67	55	50	—	—	49	53
No Change	—	—	5	13	25	—	5	6
Small Loss	—	—	15	25	50	67	12	18
Large Loss	—	—	—	—	25	33	2	3
Don't Know	—	—	10	6	—	—	5	3

Source: Compiled from response data.

percent, respectively, for American responses (Table 6). None of the Mexican respondents believed there were any gains to their grains and oilseeds sub-sector from NAFTA, and 75 percent believed there was some degree of loss. These responses suggest that Canadians believe they have a competitive advantage in grains and oilseeds within NAFTA. Americans seem to hold similar opinions, although not as strongly. Clearly, Mexicans feel that their country has sustained losses in this sub-sector.

Responses remained relatively unchanged from the first to the second report card, with the exception of decreases in the large-gain category for both Canadian and American participants, fueled by an increase in small gain for Canadians and increase in no change and small loss for Americans. The second report card found Mexicans even more pessimistic on grains and oilseeds, with increases in the small-loss and large-loss categories (Table 6).

Benefits to the Red Meat Sub-sector

Concerning the red-meat sub-sector, in both report cards, clearly Canadians believe they have an advantage, as two-thirds believe Canada has gotten a large gain and one-third a small gain from NAFTA (Table 7). American responses to the first report card also indicated some optimism as one-half indicated their red-meat sub-sector had received a small gain from NAFTA, with 15 percent indicating a large gain. However, 5 percent of Americans thought there had been no change, 20 percent thought there was some type of loss, and

Table 7: Benefit to Red Meat Sub-sector of Own Country from NAFTA--Percent Response for Each Report Card by Country and Total.

Country	*Canada*		*United States*		*Mexico*		*Total*	
Report Card	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*
Response	*%*		*%*		*%*		*%*	
Large Gain	65	67	15	13	—	—	34	35
Small Gain	35	33	50	69	—	—	39	47
No Change	—	—	5	6	—	—	2	3
Small Loss	—	—	15	13	75	100	15	15
Large Loss	—	—	5	—	25	—	5	—
Don't Know	—	—	10	—	—	—	5	—

Source: Compiled from response data.

10 percent indicated they did not know. Mexican responses indicate strongly that they do not believe they have an advantage in red meat as three-fourths indicated a small-loss and the one-fourth a large loss from NAFTA. Overall, nearly 75 percent of respondents indicated a gain for their red-meat sub-sector. As can be seen in Table 7, with the exceptions of an increase in U.S. responses in the small-gain category and decreases in small-loss and large-loss categories for Mexicans, opinions remained consistent between the two report cards.

Benefits to the Dairy Sub-sector

There were interesting variations across countries in response to the question about the dairy sub-sector (Table 8). In both the first and second report cards, Canadian and American responses were concentrated in the small-gain and no-change categories. In the first report card, 12 percent of Canadians indicated a small gain and 82 percent said there was no change associated with NAFTA, compared to 27 and 73 percent, respectively, in the second report card. American responses tended to consolidate somewhat in the second report card as outlying don't-know and large-gain responses moved to small-gain and no-change responses. More significant changes occurred for Mexican responses between report cards as respondents moved from a view of large losses toward one of small gains. Overall, there was an increase in responses indicating a small gain to one's own dairy sub-sector due to NAFTA.

Table 8: Benefit to Dairy Sub-sector of Own Country from NAFTA--Percent Response for Each Report Card by Country and Total.

Country	*Canada*		*United States*		*Mexico*		*Total*	
Report Card	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*
Response	*%*		*%*		*%*		*%*	
Large Gain	—	—	5	—	—	—	2	—
Small Gain	12	27	40	44	—	33	24	35
No Change	82	73	45	56	50	33	61	62
Small Loss	—	—	—	—	25	33	2	3
Large Loss	—	—	—	—	25	—	2	—
Don't Know	6	—	10	—	—	—	7	—

Source: Compiled from response data.

