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**Proceedings of the First  
Canada/U.S. Agricultural and Food  
Policy Systems Information Workshop**



**Understanding  
Canada/United States  
Grain Disputes**



**Edited by**

**R.M.A. Loyns  
Donald D. Knutson  
Karl Mellke**

**Proceedings of the First Canada/U.S. Agricultural and Food  
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**Understanding Canada/United States Grain Disputes**



**UNIVERSITY  
of GUELPH**



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## FOREWORD

The past decade has produced some significant developments in trading relations between Canada and the United States. On one side, great progress has been achieved through the signing of the Canada/United States Free Trade Agreement (CUSTA), and the next step which included Mexico (the NAFTA). These agreements established dispute avoidance and settlement mechanisms with the goal of reducing trade tensions between the two countries. Unfortunately, what followed were a series of serious trade disputes, challenges, duties and countervailing duties. As recently as August 1994, border controls on wheat were imposed and a new form of dispute settlement mechanism...the Canada/US Joint Commission on Grains...was employed.

Agricultural economists recognize that freer trade among the United States, Canada and Mexico will require basic structural and domestic policy adjustments in all three countries. In interacting among themselves as well as with producers, agribusiness and policymakers, it has become clear that there is a lack of understanding of each others policies and policy development processes. There are also many voids in the data required to understand and analyze the direction and magnitude of change that is likely to occur. Further, it is anticipated that the rate and magnitude of adjustment required in all three countries will intensify over the next several years.

We believe that objective and policy relevant information, delivered to decision makers at all levels can result in more harmonious trade and policy relations. For the world's largest trading partners, we think this is a useful goal.

In late 1994, a three to five year process was initiated, dependent on sustained funding, to develop a means to communicate policy information. The initial step in the process was the First Agriculture and Food Policy Systems Information Workshop held in Rio Rico, Arizona March 3 and 4, 1995. The Workshop focussed on grains disputes, which is the primary subject matter of this publication. The Workshop was also used to identify means and subject matter for subsequent activities, of the group, to further the basic objective of harmonizing trade and policy relations among the United States, Canada and Mexico.

The organizing committee for this Workshop included Jack Gellner and Bruce Kirk from Agriculture Canada, Ron Knutson from the Agriculture and Food Policy Center, Texas A & M University, Karl Meilke, Department of Agricultural Economics and Business, University of Guelph, and Al Loyns, Department of Agricultural Economics and Farm Management, University of Manitoba. Seed funding for the preparatory work and

workshop was obtained from several sources. The Farm Foundation and USDA supported part of the contribution of several of the United States attendees. Agriculture and Agri-Food Canada provided support for the Canadians and for this publication. The Universities of Guelph and Manitoba, and Texas A & M supported the three principle academics in planning the Workshop and completing this publication.

The responsibility and funding of subsequent activities of the group will vary according to topic, location and nature of communication. For this publication, three individuals from the University of Manitoba and an Agriculture Canada support person deserve special credit. Alex Pursaga provided organizational support before and during the Workshop, and he took the major responsibility for ensuring that papers were delivered. Miriam Cherogony provided valuable editorial support. Bonnie Warkentine did all the final computer work to produce a hard copy for the printer, as well as designed the cover. Donna Moore Walton at Agriculture and Agri-Food Canada helped organize and run the Workshop. Many other individuals and groups provided various forms of support and will be utilized further as we move forward.

The editors hope the policy information process and this, the first publication, will help move Canada and the United States towards a more harmonious trading environment.

R.M.A. Loyns  
University of Manitoba

Ronald D. Knutson  
Texas A & M University

Karl Meilke  
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March 31, 1995

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**Richard R. Barichello** is currently on leave as a Visiting Scholar at Harvard Institute for International Development (HIID) in Cambridge, Mass, from the Department of Agricultural Economics, University of British Columbia. He joined UBC in 1974 and was Department Head from 1988 to 1994. Prior to being Head, he was Senior Resident Advisor in Jakarta, Indonesia with HIID working in trade and industrial policy. He has also worked with HIID in Indonesia and Vietnam, the World Bank in Indonesia and Belize, the Thai Development Research Institute in Thailand, CIDA in Vietnam, and the UBC/Dekaban Foundation in Poland. He was the Director of Research on the Commission of Inquiry into the British Columbia Tree Fruit Industry. His research has been on analyzing agricultural, trade and industrial policies, with particular attention to marketing institutions, quota markets, empirical analysis of industry competitiveness, human capital investments, and various issues in economic development in developing countries. His Ph.D. degree is from the University of Chicago.

**Colin A. Carter** is Professor of Marketing in the Department of Agricultural Economics, University of California in Davis. He completed a Ph.D. at the University of California in 1980 and was on staff at the University of Manitoba from 1980 to 1986. Since 1986 he has held an academic and research position at University of California, Davis. Dr. Carter's intensive research output is in the areas of trade and grain marketing but he is a frequent author on matters of public decision making and public interest groups. While on study leave in Australia in 1994 he researched the Australian grains markets and the Australian Wheat Board, and co-authored an ABARE Research Report *The Political Economy of United States Agriculture* (Brooks and Carter, 1994). In 1993, Dr. Carter undertook a special study for Agriculture Canada related to the establishment of a North American Barley Market. The report, *An Economic Analysis of a Single North American Barley Market*, has taken its place in Canadian grain marketing literature as "the Carter Report". His expertise includes strong knowledge of the Canadian and United States grain

markets, and trade theory and trading relations between these two countries as well as their role and position in global agricultural trade. Dr. Carter was a Kellogg Fellow from 1986-89 and has received three research awards from professional associations for published research.

**Jack Gellner** was raised on a mixed farm in Saskatchewan. He holds a Bachelor's degree (1971) from the University of Saskatchewan and a Master's degree (1976) from the University of Guelph, both in Agricultural Economics. He is the Director of the Industry and Policy Analysis Division, Policy Branch at Agriculture and Agri-Food Canada. Prior to joining Agriculture Canada after his graduate work at Guelph, he worked for three years in the Agriculture Division of Statistics Canada. From 1988 to 1994 he chaired the Committee of Experts on Net Benefit Measurement under the National Tripartite Stabilization Program.

**Douglas D. Hedley** was born and raised on a hog, beef and grain farm in Southern Ontario. He holds a Bachelor's degree (1965) from the University of Guelph, a Master's degree (1968) and Ph.D. (1970) from Michigan State University, all in Agricultural Economics. He has worked in Colombia as a Rockefeller Overseas Scholar, and in Nigeria with the International Institute of Tropical Agriculture. As well, he was a Visiting Professor at Gadjad Mada University, Indonesia with the Rockefeller Foundation and returned to Indonesia with Winrock International to advise government on agricultural policy development. Dr. Hedley began his work in Agriculture Canada in 1972-76, returning to Agriculture Canada 1979-85. Following his most recent period in Indonesia, he returned to Agriculture Canada in 1988, as Director General, Policy Coordination and Analysis Directorate, Policy Branch, and now, Director General, Industry Performance and Analysis Directorate. He is the founding Editor-in-Chief of *Agricultural Economics*, the journal of the International Association of Agricultural Economics.

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**Bruce Kirk** is Director, Policy Development Division, Adaptation and Grain Policy Directorate, Agriculture and Agri-Food Canada located in Winnipeg. Prior to joining Agriculture Canada he held positions with the Province of Manitoba, Statistics Canada and the Canada Transportation Committee. He joined Agriculture Canada in Ottawa in 1980 and held positions in the Livestock section and the Net Benefits Secretariat. He has held his present position as Director of the Policy Division for three years. He completed his Ph.D. in Agricultural Economics at the University of Manitoba in 1988.

**Ronald D. Knutson** is the Director of the Agricultural and Food Policy Center at Texas A & M University and serves as a professor and extension economist in agricultural policy and marketing. The Center's purpose is to provide input to the Agriculture Committees of the Congress on the economic impacts of farm, food, and rural policy proposals. He served as chief economist in the Agricultural Marketing Service of USDA from 1971 to 1973, and in 1973 was named Administrator of the Farmer Cooperative Service. Later that year he accepted the position at Texas A & M University. Dr. Knutson is the author of over 300 publications on agricultural policy and marketing, and a college textbook titled *Agricultural and Food Policy*, 3rd edition. In 1983, he received the Texas A & M Alumni Award for his outstanding performance in public policy education. In 1987, he received a Quality of Communication Award from the American Agricultural Economics Association. In 1995, Dr. Knutson received the Lifetime Service Award from the Southern Agricultural Economics Association. He holds a Ph.D. from the University of Minnesota.

**R.M.A. Loyns** is Professor of Marketing in the Department of Agricultural Economics and Farm Management, University of Manitoba and one of the organizing committee members for the Policy Information Workshops. His professional interests have spanned consumer economics, marketing boards, agricultural development, and more recently grain marketing. After completing a Ph.D. at the University of California, Berkeley in 1968, he began his academic and research career at the University of Manitoba where he has been employed since then. He has held positions in Ottawa: Research Economist, Prices and Incomes Commission (1970); Research Director, Food Prices Review Board (1973-74) and; Assistant Deputy Minister, Consumer and Corporate Affairs (1974-76). He has held positions on several consultative committees in Consumer and Corporate Affairs and Agriculture Canada, and has international experience in several African countries, China and England. He was a member of the National Tripartite Stabilization Program, Expert Committee, from 1988 to 1994.

**Karl Meilke** is a professor in the Department of Agricultural Economics and Business, University of Guelph. He joined the University of Guelph in 1973, after completing a Ph.D. in agricultural and applied economics at the University of Minnesota. His research interests include the evaluation of the effects of domestic and international agricultural policies on world commodity markets and he maintains an active interest in trade negotiations. He is a former chairman of the International Agricultural Trade Research Consortium, a group of more than 125 academic and government economists interested in agricultural trade problems. He was a member of the National Tripartite Stabilization Program Expert Committee within Agriculture Canada from 1988 to 1995.

**A.J.W. Pursaga** is currently a doctoral candidate in the Department of Agricultural Economics and Farm Management at the University of Manitoba. He has worked extensively in policy and program development roles for the Province of Manitoba and the Government of Canada. He has participated in the Canada United States Trade Agreement negotiations at the officials level, developed initiatives in economic growth potential of the service industries, chaired a national committee on coordinated procurement, and worked extensively in trade development in China and India. He assisted in coordinating the workshop and in producing this publication.

**Robert Seguin** is the Assistant Deputy Minister of the Policy and Farm Finance Division of the Ontario Ministry of Agriculture, Food and Rural Affairs. He has worked for Agriculture Canada in New Brunswick and Ontario. Since 1980 he has worked for the Ontario government. As the Assistant Deputy Minister, he represents the department on all aspects of agriculture and food sector policy. His specific interests include farm finance policy, safety nets, farm taxation, trade policy and federal provincial relations. He has served on several national agriculture policy committees.

**Daniel A. Sumner** is the Frank H. Buck, Jr., Professor in the Department of Agricultural Economics at the University of California, Davis. His research and writing focuses particularly on the consequences of farm and trade policy on agriculture and the economy. Among his current projects is research on reform of United States agricultural policy for the American Enterprise Institute. Prior to beginning his current position in January 1993, Sumner was the Assistant Secretary for Economics at the United States Department of Agriculture. As Assistant Secretary, he was involved in policy formulation and analysis on the whole range of topics facing agriculture and rural America—from food and farm programs to trade, resources, and rural development. In his role as supervisor of Agriculture's economics and statistics agencies, Sumner was also responsible for data collection, outlook and economic research. From 1978 to 1992 Sumner was a Professor in the Division of Economics and Business at North Carolina State University. He spent much of the period after 1986 on leave for government service in Washington, D.C. He served during 1987-88 as a Senior Economist at the President's Council of Economic Advisers and was Deputy Assistant Secretary at the USDA from 1990-92. Sumner holds a Ph.D. in economics from the University of Chicago.