Benefits to the Poultry Sub-sector

On the question of whether workshop participants' poultry sub-sector has benefitted from NAFTA, there were significant changes between report cards within each country (Table 9). For Canada, 71 percent of responses indicated no change due to NAFTA, 24 percent thought there was a small gain, and 6 percent a small loss as reported in the first report card. A wide range of opinions was exhibited as to the impact of NAFTA on the U.S. poultry sub-sector in the first report card. While 15 and 30 percent thought there had been a large gain and small gain, respectively, there were also 30 percent who felt there had been no change due to NAFTA and another 25 percent who did not know.

The diversity of opinion on the first report card may be due to less knowledge of the poultry sub-sector among workshop participants from the United States. This explanation is somewhat supported by the consolidation of opinion on the second report card in the small-gain (50 percent) to no-change (44 percent) categories, with only 6 percent indicating they did not know (Table 9).

Mexican opinions also changed between the report cards. Originally, three-fourths believed there had been a small gain from NAFTA and one-fourth a large loss. After the workshop, only one-third believed there had been a small gain, while two-thirds now thought there had been a small loss in the poultry sub-sector associated with NAFTA. Overall, there was a decline in those who did not have an opinion and increase in opinions favoring a small gain to poul-

Table 9: Benefit to Poultry Sub-sector of Own Country from NAFTA--Percent Response for Each Report Card by Country and Total.

Country	*Canada*		*United States*		*Mexico*		*Total*	
Report Card	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*
Response	*%*		*%*		*%*		*%*	
Large Gain	—	—	15	—	—	—	7	—
Small Gain	24	60	30	50	75	33	32	53
No Change	71	40	30	44	—	—	44	38
Small Loss	6	—	—	—	—	67	2	6
Large Loss	—	—	—	—	25	—	2	—
Don't Know	—	—	25	6	—	—	12	3

Source: Compiled from response data.

try in participants' home country. Across countries, a locus of points seems to have formed around the area of a small gain to no change.

Benefits to the Horticultural Sub-sector

The horticultural sub-sector is an interesting and diverse collection of fruits, vegetables, nuts, and ornamentals. Each member country in NAFTA has a combination of these commodity groups which may or may not compete with other NAFTA countries depending on the particular season and crop. Due to several factors, such as perishability, limited growing seasons, and sanitary and phytosanitary issues, the horticultural sub-sector has experienced more than its share of trade disputes. Thus, it may not be surprising that representatives from each of the three countries scored their report cards differently.

On an overall basis for both report cards, between two-thirds and three-fourths of respondents believed their country experienced either small or large gains from NAFTA, compared to 12 to 18 percent who believed there had been small or large losses. All participants from Mexico in both report cards thought they had received large gains from NAFTA. Canadian participants in both surveys tended to believe there had been either large or small gains from NAFTA, 35 and 41 percent in the first and 47 and 53 in the second, respectively.

While 20 percent of American participants in the first report card felt there had been large gains to horticulture from NAFTA, none of the U.S. participants in the second report card marked this category. However, U.S. re-

Table 10: Benefit to Horticultural Sub-sector of Own Country from NAFTA--Percent Response for Each Report Card by Country and Total.

Country	***Canada***		***United States***		***Mexico***		***Total***	
Report Card	***1st***	***2nd***	***1st***	***2nd***	***1st***	***2nd***	***1st***	***2nd***
Response	***%***		***%***		***%***		***%***	
Large Gain	35	47	20	—	100	100	34	29
Small Gain	41	53	35	44	—	—	34	44
No Change	12	—	5	—	—	—	7	—
Small Loss	—	—	15	31	—	—	7	15
Large Loss	—	—	10	6	—	—	5	3
Don't Know	12	—	15	19	—	—	12	9

Source: Compiled from response data.

spondents believing there to have been a small gain increased from 35 to 44 percent between the two surveys. In the first report card, twenty-five percent of U.S. participants felt there had been either a small or large loss in horticulture compared to 37 percent in the second report card. Interestingly, even after the workshop, nearly 20 percent of U.S. representatives still did not have an opinion on the impact of NAFTA on the horticultural sub-sector. One possible explanation may be that some horticultural commodities have experienced gains while others have experienced losses. Other possible explanations include a lower level of knowledge concerning horticultural crops among workshop participants.

Having inquired about the impact of NAFTA on the general agriculture sector and a series of specific commodity sub-sectors, the report cards next addressed a series of NAFTA-related issues including fair competition, trade-distorting subsidies, market access, bilateral trade disputes, and further economic integration in the Western hemisphere. The responses to the questions on these subjects in the before and after report cards are discussed below.

Impact on Fair Competition in Agriculture

Workshop participants were asked about the extent to which they agreed or disagreed that NAFTA had promoted conditions of fair trade in agriculture. For the all-country average, one-third of the workshop participants strongly agreed that the playing field had been leveled and about 60 percent slightly agreed with this premise. On an individual-country basis, from 90 to 100 per-

Table 11: Agreement as to Whether NAFTA Promoted Conditions of Fair Competition in Agriculture--Percent Response for Each Report Card by Country and Total.

Country	*Canada*		*United States*		*Mexico*		*Total*	
Report Card	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*
Response	*%*		*%*		*%*		*%*	
Strongly Agree	35	27	35	44	—	33	32	35
Slightly Agree	53	73	60	50	100	67	61	62
Neutral	12	—	—	6	—	—	5	3
Slightly Disagree	—	—	—	—	—	—	—	—
Strongly Disagree	—	—	—	—	—	—	—	—
Don't Know	—	—	5	—	—	—	2	—

Source: Compiled from response data.

cent of respondents either strongly or slightly agreed that NAFTA had promoted fair competition, with some variation both among countries and between report cards as can be seen in Table 11. Thus, the workshop report cards give NAFTA strong marks for promoting conditions of fair competition in agriculture.

Reduction of Trade-distorting Subsidies

The report cards asked two questions concerning whether NAFTA had helped reduce trade-distorting subsidies, the first question focusing on the participant's home country and the second on other NAFTA countries. When asked to what extent they agreed that NAFTA had helped reduce trade-distorting subsidies in their own country, three-fourths of workshop participants from Mexico strongly agreed and one-fourth slightly agreed in the first report card, changing to two-thirds strongly agreeing and one-third slightly agreeing in the second report card (Table 12).

In response to the same question, Canadian workshop participants also tended to strongly (35 percent) or slightly (53 percent) agree, with 12 percent expressing neutrality on the subject (Table 13). Following the workshop, the majority (67 percent) of Canadian workshop participants strongly agreed that NAFTA had helped reduce trade-distorting subsidies in their country, compared to one-third who slightly agreed. In both report cards, a smaller proportion of participants from the United States strongly agreed (20 to 25 percent) and slightly agreed (50 to 55 percent) that NAFTA had helped reduce trade-

Table 12: Agreement as to Whether NAFTA Helped Reduce Trade-Distorting Subsidies in Own Country--Percent Response for Each Report Card by Country and Total.

Country	***Canada***		***United States***		***Mexico***		***Total***	
Report Card	***1st***	***2nd***	***1st***	***2nd***	***1st***	***2nd***	***1st***	***2nd***
Response	***%***		***%***		***%***		***%***	
Strongly Agree	35	67	20	25	75	67	32	47
Slightly Agree	53	33	55	50	25	33	51	41
Neutral	12	—	20	19	—	—	15	9
Slightly Disagree	—	—	5	6	—	—	2	3
Strongly Disagree	—	—	—	—	—	—	—	—
Don't Know	—	—	—	—	—	—	—	—

Source: Compiled from response data.

distorting subsidies in their country, while about one-fifth were neutral on the subject and 5 percent slightly disagreed. For the all-country average, about 85 percent of workshop participants believed that NAFTA had helped reduce trade-distorting subsidies in their own country, with most of the rest remaining neutral on the question.

Both report cards indicate that the majority of workshop participants slightly agree that NAFTA helped reduce trade-distorting subsidies in other NAFTA countries (Table 13). For the all-country average, 63 percent of the respondents in the first report card indicated slight agreement, increasing to 79 percent in the second report card. Those strongly agreeing increased modestly from 15 to 18 percent. Many of those holding a neutral position at the beginning of the workshop (20 percent) apparently moved to the slightly agree or the strongly agree categories, thus reducing the neutral category to a mere 3 percent.