**William W. Wilson** is a professor of Agricultural Economics at North Dakota State University. He received his Ph.D. from the University of Manitoba in 1980 and was a visiting scholar at the Food Research Institute at Stanford University in 1987/88. His primary research interests include international marketing and trade, competition and strategy. He has conducted numerous studies on issues related to competition in the North American grain industry, as well as studies on grain quality and international competition. In addition to his research responsibilities he is a Board Member of the Minneapolis Grain Exchange; has served on the Advisory Committee for the Federal Grain Inspection Service; and was one of the principal investigators of the Office of Technological Assessment study on international grain quality.

**Robert E. Young II** is the co-director of the Food and Agricultural Economics Research Institute (FAPRI) at the University of Missouri. FAPRI's mission is to evaluate for policy makers the impacts of changes in farm and trade policy on the agriculture sector. Previous to his current position, Dr. Young was the chief economist for the United States Senate Committee on Agriculture. In this capacity, he was responsible for making policy recommendations on all aspects of farm bill issues. Bob received his B.S., M.S., and Ph.D. from the University of Missouri.

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**AGRICULTURE AND FOOD POLICY SYSTEM INFORMATION WORKSHOP**  
**ON**  
**UNDERSTANDING CANADA/UNITED STATES GRAINS DISPUTES**

*R. M. A. Loyns, Ronald D. Knutson and Karl Meilke*

**INTRODUCTION AND PURPOSE**

Agriculture and food product trade between Canada and the United States is important in absolute terms and is growing. Much of the trade is so well established that it is taken for granted in terms of trading patterns and political acceptability. Implementation of the CUSTA and NAFTA imply that trading relations should be improved and trade increased. However trade relations in a few areas have deteriorated in recent years and trade disputes have occupied a significant share of the political and bureaucratic agenda in Canadian/United States relations. As well, these disputes have added a degree of market uncertainty and cost to selected agricultural markets.

These disputes are sourced, in part, in misconceptions about the nature and impacts of policies, programs and institutions on both sides of the border. There would appear to be great value then in *generating objective information which could be used in promoting greater mutual understanding of the agricultural policy systems in both countries*. The immediate need is to improve the understanding and actions of decision makers in both the United States and Canada. In order to have this effect it is important to influence grassroots opinion, farm and other organizations, the media, professionals advising decision makers and the agricultural bureaucracy. That is a tall order, but it is the goal adopted by the planners of the Workshop on Canada/United States Grain Disputes.

The overall objective of the Workshop was to initiate a process directed at fostering improved mutual understanding by decision makers of policies, programs and institutions in Canada and the United States. The end result is intended to be a more harmonious and less disruptive trading environment for agricultural and food products between the two countries. This in turn should contribute to capturing the maximum gains from more open trade and allow scarce political and bureaucratic time to be spent on other issues. The process will involve compiling, collating, some development of, and distribution of policy relevant information describing and evaluating policy and policy instruments in both

countries. The first Workshop focussed on grains disputes because that issue had a high profile in Canada/United States relations throughout 1994 and early 1995.

The Workshop also provided the opportunity to broaden the scope of participation in planning for subsequent activities. In fact, a second workshop has already been planned and, in addition to this publication, a series of publications have been planned by several extension economists for the northern tier states. These developments will be discussed in more detail in the last section of this publication.

## **THE WORKSHOP PROGRAM**

The organizing committee holds the view that to understand policy differences and trade disputes between Canada and the United States, it is necessary to go back to basics. First, we need to appreciate where policy comes from, and how policy decisions are made. Second we need to understand current policy and program initiatives, including the structure, legal framework and responsibilities of major institutions. For example, a major marketing institution—The Canadian Wheat Board—has drawn much of the allegations from the United States side in the grains disputes. From the Canadian side, there has been finger pointing at the EEP program.

In order to address all of these areas, the Workshop program was built around three themes:

- 1) How Decisions are Made;
- 2) Policy Systems Overview; and
- 3) Understanding the Canada/United States Grains Disputes.

The papers which follow were written to reflect these themes, and are presented in the context of these themes.

In the first paper, Gellner and Hedley, who are economists with many years experience in policy development at the federal level in Canada, indicate the process of legislative and regulatory decision making in the Canadian system. A short paper by Seguin adds a provincial perspective to the main paper. Knutson provides a counterpart description for United States agriculture and food policy formulation focussed on the United States policy mainstay, the Farm Bill. These papers provide a detailed and informative analysis of the different structure of governments in the two countries, and some of the political and institutional forces which influence decision making.

In "Policy Systems Overview" Barichello on the Canadian side, and Sumner on the United States, provide overviews of the policy and program framework for agricultural policy in both countries. Barichello notes the commodity orientation of Canadian policy, the importance of safety nets, and the role of marketing boards. He concludes that Canadian agricultural policy has evolved significantly in two decades but is headed toward a significant period of devolution resulting from the new priorities of fiscal restraint and international competitiveness. Sumner begins his paper with the opposite message. United States policy has changed very little in many decades. It is clear from his

presentation that direct producer support, and support to consumers through "agriculture" programs are much more important than they are north of the border.

The third theme "Understanding the Canada/United States Grains Disputes" brings together two similar papers and two very different approaches to the task. Kirk, and Wilson and Johnson describe the grain marketing systems in the two countries. Kirk takes a historical approach, and appropriately, ends with the Federal Budget of February 28 which will have far reaching impacts on Canada's grains sector, partly because it removed a major perceived irritant—the grain transportation subsidy. Wilson and Johnson provide an analytic approach indicating the evolution of the United States northern states grains sector in the past decade. Their position is clear—the northern states and the Canadian prairies should evolve into a form of common grain producing and marketing region with no artificial trade or domestic policy barriers.

Carter, and Young, Adams and Helmar illustrate the key features and impacts of trade disputes in a very different fashions. Carter's political economy capability is highlighted in a useful treatment of economists and their role in policy debate. He reviews several studies economists have undertaken which measure some of the impacts of trade disputes in grain, and the role of two major factors in Canada—the Canadian Wheat Board and the transportation subsidy. Young, Adams and Helmar on the other hand, provide original research results which are directed at analysing the impacts of removing one of the trade distortions between Canada and the United States. This analysis was conducted by FAPRI and considers the impact of reduced EEP subsidies. The results provide interesting reading.

The following set of papers were produced with the basic purpose of generating informed, objective, policy relevant information. We have attempted to present all the material in readable form—we want to communicate. We hope that these objectives are achieved; we leave it to readers to decide.



## **THEME: HOW DECISIONS ARE MADE**

### **OBJECTIVE**

To provide an overview of the policy process as it exists in the agriculture and food industry in both countries; including the identification of the key responsibility centres, a description of how the key players influence decision makers in the key responsibility centres; and some evaluation of how effectively the system operates.



# HOW POLICY DECISIONS ARE MADE IN CANADIAN AGRICULTURE

*Douglas D. Hedley and Jack A. Gellner*

## OVERVIEW

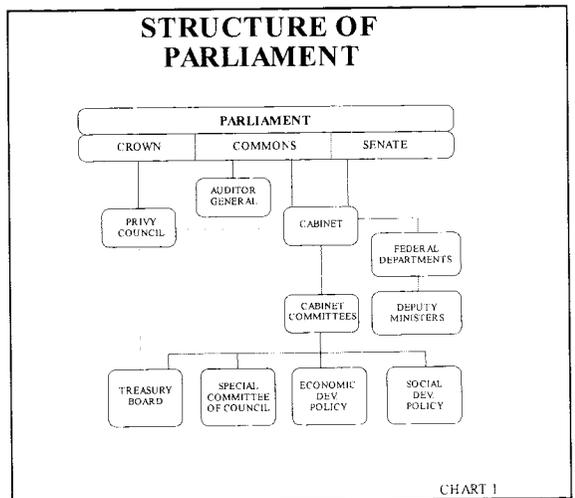
### Structure of Elected and Appointed Representation

The British North American (BNA) Act of 1867 was the statute drawn up by the Fathers of Confederation that brought the federation of provinces into existence, with sanction from the British Crown. It establishes the federal system by which Canada is governed.

Canada is a constitutional monarchy and governs itself through the parliamentary-cabinet system which it adopted from the British Parliament. For Canadians, this has meant a democratic government with a Cabinet responsible to the House of Commons and the House of Commons answerable to the people.

The Parliament of Canada is made up of three components: the Crown, the Senate and the House of Commons (Chart 1). Parliament exercises the legislative function of the Government, while Cabinet exercises the executive function. The judicial function is separate from Parliament and is executed by the provincial and federal courts.

The House of Commons is the major law making body. It has 295 members. Each constituency or riding in Canada is represented by the candidate who gets the largest vote in an election. The regional distribution of seats is



based on population. The Senate has 104 members. Senators are nominated by the Prime Minister and are not required to hold an elected office. The Crown is represented by the Governor General who is appointed by the Queen on the recommendation of the Prime Minister.

The system is based on political parties whose origins have included regional considerations and location on the common left-centre-right political spectrum. The party that wins the largest number of seats in a general election ordinarily forms the government and its leader becomes Prime Minister. The second largest party becomes the official Opposition and its leader becomes Leader of the Opposition. All important legislation and money bills are introduced by government and all members of the governing party must vote along party lines or face disciplinary measures by the party. Free votes are rare and usually deal with moral issues, such as the death penalty or abortion. As long as the government can keep the majority support in the House of Commons, it can pass any legislation it sees fit. If it loses its majority support in the House of Commons, it must either attract support from other parties to assure passage of legislation, make way for a new government formed from the opposition party or call a general election.

There is no mention of a Prime Minister or a Cabinet in the British North America Act of 1867. Instead, the Privy Council is the legal body that has the responsibility of advising the Crown and it is the legal foundation for the cabinet government. Ministers are appointed Privy Councillors on the advice of the Prime Minister and the appointment is for life. Therefore, the Privy Council is a large body of Ministers, ex-Ministers, and other appointees. Yet, only the current Cabinet Ministers meet and advise the Governor General.

The Cabinet is chaired by the Prime Minister. Its main function is to present a program of legislation to the House of Commons. It establishes overall governmental priorities and makes major policy decisions. The Prime Minister, while in reality is the leader of the winning party, is nominally appointed by the Governor General. The Prime Minister appoints the Cabinet Ministers from members of the Commons or Senate. The Ministers collectively are answerable to the House of Commons for the policy and conduct of the cabinet as a whole. They must appear in Parliament to defend government bills, answer daily questions on government actions or policies, and rebut attacks on such actions or policies. To assist with policy making at the highest level, the Cabinet is divided into cabinet committees. Under the current cabinet committee structure, due to an increasing debt and the need for improved control over expenditures, only Cabinet and Treasury Board can approve expenditures. Cabinet retains the authority to finally approve all expenditures and to ratify non-financial matters.