Individual country responses showed some variation across countries and participants from both Canada and the United States increased their presence in the slightly agree category, from 65 to 87 percent and from 55 to 69 percent, respectively (Table 13). By the end of the workshop, 13 percent of Canadians and 25 percent of Americans strongly agreed that NAFTA had helped reduce trade-distorting subsidies in other countries. One-quarter of Americans also held this opinion at the beginning of the workshop. Mexican opinion did

Table 13: Agreement as to Whether NAFTA Helped Reduce Trade-Distorting Subsidies in Other NAFTA Countries--Percent Response for Each Report Card by Country and Total.

Country	***Canada***		***United States***		***Mexico***		***Total***	
Report Card	***1st***	***2nd***	***1st***	***2nd***	***1st***	***2nd***	***1st***	***2nd***
Response	%		%		%		%	
Strongly Agree	6	13	25	25	—	—	15	18
Slightly Agree	65	87	55	69	100	100	63	79
Neutral	29	—	15	6	—	—	20	3
Slightly Disagree	—	—	5	—	—	—	2	—
Strongly Disagree	—	—	—	—	—	—	—	—
Don't Know	—	—	—	—	—	—	—	—

Source: Compiled from response data.

not vary during the workshop as all of the participants from Mexico slightly agreed with the proposition.

Comparing the information in Table 12 and Table 13 indicates that workshop participants tended to believe more strongly that NAFTA has resulted in the reduction of trade-distorting subsidies in their own country than in other NAFTA countries. This result is not entirely unexpected, as reductions in subsidies in one's own industry and country may be more visible than are such reductions in other countries.

When workshop participants initially were asked the extent to which they agreed that NAFTA had improved market access opportunities, there was a locus of points formed by the responses across all respondents (Table 14). About 60 percent of respondents strongly agreed and 40 percent slightly agreed that NAFTA had improved market access opportunities. These responses were not unexpected as a central objective of NAFTA was to increase market access among member countries.

While the all-country average remained basically unchanged between report cards, there were some interesting shifts within countries (Table 14). Following the workshop, the proportion of participants from Canada and Mexico registering strong agreement increased from 59 to 67 percent for Canada and from 50 to 67 percent for Mexico. At the same time, the proportion of participants from the United States agreeing strongly declined from 60 percent to 44

Table 14: Agreement as to Whether NAFTA Improved Market-Access Opportunities--Percent Response for Each Report Card by Country and Total.

Country	***Canada***		***United States***		***Mexico***		***Total***	
Report Card	***1st***	***2nd***	***1st***	***2nd***	***1st***	***2nd***	***1st***	***2nd***
Response	***%***		***%***		***%***		***%***	
Strongly Agree	59	67	60	44	50	67	59	56
Slightly Agree	41	33	40	56	50	33	41	44
Neutral	—	—	—	—	—	—	—	—
Slightly Disagree	—	—	—	—	—	—	—	—
Strongly Disagree	—	—	—	—	—	—	—	—
Don't Know	—	—	—	—	—	—	—	—

Source: Compiled from response data.

percent. Thus, the information presented in the workshop seems to have been interpreted differently based on the home county of the workshop participant, or pointed out differences in market access opportunities across countries.

Bilateral Trade Disputes

Before the workshop, about one-fourth of Canadian and one-fifth of American participants believed that the number of trade disputes among NAFTA countries had decreased slightly since NAFTA (Table 15). After the workshop, this position was held by only seven percent of Canadians and six percent of Americans. In both report cards, none of the workshop participants reported believing that trade disputes had decreased significantly since NAFTA. Mexican participant opinions were the most pessimistic with responses indicating that they believed trade disputes had increased slightly or significantly since NAFTA or they did not know.

Compared to the first report card, the proportion of respondents in the second report card from Canada and the United States believing the number of disputes had stayed the same increased, with the Canadian proportion increasing more than three-fold (Table 15). While the workshop proceedings resulted in a decrease in the proportion of Canadians and Mexicans thinking that trade disputes had increased slightly, the impact on U.S. participants was just the opposite, as the proportion in this category nearly doubled between the first and second report card. The proportion of participants from all three countries who believed that trade disputes had increased significantly since NAFTA de-

Table 15: Change in the Number of Bilateral Trade Disputes Since NAFTA: Percent Response for Each Report Card by Country and Total.

Country	*Canada*		*United States*		*Mexico*		*Total*	
Report Card	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*
Response	*%*		*%*		*%*		*%*	
Decreased Significantly	—	—	—	—	—	—	—	—
Decreased Slightly	24	7	20	6	—	—	20	6
Stayed the Same	12	40	20	25	—	—	15	29
Increased Slightly	47	40	30	56	50	33	39	47
Increased Significantly	18	13	25	13	25	33	22	15
Don't Know	—	—	5	—	25	33	5	3

Source: Compiled from response data.

Table 16: Effectiveness of the NAFTA Dispute Settlement Mechanism in the Resolution of Trade Disputes--Percent Response for Each Report Card by Country and Total.

Country	*Canada*		*United States*		*Mexico*		*Total*	
Report Card	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*
Response	*%*		*%*		*%*		*%*	
Strongly Agree	24	40	10	31	—	—	15	32
Slightly Agree	71	60	50	56	75	67	61	59
Neutral	—	—	10	—	—	—	5	—
Slightly Disagree	—	—	20	6	—	—	10	3
Strongly Disagree	—	—	10	6	—	—	5	3
Don't Know	6	—	—	—	25	33	5	3

Source: Compiled from response data.

clined as a result of the workshop. While the majority of workshop participants believe that the number of trade disputes has increased since NAFTA, it also is possible that such disputes are simply more visible and emotional since NAFTA.

Workshop participants, to an overwhelming extent, slightly agreed that the NAFTA dispute settlement mechanism has been effective in the resolution of trade disputes (Table 16). Across countries and in total, the proportion holding such a position ranged from one-half to three-fourths of workshop participants. For the all-country average, the proportion of respondents strongly or

Table 17: Extension of NAFTA to the Western Hemisphere Based on the NAFTA Experience: Percent Response for Each Report Card by Country and Total.

Country	***Canada***		***United States***		***Mexico***		***Total***	
Report Card	***1st***	***2nd***	***1st***	***2nd***	***1st***	***2nd***	***1st***	***2nd***
Response	***%***		***%***		***%***		***%***	
Strongly Agree	41	20	35	19	50	33	39	21
Slightly Agree	53	67	30	56	50	67	41	62
Neutral	6	7	20	13	—	—	12	9
Slightly Disagree	—	—	10	6	—	—	5	3
Strongly Disagree	—	7	—	6	—	—	—	6
Don't Know	—	—	5	—	—	—	2	—

Source: Compiled from response data.

slightly agreeing with the statement increased from 76 to 91 percent, respectively, between report cards.

In both report cards, almost all of the respondents from Canada agreed either slightly or strongly with the proposition, as did all of the respondents from Mexico. However, participants from the United States were less optimistic about dispute resolution. Prior to the workshop, forty percent of U.S. participants either slightly or strongly disagreed that NAFTA dispute resolution mechanisms had been successful, or were neutral on the subject. Following the workshop, only twelve percent of the U.S. respondents disagreed with the statement.

Expanding NAFTA to the Western Hemisphere

On the question of whether the NAFTA experience supports the expansion of NAFTA to the Western hemisphere, there was overall agreement, with eighty percent of workshop participants strongly or slightly agreeing that expansion is justified based on experience to date (Table 17). On a country-by-country basis, 100 percent of Mexicans, 94 percent of Canadians, and 65 percent of Americans responding to the first report card either strongly or slightly agreed that NAFTA experience justified expansion. In the second report card, those registering some degree of agreement represented 100, 87, and 75 percent, respectively, of Mexican, Canadian, and American workshop participants.

Table 18: Likelihood of NAFTA Being Extended to the Western Hemisphere Within Ten Years: Percent Response for Each Report Card by Country and Total.

Country	*Canada*		*United States*		*Mexico*		*Total*	
Report Card	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*	*1st*	*2nd*
Response	*%*		*%*		*%*		*%*	
Not Likely	6	7	10	6	25	—	10	6
Somewhat Likely	76	60	60	75	50	33	66	65
Most Likely	12	27	20	19	25	67	17	26
Don't Know	6	7	10	—	—	—	7	3

Source: Compiled from response data.