### **Budget Systems and Allocations**

In the Federal Government, the Budget, including the Appropriations Act, serves three purposes: (1) to determine resource requirements; (2) to obtain authorization for planned expenditures; and (3) to provide the basis for budgetary control.

The Minister of Finance is responsible for the government's fiscal policy and manages the Consolidated Revenue Fund to ensure that cash requirements are met. The Minister of Government Services fulfils the role of Receiver General for Canada. The Receiver General controls the Consolidated Revenue Fund and prepares the Public Accounts, which are the official financial report of the Government of Canada. The Auditor General, who reports directly to Parliament, is responsible for verifying that the Public Accounts are accurate and assessing the operations of government departments. The Treasury Board has the legal responsibility for the authorization of expenditures and is generally responsible for allocating resources to support the approved policies and programs of the Government. It is also the employer of the Public Service and it oversees the management of the government as a whole.

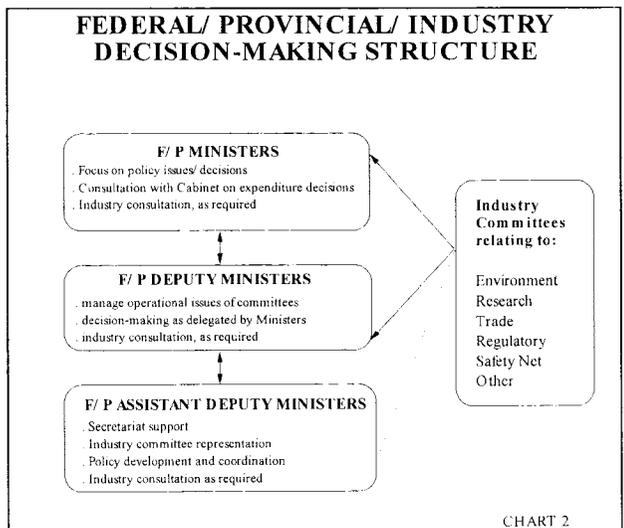
There are currently 24 Cabinet Ministers who are responsible for Federal Departments. Each Department has a Deputy Minister, normally a career public servant, who is appointed by the Prime Minister, and is responsible for day-to-day management and ensuring that the needs of the Minister are met.

## CONSTITUTIONAL BASIS FOR AGRICULTURAL POLICY

### Constitutional Considerations

The basis for the current federal-provincial structure is found in Section 95 of the Constitution Act, which identifies agriculture as an area of concurrent jurisdiction of federal and provincial governments. However, agriculture is not an isolated area. Actions in the areas of transportation, health, education and trade all affect agriculture policy. These areas are either under the jurisdiction of federal or provincial governments. This jurisdictional cross-over complicates the policy process which requires consensus on each issue and often slows and may dilute the decisions.

There are currently no prescribed structures for coordinating relations between federal and provincial governments (Chart 2). Relations are

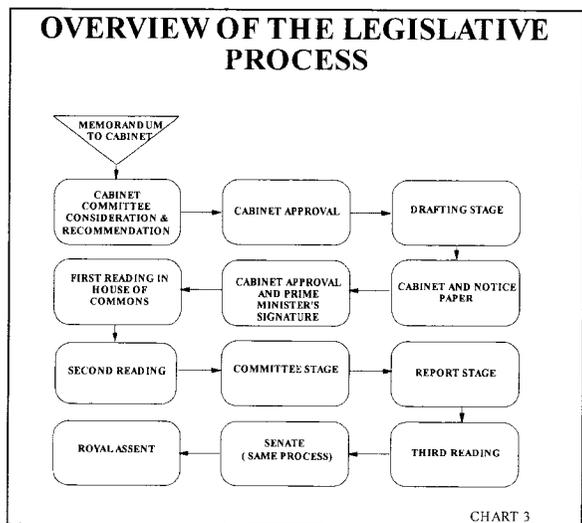


handled through ad hoc meetings. Ministers of Agriculture meet 2-3 times per year including an annual conference. Deputy Ministers meet 3-4 times a year and Assistant Deputy Ministers have almost monthly meetings and conference calls. These meetings are generally chaired by federal officials, except for Ministers meetings which are co-chaired by the federal Minister and the Minister of the host province. A number of policy-oriented federal-provincial-industry and federal-provincial committees report to the Deputy Ministers or Ministers on various policy issues in the areas of environment, regulatory, trade, research, safety nets, and others.

### Legislative Considerations

There is no law guiding policy formulation. Policy makers must conduct the process so that the results of their work will not be overturned by legal challenge, i.e., deemed non-constitutional.

The legislative process begins with the development of a policy (Memorandum to Cabinet) which is submitted to Cabinet by the sponsoring Minister for approval (Chart 3). Cabinet approval of the policy authorizes the drafting of the proposed legislation, a process carried out for the government by the Legislation Section of the Department of Justice. After the drafting stage, various proofs of the bill are printed, as required, for consideration by the Cabinet Committee on Legislation and House Planning.



Once the draft bill is in a form that is satisfactory to the sponsoring Minister, it must be approved by Cabinet and signed by the Prime Minister. When Cabinet approval has been given, the bill is ready to be introduced in Parliament, where it is read for the first time and printed. At the second reading stage, the principle of the bill and its broad purposes are fully debated and voted upon. After approval in principle on second reading, the bill is then studied by the appropriate Parliamentary Committee, clause by clause. The Committee reports its findings, including proposed amendments to the House to be voted upon. The third and final reading allows for a review of the bill in its final form.

When a bill has had three readings in the House of Commons, it is then sent to the Senate to be read, debated and possibly amended, in a process similar to that which occurred

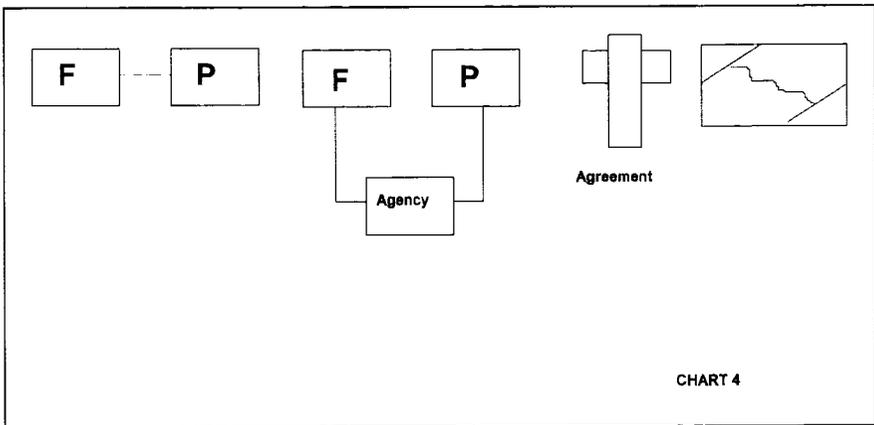
in the House. Once the bill is passed by both the House of Commons and the Senate, Royal Assent is given by the Governor General and the bill becomes an Act of Parliament.

Employees in the Department of Agriculture and Agri-Food are involved in the federal legislative process. Some are called upon to work on revisions of statutes for which their Minister is responsible. Others may be asked to participate in the development of agriculture and agri-food policies or programs requiring legislative measures. A recent Department of Agriculture Act extended the mandate of Agriculture Canada to formally include the agri-food and agribusiness sectors.

### Administrative Roles of the Federal/Provincial Governments

Administrative delegation is an important aspect of the flexibility of the Canadian Constitution. There are provisions for federal responsibilities to be delegated to provinces and vice versa.

There are also several variations on the delegation of authority to agencies, boards and commissions in order to carry out coordinated programs in areas where federal and provincial authorities coincide (Chart 4). These approaches vary by the complexity of the issue and whether or not it is national or regional in scope.



The first approach is to decide on a split of responsibilities where provincial governments handle regional aspects and the national government handles larger aspects of the same problem. In essence, each level of government uses its power within a prescribed scope of activity.

The second variant is to create an "arms-length" agency to receive delegated powers from the federal and provincial governments. This is usually done when it is felt that a separate body could act more efficiently in responding to the needs of the public.

A third method is the creation of an umbrella agreement that delegates planning and management authority under a set of prescribed rules and allocates resources through a joint management committee. This approach is largely reserved for areas where a working arrangement can be struck easily and efficiently.

The policy decision-making process in the agri-food industry is becoming increasingly complex whereby the federal government, the provinces and industry groups must be able to integrate and include the interests of all relevant players. The Federal-Provincial Relations Office monitors ongoing concerns in intergovernmental relations, offers advice to departments in their dealings with their provincial counterparts and tracks issues with federal-provincial aspects through Parliament. The Department of Agriculture and Agri-Food also has a group which handles intergovernmental affairs.

### **Trade and Domestic Policy Mandates**

The Department of Agriculture and Agri-Food develops and implements national policies and programs in support of the agriculture and agri-food sector with the stated objective of assuring a dependable supply of safe, nutritious food at reasonable prices to consumers, with equitable returns to producers and processors. The primary responsibility for international trade rests with the Department of Foreign Affairs and International Trade.

The Department's trade policy mandate is to improve and secure market access for agri-food products, improve trade rules, and work toward reducing unfair competition in domestic or foreign markets. This is done through inter-departmental consultation with Foreign Affairs and International Trade, government-to-government contact, bilateral relations, discussions in international organizations, and consultations and negotiations under trade agreements.

Agriculture and Agri-Food also participates actively in the agriculture programs of various international organizations such as the OECD, FAO, IICA and APEC.

## **INFLUENCES ON THE POLICY PROCESS**

### **Farmers and Farm Organizations**

Farmers as individuals can influence the policy process by making representation directly to federal and provincial ministers and officials. While this is done to some extent, most representation is done through farm organizations.

There are a large number of farm organizations, which vary considerably in structure depending on their national, regional or sectoral focus. The most prominent national general farm organization is the Canadian Federation of Agriculture (CFA). Its membership includes affiliated provincial federations and commodity groups. Commodity groups include some

national umbrella groups, which also have provincial affiliates, as well as groups which have regional mandates. Umbrella organizations, such as the Canadian Federation of Agriculture, represent the broad spectrum of interests of farmers. Their most difficult challenge is to deal with the often strongly conflicting interests of their members.

In addition to the general organizations there are a large number of regional and sectoral groups. Most of the sectoral groups have national umbrella organizations which try to resolve regional interests of the provincial groups. Examples include the Canadian Cattlemen's Association, the Canadian Pork Council, the Canadian Horticulture Council and the Dairy Farmers of Canada. The major exception is the grains and oilseeds sector, where a large number of groups exist, but without one national organization in place.

There are also important regional organizations which tend to promote provincial interests at the national level. Examples include the "Union des producteurs agricoles" (UPA) which operates as an umbrella organization for sectoral groups in the province of Quebec. Another is the Ontario Agriculture Commodity Coalition, which is a less formal coalition of sectoral groups, to promote common interests in Ontario.

Contacts with Ministers offices, Members of Parliament and federal and provincial officials are the key to farm organizations lobbying efforts. Those which are most successful tend to have informal contacts at many levels. For the most part, they operate on their own and do not use professional lobbyists. Given the often conflicting interests among the groups, representation tends to reflect sectoral or regional interests rather than national perspectives.

## **Agribusiness**

Agribusiness firms also can make direct representations to influence policy decisions. The extent to which they can have an influence depends in part on their size and importance to regional economies. For the most part firms make representations through associations and umbrella organizations which promote common interests.

There are a large number of agribusiness firms representing all levels of the food chain. There are associations for primary processors, further processors, importers, exporters, distributors, retail grocers and food services firms. In some cases the associations represent national points of view but more often they reflect sectoral interests.

There are varying degrees of vertical integration in the different commodity sectors. For the most part, however, the interactions of the players at the different levels in the food chain are confrontational rather than cooperative. It is fair to say, nevertheless, that the need for vertical alliances is becoming more recognized.

**Consumer Groups**

Consumers tend to have diverse interests and for the most part they are not formally organized. Because of their large numbers and their diversity, consumer groups are difficult to fund. Hence, influence on the policy process is not well organized and not integrated. Additionally, food represents a relatively small part of consumer expenditures which reduces the motivation for organizations to be formed. In fact, in terms of the percentage of family expenditures spent on food, Canada is second lowest, just above the United States. With the exception of commodities with supply management systems in place, concerns tend to focus on health and safety issues rather than other aspects of agricultural policy.

**Academics**

The direct influence is small because there are no formal mechanisms or processes through which to contribute. There are a few high profile individuals who are often used in an advisory capacity but not in an integrated way. There is some impact in terms of the economic research and policy analysis that is done under contract with governments, or industry, or part of a teaching program. By far the primary influence is indirect through the education functions of universities in producing skilled professionals who work in policy positions.

Extension activities in Canada are the responsibility of provincial governments. Involvement of universities in extension work depends on joint arrangements with provincial governments and the interests of individuals.

**Other Interest Groups**

There are a relatively small number of other interest groups that have agendas that impact on the agriculture sector. Examples include, environmental groups and animal rights groups. These organizations typically will lobby the Minister directly responsible for their area of concern as well as Ministers indirectly affected. For example, environmental groups will pressure the Minister responsible for the environment to enact environmental regulations but will also lobby the Minister responsible for agriculture as well.

**Media**

The primary role of the media in the policy process is to provide information to the general public. For the most part, major media organizations do not have agricultural specialists on staff. As a result, agricultural policy issues do not receive much coverage, especially in central Canada, and at times the commentary may not be particularly well informed.

Many farm organizations have their own media structures, notably their own newspapers. These operate to provide information and, of course, to promote the view points of the organization.

## **Other Countries**

Other countries influence Canadian agriculture policy in primarily three ways. The first is through the General Agreement on Tariff and Trade (GATT) and the North American Free Trade Agreement (NAFTA) in the case of the United States and Mexico; the second is through other countries' trade laws which operate within the GATT rules; and the third is through the agriculture programs of international organizations.

Under GATT and NAFTA, as with other member countries, Canada agrees to abide by certain rules with respect to export subsidies and internal support measures. The last GATT round made major steps to bring agriculture more fully within the rules, and it will have significant long term impacts on agriculture.

Trade actions have the potential to have more immediate impacts on agriculture. The most obvious example is the countervail imposed by the United States on imports of live hogs from Canada. This action, which is still under annual review, was no doubt a major factor in the early elimination of the national stabilization programs for hogs, beef cattle and sheep. This combined with new GATT rules has generated interest in decoupled income support rather than the more traditional deficiency payment approach to stabilization.

International organizations provide fora for discussion and policy information exchange.

## **CONSTRAINTS ON POLICY DEVELOPMENT**

### **Budgets**

Governments at both the federal and provincial levels are facing severe pressures on budgets. This has caused governments to review both the level and composition of transfers to the agri-food sector. The outcomes have been the termination of programs, phased reductions in program benefits and initiatives to cost recover government services, e.g., grading and inspection. Recent, (February 1995) federal budget highlights include the reform of the western grain transportation system which includes elimination of the WGTA subsidy, a one-time \$1.6 billion payment to prairie land owners, a \$300 million 6-year adjustment fund, elimination of the Feed Freight Assistance subsidy in 1995, reduction of annual federal safety net spending from \$850 million to \$600 million over three years, reduction of the dairy subsidy by 30 percent over the next two years, and a national adaptation fund of \$60 million.

**Equity**

As noted previously, agriculture is a shared responsibility between the federal and provincial governments. This has given rise to on going concerns over the distribution and relative level of federal financial transfers among provinces and commodities, but also to the level of provincial financial transfers among provinces. These transfers include direct program payments, indirect program payments and revenue increases from regulations. More specifics on this will be provided in the next presentation.

Traditionally the focus of the debate has been on the "equitable" distribution from increasing levels of transfer. Concerns about equity, however, seem to be as intense when transfers are falling. Regional and commodity equity are major political constraints in policy decision making.

**Environment**

Environmental considerations are becoming increasingly important factors in Canadian agriculture. This is most apparent in the heavily populated areas of Eastern Canada, notably Ontario and Quebec. Concerns are focussed around the impacts of fertilizers, chemicals, and concentrated animal production on water and air quality. Major policy changes now are required to have environmental assessments completed.

**Trade Agreements**

As noted above trade agreements present very important constraints on policy development. In the Canadian context this is doubly important because of large values of both imports and exports.

**EVALUATION OF THE POLICY PROCESS****Openness**

As noted previously, the budget process in Canada operates under a high degree of secrecy. This in itself places constraints on the openness of the agricultural policy process. To the extent that policy changes are tied to budget changes the ability to have an open public discussion on options is quite restricted.

At the same time, the Minister of Agriculture has the mandate to modify agricultural policy within the delegated authority and the guidelines set by Cabinet. Under the current federal/provincial/industry decision making structure there is a process for communication

among the stakeholders in the sector. Federal and provincial Ministers of Agriculture meet at least twice a year. Deputy Ministers meet more often and Assistant Deputy Ministers meet almost monthly. There are a large number of industry committees that report to and advise governments on a wide range of policy as well as program design and delivery. In fact, industry representatives sometimes complain of consultation overload, part of which is the high cost of participating in the process.

In recent years the policy decision making process in the agri-food industry has become more open, consultative and interactive. A notable change has been the increased influence of agribusiness firms relative to the primary production sector. Agriculture Departments, federally and provincially, have broadened their mandates to include a whole system view of the agri-food sector.

Perhaps the main complaint with the current system is that it is not guided by an overall approach to policy development and industry competitiveness. This problem is reflected in the overspecialization of government/industry committee mandates and the lack of coordination and communication among them.

### **Transparency**

Complaints about the transparency of the policy decision making process are primarily related to the lack of understanding and clarity of the wider range of considerations facing policy decision makers. There are many government/industry committees with narrow mandates. There is a level of frustration among these groups in not knowing how their efforts fit into the longer term objectives and strategies of the industry.

The process does, in fact, tend to focus on short term commodity and regional issues. In part, this is a reflection of the disparity of the issues and advice that end up on the agendas of the Ministers' meetings from the structures reporting to them. In part, it also reflects the competing interests which often require trade-offs and consensus to reach solutions. These compromises can dilute decisions and result in deviations from the longer-term objectives, to the extent they are clearly articulated.

### **Responsiveness**

In the context of a consultative and interactive process, industry has fairly ready access to the decision makers in the system. In general the policy system has tended to respond quickly to serious short term problems and the special needs of certain sectors. For example, during the grain subsidy wars in the 1980s, considerable extra assistance was provided to the grains and oilseeds sector. During the GATT negotiations the interests of the supply managed commodities were well represented. Disaster problems also tend to be handled quickly, albeit in a fairly ad hoc manner. As noted above, the focus of the responses is shifting, from just the primary production sector, to a food system orientation.

This responsiveness has had a short term focus, which begs the question of the response to the longer term pressures in the industry. It is perhaps fair to say that the process, by itself, does not respond well to the longer term needs and developments of the agri-food industry. These longer term needs tend to be addressed when external forces dictate policy changes. Examples include budgets, trade agreements and trade actions. The process could, in fact, be judged to be more reactive than responsive.

### **Time Limits and Default Mechanisms**

Within the Canadian system there are no formal time limits and default mechanisms. The outcome of no decision is the status quo or the consequences of an external event. The consequences of no time limits can also result in protracted debates and negotiations that may seemingly have no particular direction. This can cause a high level of frustration at all levels in the process.

## **CONCLUSIONS**

Decision making in the Canadian agri-food industry is an evolving and complicated process. By most accounts, there is a general view that the process has improved significantly in recent years. There is a high level of satisfaction with the ability to consult, interact and provide input to policy decisions.

The sphere of influence has also changed dramatically. Greater emphasis is being placed on the whole agri-food sector. Forces external to agriculture are becoming more important whether domestically driven through budgets and environmental concerns or internationally driven through trade disciplines.

These changes and pressures will necessitate greater integration of factors, more focus on a wider range of issues, and encourage more proactive and longer term visions.

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## A PROVINCIAL PERSPECTIVE

*Robert Seguin*

### INTRODUCTION

There are considerable similarities between the federal and provincial levels of government, as with the federal and state governments in the United States. One major difference between the two levels is that all provinces have a unicameral form of government—no Senate—unlike the federal government. Otherwise, the majority party in the Legislature forms the government and selects its key members for the Executive, or Cabinet, where most of the major decisions of government are made. The Minister of Agriculture in a province is the senior policy executive within the government, and as with the federal government, the senior civil service extends to all levels except for the Minister.

The Minister, as in the federal system, is responsible for the ministry's activities/policies/programs and must defend them in the Legislature. As a member of Cabinet, the Minister is also responsible for the policies of the whole government, and as a member of the Legislature, responsible to his/her constituents. There are a lot of duties and responsibilities, a lot of authority, and usually not enough time.

A key difference between the provinces and the states is reflected in the scale of intervention in agriculture and food policy by the provinces. Chart 1 indicates the amount of financial support to agriculture in the various provinces in 1994/95. In total, it matches the federal level of support, although it varies considerably by province. Over time, the support levels and provincial differences change, and the level of federal intervention by province varies. Unlike the United States system, provinces have been key players over the last 2-3 decades in agricultural policy development, implementation, and analysis.

In Canada, as in the United States, there is a significant dependence upon agencies, boards and commission (ABC's) to deliver, and sometimes even make, policy at both the federal and provincial levels. It is often overlooked that these quasi public bodies can carry out so much of a government's mandate. For example, in Ontario with a total budget of about \$50 billion, the various ABC's throughout the provincial government deliver about \$30 billion of the government's budget!