Thus, on the question of expanding NAFTA to the Western hemisphere, workshop participants were in general agreement that the experience with NAFTA supports such an expansion. However, the results also suggest that perhaps participants from Canada and Mexico may perceive more potential benefits from such expansion, while participants from the United States may sense more potential competition and fewer benefits from expansion to a Free Trade Area of the Americas.

The final question in the report card on NAFTA asked workshop participants their opinion as to the likelihood of NAFTA being extended to the Western hemisphere within the next ten years. In the first report card, completed before the workshop, two-thirds of all participants felt it was somewhat likely that there would be a hemispheric agreement within ten years (Table 18). On an individual country basis, 76, 60, and 50 percent of participants from Canada, the United States, and Mexico, respectively, believed the prospect to be somewhat likely.

For each country, the proportion believing the prospect of a hemispheric-wide free trade area to be most likely was greater than those believing it to be not likely. Based on presentations and discussions during the workshop, participants appear to have become more certain and optimistic as to the possibility of a Western hemisphere free trade area within the next ten years. When asked by the moderator of the "reporting on the report card" session, workshop participants expressed considerably less optimism for a completed hemispheric-wide agreement by 2005, and considerably more optimism that an agreement will be completed by 2020.

CONCLUDING COMMENTS

The **Report Card on Agriculture under NAFTA** was designed to address the important issue of *What Have We Learned from the Experiences of NAFTA?* Specific questions focused on both the general agriculture sector and commodity-specific sub-sectors, as well as a series of issues including fair competition, trade-distorting subsidies, market-access opportunities, dispute resolution, and extension of NAFTA to the Western hemisphere.

Workshop participants were asked to complete the report card both during the opening session of the workshop and again following the closing session of the workshop. The purpose of double-report-card format was to determine if learning had occurred during the workshop or if opinions had changed in response to potentially new information. Comparing the report card results provides evidence that "learning" did occur during the workshop.

Workshop participants were from Canada, the United States, and Mexico, representing universities, government agencies, and production agriculture. Since participation was dominated by the United States (49 percent) and Canada (41 percent), the results of the report cards are not intended to be a statistically representative sample. Rather, the report cards are intended simply to reveal the opinions of an interested and reasonably-well-informed set of workshop participants concerning what we have learned from the NAFTA experience.

As suggested in the introduction, the report card results tend to be both interesting and informative. On some issues, considerable agreement exists among workshop participants from the three NAFTA countries. On other issues, particularly commodity-specific issues, there are varying degrees of disagreement among workshop participants, often reflecting relative positions of competitive advantage and disadvantage. Based on the report card, it appears that NAFTA is receiving a passing grade on agriculture and that the progress report is positive to date and optimistic with respect to the future.

APPENDIX

Report Card on Agriculture Under NAFTA (sample questionnaire)

1. Which country do you represent?
   Canada; United States; Mexico

2. In facilitating trade in agriculture generally, to what extent has NAFTA benefitted your country?
   Large benefit; Small benefit; No change; Small deficit; Large deficit; Don't know

3. In facilitating trade in agriculture generally, to what extent has NAFTA benefitted other NAFTA countries?
   Large benefit; Small benefit; No change; Small deficit; Large deficit; Don't know

4. Considering the primary, industry sectors and other sub-sectors of agriculture and food chain in your country, what benefits, if any, has each derived form NAFTA?

   4.1 Primary agriculture sector
   Large gain; Small gain; No change; Small loss; Large loss; Don't know

   4.2 Food processing industry sector
   Large gain; Small gain; No change; Small loss; Large loss; Don't know

   4.3 Beverage processing sector
   Large gain; Small gain; No change; Small loss; Large loss; Don't know

   4.4 Grains and oilseeds sub-sector
   Large gain; Small gain; No change; Small loss; Large loss; Don't know

   4.5 Red meat sub-sector
   Large gain; Small gain; No change; Small loss; Large loss; Don't know

4.6 Dairy sub-sector
Large gain; Small gain; No change; Small loss; Large loss; Don't know

4.7 Poultry sub-sector
Large gain; Small gain; No change; Small loss; Large loss; Don't know

4.8 Horticulture sub-sector
Large gain; Small gain; No change; Small loss; Large loss; Don't know

5. To what extent do you agree with the following statement:
NAFTA has promoted conditions of fair competition in agriculture.
Strongly agree; Slightly agree; Neutral; Slightly disagree; Strongly disagree; Don't know