There is no single piece of farm/food legislation that dominates the provincial agriculture and food policy decision-making process. This is unlike the United States system, which utilizes the Farm Bill process to focus key activities in United States farm and food policy. At the provincial level, each province will have an Act to create the agriculture ministry which will usually have substantial authority to act on behalf of its agriculture constituents. This may vary by province, but the power to intervene can be considerable. Otherwise, many of the pieces of provincial legislation mimic the federal

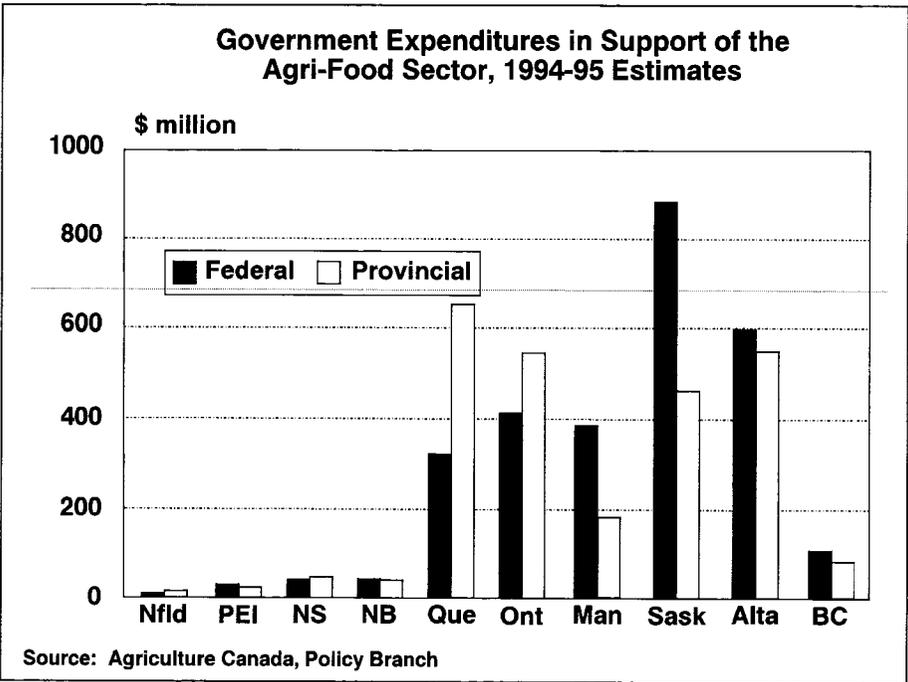


Chart 1

legislation, primarily in order that the two governments can act together on key issues/policies/programs.

### THE PUBLIC POLICY PROCESS

To be expected, agriculture and food policy is very sensitive to farmers/farm groups and farm leaders, at the provincial and national levels. In many cases, there is a greater sensitivity to local commodity issues and groups, and as with state governments, there is a belief that the province is more receptive to the concerns of the citizenry, since it is

closer to the public. There is also more concern about consultation fatigue as there are usually fewer farm leaders involved in all the various consultations, especially if one recalls that the federal government is also regularly consulting on agriculture and food issues.

The provinces are also sensitive to the concerns of other interest groups, especially on the environment, natural resources (wetlands, diversity), the views of other ministries and other governments within Canada (the other provinces), agribusinesses, academics - although their involvement is usually very limited, consumer groups, media - particularly key media who truly understand the farm community and farm policy, which is not too frequent, and the policies of other countries, notably the United States.

The provinces, because of the shared jurisdiction, are very sensitive in policy making to the views and concerns of the federal government. This is usually necessary to improve the effectiveness of any programming or reduce overlap and duplication. However, it has been the case at various points in time that provincial policy has been undertaken to frustrate or delay federal decisions.

The key constraints on public policy in provincial agriculture and food decision-making are budgets, budgets, and budgets. The recent federal budget will affect the decisions and spending priorities of all the provincial governments, which will combine with the very tough constraints facing each individual province. Other constraints include public concern over equitable treatment by both levels of government by region and by commodity, the environmental impacts of agricultural and food policies, social and rural impacts, trade agreements—which have really brought home the limits of public policy within a more global interdependent marketplace, and actions of the other governments.

Despite what might seem to be a great deal of overlap, officials have succeeded in developing the necessary operating agreements (formal or informal) in order to efficiently and effectively provide services without undue interference or duplication by either level of government. This is true with our food inspection systems and our research capacities. It is also true that with both levels of government involved in policy making and programming, each level can at times coerce or co-opt the other, and producers/food sector are also quite capable of using the joint jurisdiction to maximize their benefits.

Finally, in evaluating the provincial system of public policy making, our systems are not as open as the United States system, but becoming more so over time. Transparency of decision-making is increasing, and there is considerably more responsiveness at the provincial level to local needs (like state governments) than at the national level. There is no time limit to many of the policies nor are there default mechanisms if certain policies are not renewed/revised. The federal/provincial system does overlap, and can create duplication but it can also generate improved consistency and complementarity to better serve the public.



## **HOW POLICY DECISIONS ARE MADE IN U.S. AGRICULTURE**

*Ronald D. Knutson*

### **INTRODUCTION**

Understanding the U.S. policy process provides substantial insight into the origin of trade disputes, how they play out in a time dimension, and their resolution. Moreover, the nature and substance of future disputes are a direct product of the policy process.

This paper concentrates on the two major elements of the policy process—the legislative and executive branches of government as they develop the 1995 Farm Bill. It places relatively less emphasis on the process of dispute resolution embodied in domestic and international judicial systems including the related institutions of the U.S. International Trade Commission (ITC), the Canadian-U.S. Trade Agreement (CUSTA), North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT). While these international institutions are important, the origin of disputes tends to lie in pressures exerted on the legislative and executive branches which may eventually play out in the international dispute resolution process. For example, the interaction of the Export Enhancement Program (EEP) with the Conservation Reserve Program (CRP) is frequently cited as an important contributing factor to the 1994 wheat import dispute. To the extent that this is the case, the origin of the dispute lies in the political processes that developed the 1985 and the 1990 Farm Bills through which these programs were conceived and enacted into law.

### **THE ENACTMENT OF LEGISLATION**

The Farm Bill is developed by the United States Congress. To be enacted into law, the Bill must receive a majority vote in both the House of Representatives and the Senate. To a degree, these bodies operate and develop farm bill provisions independently. Differences between the bills passed by House and Senate are ironed out in a conference committee.

Securing the votes needed to enact a farm bill is becoming increasingly difficult—particularly in the House of Representatives. The House contains 435 representatives from

congressional districts apportioned on the basis of population. Reapportionment occurs with every census, the last of which was in 1990.

As farm and rural population has declined, the number of congresspersons having a rural constituency has correspondingly decreased. After the 1990 reapportionment, most authorities indicate that only 50 congresspersons have sufficient rural constituency for their vote to be significantly influenced by the effects of farm interest groups. Some of the major states impacted by agriculture have only one congressperson. Included are Alaska, Montana, North Dakota, South Dakota, Vermont and Wyoming—all of which would be expected to have a particularly strong interest in Canadian-U.S. issues.

It takes 218 votes for a farm bill to pass in the House of Representatives. If only 50 votes can be counted on as being farmer-oriented, 168 additional votes must be garnered to vote for the bill either because they see a basic national interest in supporting agriculture, because they have a direct interest in some specific provision or title of the farm bill, or because rural congresspersons trade votes to support other legislation of primary interest to representatives having an urban or suburban constituency.

It is because of the lack of sufficient votes to enact a farm program that concentrates solely on farming that the Farm Bill is omnibus. Therefore, it contains a broad range of titles relating trade, nutrition programs (food stamps) and the environment in addition to farm programs. By this means, it is hoped that a sufficiently broad constituency (coalition) can be developed to secure the requisite 218 votes. To date, this has been a successful strategy. More will be said about this issue when the composition of farm bill interest groups is discussed.

Agriculture tends to have more influence in the Senate, where each state has two senators and thus two votes, than in the House. Every state has some significant amount of agriculture, while every congressional district does not. For example, both California senators have to be concerned about the economic well-being of its agriculture (the largest state in terms of the value of farm sales). However, there are at most 9 California congresspersons who would be considered to be agriculture-oriented out of 52. Therefore, it tends to be easier to enact a farm bill in the Senate than in the House. Perhaps for this reason, the Senate to a degree, tends to defer to the House in farm bill development. That is, the Senate tends to wait until the House bill has taken shape before it crafts its bill in order to make sure that it has legislation that can be enacted. This also prevents the two bills from being dramatically different.

### **Committee Action**

The Farm Bill is drafted in the agriculture committees. Drafting begins in the subcommittees, which are considerably more important in the House than in the Senate. At one time, the subcommittees were organized along commodity lines. This organizational structure created what was often referred to as an "iron triangle" among the commodity farm organizations such as the National Association of Wheat Growers (NAWG), the related wheat program implementing division of the Farm Service Agency (FSA), and the congressional wheat subcommittee.

The ground rules for farm bill development will be laid down by the agriculture committee chairs—Senator Lugar (IN) and Congressman Roberts (KS). Austerity measures have forced reductions in the number of subcommittees. As a result, the number of subcommittees responsible for drafting the main farm program provisions (direct producer subsidies) has dwindled to two on the House side (the Commodities Subcommittee and the Livestock Subcommittee) and one on the Senate side (the Production and Competitiveness Subcommittee). Table 1 provides a listing of the subcommittees in the 104th Congress, the subcommittee chair, and the major home state interests, by commodity, of the subcommittee chair. The interests of the subcommittee chair are important because it will likely have an influence on priorities as the 1995 Farm Bill is drafted. When the Republican party majority was elected, a whole new set of Republicans took over the leadership of the Congress. Therefore, the names of the subcommittee chairs may be new. The subcommittees are relatively less important in the Senate than in the House. This is because the Senate agriculture committee, composed of 17 members, tends to do more/most of its business in full committee.

**Table 1. Agricultural Committee Structure, Leadership, and Major Constituent Interests, 104th Congress.**

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■	House
√	Commodities: Barrett, Chair: NB: Corn, wheat, soybeans, cattle
√	Livestock: Gunderson, Chair: WI: Dairy
√	Specialty Crops, Insurance: Ewing, Chair: IL: Corn, soybeans, hogs
√	Nutrition, Foreign Agriculture: Emerson, Chair: MO: Rice, corn, soybeans
√	Conservation, Research: Allard, Chair: CO: Wheat, beef, corn
■	Senate
√	Production and Competitiveness: Cochran, Chair: MS: Rice, cotton, soybeans
√	Marketing, Inspection, Promotion: Helms, Chair: NC: Tobacco, peanuts
√	Conservation, Rural Development: Craig, Chair: ID: Cattle, forestry, sugar, dairy
√	Research, Nutrition: McConnell, Chair: KY: Dairy, tobacco

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Not to minimize the importance of other committee members, Senators Lugar and Cochran (for reasons explained later) are the key members of the Senate Agriculture

Committee. Senator Lugar is a key because he is Committee Chair. Being from Indiana, his primary constituency interests have been corn, soybeans and trade. Historically, he has been one of the leading "free traders" in the Congress. In the initial stages of 1995 Farm Bill development, Senator Lugar came off as a person who desired to get rid of farm subsidies. However, in an early budget committee hearing on the Farm Bill, Senator Lugar surprised many by proposing a 15 percent cut in the level of target price—3 percent per year. This more modest position could have been influenced by his decision to become a presidential candidate.

Before leaving the Senate side, it would be a mistake not to mention Senator Dole as a key actor in farm bill development. As majority leader of the Senate, a member of its Agriculture Committee, and being from the largest wheat producing state (KS), Dole has always had a strong interest in farm bill development. Historically, he has not been as strong a free trader as Lugar. Dole can be looked upon more as a tough and seasoned political negotiator—domestically and internationally. Both Lugar and Dole would consider themselves experts in trade and foreign relations.

On the House side, Congressman Roberts is the key actor as Chairman of its 47 member Agriculture Committee. Roberts' district covers much of rural Kansas—certainly most of the wheat growing areas of Kansas. Since wheat is often considered to be a farm program dependent commodity (along with cotton, rice, sugar and peanuts), Roberts will need to be seen by his wheat producer constituents as delivering favorable farm program provisions for them. This, perhaps, is more the case for Roberts than for any other Congressperson. As a result of this position, Roberts can be expected to exercise substantial control over the writing of the 1995 Farm Bill.

The chairman's control is most apparent in the so-called markup process. In markup, the full committee makes the crucial decisions on acceptance/rejection of specific farm bill provisions, including its exact verbiage.

An additional House consideration in the drafting of the 1995 Farm Bill is the position and interest of the House majority leader, Congressman Armev. In the 1990 Farm Bill debate and in the annual appropriation process that followed, Armev was an active proponent of eliminating farm subsidies. While Armev was unsuccessful in the floor debate on the 1990 Farm Bill, in the appropriations process he knocked out funding for the honey, wool, and mohair programs. Congressman Armev can be expected to wield more political power as majority leader. Chairman Roberts indicates that he has reached an agreement with Congressman Armev that Armev would not become involved in the farm bill debate. However, Armev has an army of followers who could make farm bill development and enactment interesting for Roberts and the rest of the House Agriculture Committee.

### **Budget Process**

The statement is often correctly made that the budget drives the Farm Bill. While true in the past, this statement is even more true in the austere budget balancing environment that pervades the 104th Congress. The budget process is centered in the House and Senate budget committees interacting with the Congressional Budget Office.

This combination produces, with the approval of a majority in both the House and the Senate, a budget resolution. This resolution constrains the level of spending, in that legislation must be reconciled in a manner that falls within the budget resolution.

Shortly after each New Year, the Congress receives the President's budget proposal. This proposal is developed in the Office of Management and Budget (OMB), the largest agency in the Executive Office of the President. In developing the President's budget proposal, OMB receives input from each of the agencies of government, including USDA, regarding their budget needs. Decisions are made in consultation with the President regarding the level of overall spending (size of the deficit) and priorities within the budget. The President's budget plays a more important role in the legislative and appropriations process when the majority in the Congress is of the same party as the President. However, even when they are of different parties, it is generally recognized in the Congress that the budget of the President is developed with substantial OMB expertise on how the agencies of government operate and their resulting needs. The President's budget proposal, therefore, plays an important, but variable, role in the congressional budget and appropriations process.

The budget resolution/reconciliation process plays an important role in farm bill development. It will play an even more important role in the 1995 Farm Bill because of the budget balancing fervor that exists—particularly in the House.

The Agriculture Committees will be required to craft a bill that comes within the budget resolution as developed by the Budget Committees and enacted by the Congress. The Budget Committees work closely with the Congressional Budget Office (CBO). CBO develops a baseline of spending expectations. All proposed policy changes are scored relative to that baseline and to the budget resolution.

## **Appropriation Process**

The Agriculture Committees are referred to as authorizing committees in that they only have the power to authorize expenditures. Monies must then be appropriated to the U.S. Department of Agriculture (USDA) to implement what has been authorized. However, it is not unusual for the agriculture committee to authorize an expenditure in the Farm Bill only to have the appropriation committee decide not to provide monies for its implementation. This particularly has been the case in recent years for farm bill authorizations in the area of environment, sustainable agriculture and rural development.

Both the appropriations and budget committees have lacked control over entitlement expenditures. An entitlement is a program that authorizes expenditures when a person is eligible. Target price subsidies (deficiency payments) are entitlements as are food stamps. USDA frequently has required supplemental appropriations because deficiency payments and food stamp expenditures have exceeded not only appropriated levels but also budget resolution/reconciliation levels. Substantial concern has risen over these excesses. In order to get control of entitlement expenditures, consideration will likely be given to placing an absolute cap on expenditures for some programs. Agriculture could be a prime candidate for such a cap.

Even in the absence of a farm subsidy spending cap, it is likely that authorizations for spending in the 1995 Farm Bill will be watched more closely than has been the case in the past. The budget resolution could be particularly important in setting the level of "big ticket" subsidies such as target price levels and the size of the CRP.

## **ROLE OF THE ADMINISTRATION**

The degree of administration input into farm bill development is to a degree a matter of strategy and depends on the working relationship between the administration and the Congress. If the majority in the Congress is of the same party as the President, substantial administration influence might be anticipated.

One of the initial decisions for any administration in approaching the Farm Bill involves the degree to which it ought to become involved in developing an administration proposal or position. Philosophies differ on farm bill proposal development among administrations and depending on the circumstances. For example, Secretary Butz under Presidents Nixon and Ford did not lay a farm bill proposal on the table because he felt that it would be a "sitting duck" target for the Democrats who held the majority in Congress. On the other hand, Secretary Lyng under President Ford produced a detailed "green book" proposal for a Democrat controlled Congress prior to the 1990 Farm Bill.

The Clinton administration appeared to set up a mechanism to develop a 1995 Farm Bill proposal under Secretary Espy. Preparations stopped when Espy encountered political problems. If Secretary designee Glickman is approved by the end of March 1995, it could be too late for the Clinton administration to put its proposal on the table.

Yet, Secretary Glickman could have substantial impact on 1995 Farm Bill development by virtue of his working relationship with Chairman Roberts and Majority Leader Dole. All three are from Kansas—a delegation that has been known for its close cooperative working relationship.

The Administration has an opportunity to react to farm bill proposals. They testify in hearings and have a representative that sits in on key committee sessions such as the markup process where the committee as a whole makes final adjustments in the provisions and language of the bill. This participation is designed to provide increased assurance that the President will not veto the bill when it is enrolled for signature. Of course, it is with the power of the veto that the President exercises ultimate authority. This absolute power is particularly the case for a farm bill. In the current Congress, the chances of getting the two-thirds majority to override the President's veto is minimal.

Often overlooked is the power held by the administration in the process of implementing a farm bill that has been enacted. Farm bill provisions are often written in general terms that provide latitude for implementation. Congressional recourse for what is deemed to be improperly implemented legislation involves jawboning, often through the holding of oversight hearings.

A brief word about the trade negotiation and dispute resolution process is warranted. It involves a different set of actors than domestic farm policy because foreign policy is the responsibility of the President, and multiple agencies are involved in the implementation of foreign policy. The leaders on agricultural trade issues tend to be the trade representative and the Secretaries of State, Treasury, Agriculture, and Commerce all acting on behalf of the President. Which is most influential depends on the individuals in each position. Some powerful individuals in an historical context included Secretary of State Kissinger and Secretary of the Treasury Bentsen. Trade representative Kantor has proven to be a more potent and effective power in the trade policy arena than many had anticipated. The International Trade Commission is a specialized agency designed to make decisions and recommendations on trade disputes.

## **INTEREST GROUPS**

A key to farm bill development and enactment involves developing a combination of provisions that will garner the requisite 218 votes in the House and 26 votes in the Senate for enactment. Farm organizations, agribusiness organizations, environmental groups and the food lobby are integral components of this required coalition.

### **Farm Organizations**

In the United States, every commodity has its lobbying organization. These commodity organizations are generally recognized as being the most influential in determining the provisions contained in its title of the farm bill. Having said this, the power of commodity groups such as the National Association of Wheat Growers (NAWG) is not as strong as in the past because wheat, corn, cotton, rice, sorghum, barley and oats all operate within the same general framework—target price, loan rate and acreage reduction. Within this framework, equity across commodities is an important concern of the Congress.

Two general farm organizations, the Farm Bureau and Farmers Union, have a long history of farm bill lobbying. The Farm Bureau tends to be tied to the Republican party while the Farmers Union tends to be tied to the Democrats. General farm organizations have tended to be less influential on commodity issues, but generally are well represented in USDA political appointments, thus influencing implementation decisions.

### **Agribusiness**

Agribusiness has much the same organizational structure as farmers with a combination of commodity groups and general cross-commodity organizations. Some of the more politically potent organizations are those that combine farmer and agribusiness interests—these include the National Cotton Council, Rice Federation and National Grain

and Feed Dealers Association. Organizations involving agribusiness tend to have an overwhelming trade orientation. As a result, they are strongly opposed to production controls, government storage and policies that centralize exports, such as marketing boards.

Like general farm organizations, agribusiness has a history of being represented in USDA through the political appointment process. Generally, this is either at the Secretary level (Lyng, Yeutter, Espy) or Undersecretary level (Brunthover, Bell, Crowder). Through such high level appointments, agribusiness is able to exercise considerable influences over administration policy position and implementation decisions.

### **Environment**

The environmental lobby was a key to getting the Farm Bill enacted in 1985 and arguably could have prevented enactment in 1990. In 1985, a coalition of farm organization and environmental interests came to agreement on the central provisions of the Farm Bill through joint support for the establishment of Conservation Reserve Program (CRP).

The role that these same interest groups might play in putting together the 1995 Farm Bill is problematic but still could be decisive in, for example, dealing with the Arney factor.<sup>1</sup> While the environmental lobby is in disarray following the election of an anti-environment Republican majority and have become disenchanted with CRP, alignment with Roberts and Dole on the retention of a strong CRP program could be their only leverage in continuing the sustainability programs initiated in the 1990 Farm Bill.

### **Food Lobby**

The food lobby supports food programs that comprise over half of USDA's budget. Included are food stamps; school lunch; women, infants and children (WIC); meat and poultry inspection; and foreign food aid Public Law 480 (PL 480). All of these programs, except possibly meat and poultry inspection, are targets of budget cuts. This raises some interesting questions regarding the support of food groups for the farm bill. Realizing the importance of their support, Republican agriculture interests put considerable effort into preventing the food stamp and WIC program from becoming part of a proposed block grant welfare reform proposal that would have taken food stamps and WIC out of USDA.

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<sup>1</sup> Editors Note: The author describes the "Arney factor" as the extent to which Congressman Arney (R-Tx) organizes opposition to farm subsidies in House debate on the 1995 Farm Bill.

## CONCLUDING REMARKS

The future configuration and existence of U.S. farm programs is in doubt—perhaps not so much in 1995 but with greater certainty in the year 2000. How the 1995 Farm Bill development and related budget issues play out should provide considerable insight into future prospects for trade disputes and the changing nature of the political process as it relates to agriculture.

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## **THEME: POLICY SYSTEMS OVERVIEW**

### **OBJECTIVE**

To provide an overview of main policy instruments and regulatory regimes currently in place for major commodities or commodity groups: to evaluate their effectiveness in meeting objectives, explicit or implicit; to assess the level of benefit provided and to whom; to identify important regional and cross-commodity impacts; and to highlight major cross border issues and irritants.



## OVERVIEW OF CANADIAN AGRICULTURAL POLICY SYSTEMS

*Richard R. Barichello*

### INTRODUCTION

The purpose of this paper is to give an overview of Canadian agricultural policies and to provide background information on our current trade issues and disputes. To make this task more manageable, discussion will focus only on the major policy instruments. For these we will examine their design and provide some quantitative evidence of the transfers they generate to farmers, in order to provide some background to the larger border issues that exist.

There are many ways to look at the country's agricultural policies. For example, we could review policies on an instrument by instrument basis, or review each of the major commodities and discuss the instruments that are involved. Instruments will be discussed first since it is the instrumentation that often generates the trade dispute. Second, the set of policies in place for each commodity subsector are reviewed and some quantitative estimates of their effects are provided.

An attraction of reviewing policy instruments is that it should allow a comparative analysis of policies in the two countries. What makes a Canada-United States comparison interesting is that there is so much similarity in the agricultural and economic environments, in the trends in important economic variables, and in the problems and issues facing policy makers in both countries. Yet the policy responses have been, and continue to be, quite different.

The policy groups that are examined include safety nets or stabilization programs, direct output and input subsidies, market regulations and institutions, which include important elements of trade policy, and the diverse collection of remaining policies that are of secondary importance from an aggregate perspective but may be of primary importance in a particular industry. These include trade policies, research, extension and inspection services, and the variety of smaller financial transfers that go to various agricultural sectors from the federal and provincial governments.