6. To what extent do you agree with the following statement:
NAFTA helped reduce trade distorting subsidies in my country.
Strongly agree; Slightly agree; Neutral; Slightly disagree; Strongly disagree; Don't know

7. To what extent do you agree with the following statement:
NAFTA helped reduce trade distorting subsidies in other NAFTA countries.
Strongly agree' Slightly agree; Neutral; Slightly disagree; Strongly disagree; Don't know

8. To what extent do you agree with the following statement;
NAFTA improved market access opportunities.
Strongly agree; Slightly agree; Neutral; Slightly disagree; Strongly disagree; Don't know

9 Since NAFTA, bilateral trade disputes in agriculture have;
Decreased significantly; Decreased slightly; Stayed the same; Increased slightly; Increased significantly; Don't know

10. To what extent do you agree with the following statement:
The dispute settlement mechanism under NAFTA has been effective in the resolution of trade disputes.
Strongly agree; Slightly agree; Neutral; Slightly disagree; Strongly disagree; Don't know

11. To what extent do you agree with the following statement:
The experience under NAFTA supports extending the agreement to the Western hemisphere.
Strongly agree; Slightly agree; Neutral; Slightly disagree; Strongly disagree; Don't know

12. What is the likelihood of having an extended agreement to the Western hemisphere in place in the next ten years.
Not likely; Somewhat likely; Most likely; Don't know

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Other Workshop Publications

1995 - ***UNDERSTANDING CANADA/UNITED STATES GRAIN DISPUTES.*** R.M.A. Loyns, Ronald D. Knutson, Karl Meilke (editors). University of Manitoba, Texas A&M University, University of Guelph. April.

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1997 - ***HARMONIZATION / CONVERGENCE / COMPATIBILITY IN AGRICULTURE AND AGRI-FOOD POLICY: CANADA, UNITED STATES AND MEXICO.*** R.M.A. Loyns, Ronald D. Knutson, Karl Meilke, Daniel Sumner (editors). University of Manitoba, Texas A&M University, University of Guelph, University of California (Davis). October.

1998 - ***ECONOMIC HARMONIZATION IN THE CANADIAN/U.S./ MEXICAN GRAIN-LIVESTOCK SUBSECTOR.*** R.M.A. Loyns, Ronald D. Knutson, Karl Meilke (editors). Texas A&M University and University of Guelph. December.

1999 - ***POLICY HARMONIZATION AND ADJUSTMENT IN THE NORTH AMERICAN AGRICULTURAL AND FOOD INDUSTRY***. *R*.M.A. Loyns, Ronald D. Knutson, Karl Meilke and Antonio Yunez-Naude (editors). Texas A&M University, University of Guelph and El Colegio de México. February 2000.

These publications and early releases are available through the Internet on Farm Foundation's web site:

http://www.farmfoundation.org/policysystems.htm

This is the sixth in a series of annual workshop proceedings designed to produce economic analysis and information on Mexico/United States/Canada trade and policy issues in their agricultural/agri-food industries. The workshops are conducted with the objective of contributing to reduction of trade and policy disputes within the NAFTA countries through improved understanding of market structure, government policy, and trade flows. The 2000 workshop undertook to review what has been accomplished in agricultural and food markets under free trade agreements in relation to NAFTA objectives.

This workshop was held in San Diego, California in March, and like earlier programs, was attended by academic and government economists, and industry and interest group representatives. This publication consists of the papers and discussion comments presented at the workshop. The publication is intended for readers with a general interest in the North American agricultural and food sector, and effects of trade agreements on markets and trade. The material is also intended to be relevant to decision makers at all levels of the food chain to inform on economic relationships and market reality as a means to reducing trade and policy stress.

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