Four commodity groupings will be discussed which cover most of Canadian agriculture: the red meats sector, grains and oilseeds, the supply-managed sector that includes dairy, poultry and eggs, and the horticultural sector. These four groups account

for 205,000 farms out of a total of 230,000 farms with sales in excess of \$10,000, or about 88 percent of all farms. In terms of gross cash receipts, these four groups account for \$23.7 billion out of \$26.4 billion (90 percent of total gross farm sales).

Some summary statistics for 1993 give an overview of the Canadian agricultural sector. First, the industry's farm cash receipts from market sources were \$21.5 billion, and this primary part of the food sector accounted for about 2 percent of GDP. In nominal terms, the trend in market returns over the five years from 1988 to 1992 was +6 percent, but this is equivalent to a small decline in real terms. Net cash income and realized net income are also falling on trend in real terms. (AAFC, 1995). Similarly the proportion of GDP from primary agriculture has been falling, from about 3 percent in the early 1980s, as is found in all growing countries. The food processing sector is roughly double the size of the farm sector in sales (\$40 billion) and also contributes 5 percent to GDP. The agri-food industry as a whole accounts for 8 percent of GDP and 15 percent of total jobs.

With technical change in farm production continuing unabated, real commodity prices are declining on trend in most farm commodities. There is also a trend to larger farms, as is observed in the United States, although with a lag—the current average farm size is smaller in Canada than in the United States. The result is a steady but attenuating decline in the number of farmers as a combination of new technologies and particularly higher wage rates make larger farms more economical. The exit of farmers from agriculture is occurring at the rate of one in three operators every five years. The number of new entrants replacing those leaving is smaller, but the difference between the two groups is diminishing. All of this is very similar to the situation in the United States (Statistics Canada, *Farming Facts*, 1993).

In trade, Canada exports about one-third of domestic production, and when primary commodities are combined with processed exports, the total export value is \$13 billion in 1992 and 1993. Canada has a positive trade balance in primary products (\$6 vs. \$3 billion) and a negative trade balance for processed products (\$6.9 vs. 7.3 billion). However, like the United States, Australia and New Zealand, Canada's share of the total global market for agri-food exports has declined since the 1961-65 period. (AAFC, September 1994).

Government financial support has been declining from the record high levels of the late 1980s and early 1990s. Since 1980 the real path of federal government expenditure rose gradually from 1980 to 1985, rose dramatically for the next two years, declined for three years to 1990 and jumped to an all-time high in 1991. These very high expenditures in the 1986-91 period were primarily due to special ad hoc farm income support payments to assist the grains and oilseeds sector to maintain income levels in the face of lower world market prices during the grain trade "war" of that period. Since then, expenditures have declined, but 1994/95 levels in real terms are still higher than those in the early 1980s. A feature of government expenditures in agriculture in Canada is that the provinces are also heavily involved, particularly in the areas of income support and rural development, extension, education, and environment.

## AGRICULTURAL POLICY LANDSCAPE

### Goals

Review of the agricultural policy landscape in Canada, should start with the general goals motivating the policies. The following five goals are identified for agriculture by the current government, with the first two emphasizing growth and the second three emphasizing security:

- achieving sustainable agriculture and agri-food growth
- fostering rural opportunities
- realizing long-term financial security
- attaining resource and environmental sustainability
- maintaining a safe, high quality food supply.

From such a list of current policy goals some changes are evident from the situation in the 1970s and early to mid-1980s. In the early 1980s a listing of goals on the consumer side would include reasonable and stable food prices, and adequate, safe, nutritious and dependable food supplies. On the producer side, the list would include a fair level and stability of producer returns, reduced economic disparities within agriculture, increased production efficiency, expanded production, the promotion of exports, and the preservation of the family farm. In the reality of programs and regulations, the number of underlying objectives could be thinned to two, *increased stability and increased farm incomes*. The other objectives have existed but in practice they played a secondary role. To view this issue (policy objectives) differently, Warley (1985) organized agricultural policy objectives into two groups, "development-oriented, productivity enhancing, and competitiveness-promoting" and "protectionist, preservationist and adjustment-ameliorating". The period from 1970 to the mid-1980s witnessed the ascendancy of the latter group of objectives, with increased intervention. More recently, language, such as that noted above, reflects a greater concern with developmental objectives.

One common element between the goals of the 1970s and the current listing is the attention given in both cases to *stabilization*. This reveals what may be a unique element of Canadian agricultural policy, the sustained priority given to this goal. The public rhetoric of agricultural policy in most developed countries also puts great emphasis on the goal of stabilizing markets, prices and incomes. But most of the resulting policies have little to do with stabilization and a great deal to do with increasing levels of farm prices and incomes. Canadian agricultural policy appears somewhat different in this regard. As noted above, stability is consistently stated as a policy objective and receives even greater emphasis in policy rhetoric than in other countries. More important, a number of agricultural policies, usually at the federal and federal-provincial levels, actually seem designed to increase stability and reduce market risks. The historical reason for this attention could be due to Canada's climate and inherently large weather risks, its dependence on world markets for many years, or a thinness of markets resulting in fewer insurance options. This is not to say that farm income or price levels are unimportant in Canadian policy but that stabilization goals are taken seriously and instruments are

designed and used largely to meet such an objective.<sup>1</sup> This will become more evident later in this paper.

There are other differences in the goals now mentioned in comparison with the situation in the early 1980s. First, there is an increased importance of competitiveness, at least as an important criterion for policy adoption. This is reflected in the desire to increase exports, the statement that financial security in the industry must come increasingly from the market place, not governments, and that policies should be non-distorting so that farmers will adjust to market signals. There is an explicit desire for agricultural policies to foster economic growth in the agricultural sector instead of providing passive income support.

Sustainability in agricultural production has now become a stated goal that was not often mentioned a decade ago, indicating the increased importance of environmental issues. For example, there has been greater attention given to production externalities where agricultural activities (e.g., waste disposal) damage water quality and other resources, and a desire to limit agricultural activities in order to preserve certain "public goods" (such as biodiversity or waterfowl habitat) that are judged to be socially valuable. Risk management by farmers through market mechanisms has begun to replace reliance upon government programs to reduce risk. Clearly, there is a smaller role for government expenditure in current policy goals, and greater emphasis on the market place as well as on the farmer becoming more self-reliant and more responsible for managing his/her own situation.

### **Type of Policies in Place**

On a quick review, the policy landscape in Canada today appears to be quite similar to the situation of 10-15 years ago. At that time, the dominant features of agricultural policy in Canada were the supply management regime covering dairy and poultry products, a number of stabilization programs that were evolving into the National Tripartite Stabilization Program, and a grains policy that featured a one-desk selling marketing board along with a significant transportation subsidy. The important secondary element was the large and increasing role of provincial government support programs, which were often direct financial transfers in the form of an output or input subsidy. To a certain extent, this is still the case today. The major program initiatives remain the same, albeit with some important changes in their details, and no new initiatives have been begun that cannot be seen in some form in 1986. For details and an overview of programs in effect earlier in the 1980s, see Arcus Consulting Limited (1985), and Barichello (1986).

However, there has been more change in the policy framework than initially meets the eye. Driving these changes are a set of underlying fundamentals, the two most important of which are (i) a tighter government budget constraint and (ii) a more open and informed international trading environment that constrains trade policies to be less

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<sup>1</sup> Editors Note: One reviewer observed that there has been no stabilization program in Canada that has not also had a significant income enhancement effect.

protective and less damaging to trading partners and international markets. These pressures have become particularly concentrated in the last year, with agreement on the Uruguay GATT Round and with the current federal and provincial governments' special attention to its deficit. The need to focus government resources more carefully and the increased offshore competition has led to a greater concern with the international competitiveness of our agricultural subsectors.

The importance of smaller budgets and more open trading rules is provoking a sometimes rapid and substantial change in policies in Canada. Most of the major budget items in the programs discussed below are either disappearing or being reformed. Even in the supply management areas, although prohibitive tariffs have replaced restrictive Non-Tariff Barriers (NTBs), the mechanism for changing support levels is fundamentally altered, and it is only a matter of time until these changes will affect producers directly by lowering prices. Depending upon the outcome of certain legal and international decisions, the very high tariffs on trade within North America may be reduced rather quickly after the year 2001. All of this is occurring as the agricultural sector itself is continuing to undergo substantial changes due to the increased importance of new information in production and marketing, the rapid transmission of this knowledge among trading partners and competitors, and the resulting increased international competition.

The result is that the policy framework and industry structure in Canada are changing relatively rapidly and in a quite different direction than was the case a decade ago. This change—in the direction of less regulation, less government financial support and greater reliance on markets—may now be occurring more rapidly in Canada than in the United States. It also may be the case that certain parts of Canadian agricultural policy had further to go in this direction.

## **REVIEW OF POLICY INSTRUMENTS**

### **Safety Net Programs and Stabilization Policy**

There is a long history of stabilization or farm safety net programs, beginning in 1958 with the Agricultural Stabilization Act. From that program which guaranteed 80 percent of the previous ten years' price, a series of changes were made, to deal with inflation, gross revenues and gross margins instead of only market price, and incorporate shorter base periods. Payments were still made like deficiency payments but the funding source was broadened to include both federal and provincial governments, and producers. In 1991, an umbrella statute (Farm Income Protection Act, FIPA) provided a general framework for stabilization programs that was to integrate the safety nets for virtually all commodities. All programs under this framework were guided by five principles:

- i) market neutrality;
- ii) equity among commodities and recognition of regional diversity;
- iii) long-term social and economic sustainability of farm families;
- iv) consistency with international obligations; and
- v) long-term economic and environmental sustainability.

Four safety net programs have been developed under this legislation to cover the different needs of different products. They are a revenue insurance program (National Tripartite Stabilization Program, NTSP), a gross revenue insurance program (GRIP), a net income stabilization account program (NISA), and a crop insurance program. All share the following common characteristics; they:

- stabilize farmer incomes through market risk or yield protection;
- are tripartite among federal and provincial governments and producers, and the costs of the program plus its management and program development are shared among the three parties to the agreement;
- are national, not regional, in scope;
- are voluntary with farmers who may sign up for any, all, or a combination of the programs;
- are established through federal-provincial agreements;
- are administered and funded through Agriculture and Agri-Food Canada, and other government departments;
- promote equity among regions and producers; and
- address short term production and market risks while permitting farmers to adjust to long-term price and market trends.

This family of safety net programs is important in Canadian agricultural policy, although the first two programs, respectively, are no longer in effect or are unlikely to be continued. To illustrate the evolution and nature of safety net policy, the four programs are summarized below.

***National Tripartite Stabilization Program (NTSP)*** The objective of the NTSP is to reduce losses to producers due to adverse changes in market prices or costs. It is applied to hogs, cattle, lambs, some fruits and vegetables (apples, beans and onions), and honey. The premia are shared equally (one-third each) by the two levels of government (federal and provincial), and producers. After being in place for about a decade, this program is now winding down. Most commodity NTSP schemes are ended, or in the process of being ended.

The details of this program reveal some of the thinking that underlies its operation. For hogs, slaughter and feeder cattle, the program guarantees a specified percentage of the average gross margin over the last five years. The support level is equal to estimated national current cash costs in that quarter, plus a percentage of the difference between these cash costs and the national average market price for the preceding five years (i.e., the average gross margin). The program for cattle terminated at the end of 1993 and the hog program ended in July 1994. To give an idea of the degree of financial support this program offered, the hog program paid an average of \$120 million per year, and payments in excess of \$10 million were made in four of the seven years from 1988 to 1994. The average payment for slaughter cattle in total was \$51 million per year, and the average payment to feeder calves was \$2 million per year. Finally, the cow-calf program was set up a little differently, focusing on market price alone instead of a gross margin. Support levels were set as a given percentage of an indexed (for inflation) moving average price of calves over the last 10 years (i.e., the ten year average real price of calves). From 1988 to 1993, no payments were made on this part of the NTSP.

It should be noted that these numbers are the payments actually made to producers, *ex post*, net of the premium contributions made by producers, averaged in nominal terms over the 1988-1994 period. Therefore, they are not directly comparable with the financial transfers presented in the Commodity-by-Commodity Review section at the end of this paper. Those financial transfers were calculated as the sum of federal and provincial plans self-financing (completely financed from premium contributions alone). The financial transfer data are also for the 1992 year only.

**Gross Revenue Insurance Plan (GRIP)** This program was the successor to the Western Grain Stabilization Act and was introduced in 1991. It was offered to grain, oilseed and specialty crop growers. It was designed to be complementary to Crop Insurance, with the two programs providing comprehensive revenue protection. With crop insurance giving yield protection, based upon historical production, GRIP adds revenue protection based on prices, with reference to a fifteen year indexed moving average price. Target revenues per acre were calculated using probable yields (farmers' past historical production) and average real price. Payments to producers are triggered when market revenue falls short of target revenue. Premia are calculated each year, designed to make the plan self-sustaining. These premia are shared by the three participants, with 33 1/3 percent paid by producers, 41 2/3 percent paid for by the federal government, and 25 percent paid by provincial governments. Participation is voluntary—in 1994, 70 percent of eligible producers were enrolled (covering 73 percent of acreage).

However, participation is declining and farmers are choosing reduced coverage. The federal government is reconsidering its participation, partly for trade reasons and because Alberta and Saskatchewan, the largest two participating provinces, are terminating their involvement. To give some idea of the financial commitment represented by GRIP, the federal government contribution is about \$500 million annually and the total government transfer, federal and provincial including specialty crops as well as grains and oilseeds, was \$936 million in 1992, excluding federal government contributions to the plan's administration.

**Crop Insurance** This program provides specified protection against production risks, including such hazards as drought, flood, hail, frost, excessive moisture and insects. It is offered in conjunction with GRIP or as a stand-alone program. Payouts are triggered when a farmer's yield falls below 70-80 percent of that farm's average historical yield, due to any of the hazards listed, with the details depending upon the province. Premiums are calculated in an actuarially sound manner so the scheme is intended to be financially self-sustaining. Costs are shared by the three participant groups with the shares being 25 percent for each of the federal and provincial governments and 50 percent for the producer. Participation is at 55-60 percent of the eligible acreage and number of producers. The federal cost of premiums has averaged about \$160 million over the last 6 years. In 1992, the combined federal and provincial transfer (via premium contributions) across all commodities was \$258 million.

**Net Income Stabilization Account (NISA)** This program is probably the most unique of the four stabilization programs and has the potential of becoming the most important, given the expectation that it will be classified as a "GATT-green" program. It is designed

to give farmers another tool in financial management, like a special "rainy day" savings account where you set aside funds in good years for use in poor years. A participant farmer can deposit up to 2 percent of eligible net sales, to a maximum sales level of \$250,000. This amount will be matched by 1 percent contributions by both federal and provincial governments. Producers can contribute up to 20 percent on additional sales but such contributions attract no matching government contributions. Interest is earned on these individual accounts at competitive interest rates, plus 3 percent provided by government. Withdrawals can be made when the gross margin for the entire farm is less than the 5 year historical average, or when the income level from all sources is below some minimal level.

This program takes a whole farm approach; it was not intended to be commodity specific. Overall farm income from included commodities is used for calculations and these are done on an individual farm basis. At present, farms in grains, oilseeds, special crops, horticulture and honey are eligible, as determined by each province. So far the contribution levels are relatively small. The federal cost in 1992 and 1993 was in the \$65-\$75 million range. Across all commodities and including both governments, the transfer for 1992 was \$110 million. In line with the ongoing evolution of this program, steps are now being taken to simplify its procedures and administration.

### **Future of Safety Net Policy**

Safety net policy is to be a primary vehicle of overall agricultural policy in Canada. As such it must contribute to a set of larger policy objectives for Canadian agriculture, including promoting long run viability and competitiveness of the sector, and helping farmers to adjust to market signals and manage risks in a non-distorting fashion. It is intended to involve whole-farm income stabilization rather than historical commodity income support. The family of safety net programs is to include three specific programs: crop insurance, a whole farm income program like NISA, and more specific companion programs that would deal with disasters, other regional needs, farm adjustment and adaptation measures, and risk management. The current programs are being actively reformed to ensure that, among other objectives, they are compatible with trade agreements, do not alter production decisions toward certain outputs, inputs or technologies or market allocations (compared to the absence of the program), are self-financing and affordable. The government financing component will involve 60 percent federal funding and 40 percent provincial. Policy design issues that remain to be determined include whether producer deposits should be based on sales or value-added, whether funding should be increased and the interest bonus reduced, and if there should be contribution limits or caps on fund balances.

Given the importance of this class of programs, what can we say about their overall economic effects, at least in qualitative terms? First, the programs are basically risk reduction programs. At present this involves changing the price distribution faced by farmers by increasing prices at the low end, thereby raising the effective average prices received. This likely generates some increased production, although with the scale of subsidy relative to market returns, the actual increase is not likely to be large except for GRIP, which involved financial transfers of almost one billion dollars in 1992. By

conscious design, the reformed safety net policy will be less subsidized, hence less distorting, and with less of a commodity market effect by focusing on whole farm incomes, not commodity-specific prices or revenues. It would appear that the distortions will be quite small, and that, in turn, these reformed safety nets programs will cause few trade difficulties. Of course, the details of these programs are everything in analyzing them; more substantial comments must await information on the actual program details including the size of the subsidy and the relation between price movements and payments to farmers to determine the farm-level incentives they give to individual commodity producers.

## **DIRECT SUBSIDY PROGRAMS**

### **Output Subsidies**

In contrast to U.S. farm programs, Canadian agricultural policy does not often use this policy instrument. Safety net programs until now have included only conditional deficiency payments working on the lower end of the price distribution, and even these payments will be ended with the current safety net policy reform. The two exceptions to this generalization arise in dairy policy. First, there is an offer-to-purchase program that operates on butter and skim milk powder to underwrite the prices for these commodities, and in so doing put a floor on industrial milk prices in general. There is also a deficiency payment used in dairy policy to provide a direct subsidy on industrial milk. It was at a level of \$6/hectolitre through 1992/93 (one-sixth to one-seventh of the industrial milk price), and has since declined to \$5.40/hl in 1994/95. This subsidy is not open-ended; it is paid only on the base of industrial milk quotas. It is an important part of dairy policy but is being re-examined as part of redesigning Canada's post-Uruguay Round "orderly marketing system". In fact, in the February 28, 1995 budget, this subsidy will be reduced by 30 percent over the next two years.

Another area where output subsidies have been used is as part of provincial agricultural policy in some provinces such as Quebec and British Columbia. However, the situation now is substantially changed compared to that of the mid-1970s, when these provincial price supports (via deficiency payments) were widespread and large, incurring countervail trade actions and creating more inequity in support between provinces. Now, most such programs are being terminated or adjusted to comply with trade agreements.

## Input Subsidies

These instruments have been used quite commonly in Canadian agricultural policy. The most important input subsidy has been that on transporting Western grain exports to export port, known more recently as the Western Grain Transportation Act (WGTA).<sup>2</sup>

**Western Grain Transportation Act** This subsidy has its origins in 1897 legislation fixing the freight rate on moving grain to export position at the so-called Crow Rate. This fixed nominal freight charge became an increasingly significant benefit to Prairie grain farmers as inflation occurred and underlying freight costs increased. It was reformed and capped in the mid-1980s with the enactment of the Western Grain Transportation Act whereby the federal government assumed the costs of the fixed rate at a level equivalent to the 1981 value of the subsidy benefit, about \$700 million, paid annually to the railways. This method of payment, however, also meant that grains in the Prairies were priced artificially high (as the export price f.o.b. Vancouver or Thunder Bay less the artificially low cost of freight). The result was that the WGTA taxed livestock production, especially feedlot operations on the Prairies, and it discouraged increased value-added or further processing of grain because processed grain products did not receive the freight subsidy. In addition, the subsidy was an export subsidy and hence contrary to Canada's GATT obligations.

The size of this subsidy is among the largest of any single program in Canadian agriculture. From 1989 to 1992 the cost to the federal government was about \$725 million per year, equivalent to about \$20 per tonne of grain in freight costs. Given the distortions and inequities this subsidy causes within the agricultural sector, its incompatibility with basic GATT articles and its large budget commitments, it has been a candidate for reform or elimination ever since the WGTA was announced. In the February 28, 1995 Budget, the program was eliminated. It will be replaced by a one-time payment to Prairie grain land owners of \$1.6 billion to offset partially the drop in land values expected from termination of such a long-standing benefit. As this payment will be tax-free, its value to farmers is claimed to be about \$2.2 billion, while termination will generate for the Government of Canada annual savings of \$560 million beginning August 1995.

**Feed Freight Assistance** Although it is relatively minor in terms of outlay, the Feed Freight Assistance Program (FFA) is another freight subsidy program. In contrast to WGTA which assists cereal growers at the expense of grain users in the grain exporting regions, FFA assists livestock producers in the feed grain deficit areas. It does this by paying a portion of the transport costs of shipping feed grains to the feed importing areas of Atlantic Canada, B.C., and peripheral regions of Ontario and Quebec. It has had the effect of making livestock feed cheaper and livestock production more profitable in these areas, reducing the comparative advantage of livestock production in the Prairies. The average subsidy was equivalent to \$11-13 per tonne and cost the federal government \$17-

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<sup>2</sup> This subsidy reduces net freight charges to the farmer, hence is included among input subsidies. But because it operates beyond the farm gate and raises effective farm gate prices, from a farm perspective it appears as an output subsidy. Its allocation to the Input Subsidy category is somewhat arbitrary—it could just as well be included under the section above on Output Subsidies.

18 million over the 1990-93 period. However, this program was also ended in the February 28 budget with a phase-out over ten years.

**Credit Subsidies** The last input subsidy to be discussed concerns credit. There are a great variety of programs, mostly provincial, which provide some form of subsidy to credit for farmers. Typically these programs are focused on a particular type of credit (e.g., long term borrowing), or for a specific use of funds (e.g., land development). There are also credit components to other programs (e.g., for replanting fruit trees) that are harder to identify as credit. The extent of these programs and the subsidy element have been reduced within the last decade. The actual financial transfer in each program is usually small, but the total amount transferred in the form of credit assistance becomes reasonably significant due to the large number of such programs. Federal credit programs accounted for a transfer of \$7 million in 1992, while provincial and federal-provincial programs labelled as "credit" assistance amounted to some \$75 million, not including debt restructuring programs. There are also credit programs for marketing (e.g., export credit in the form of loan guarantees) and processing plant assistance, where the immediate beneficiary may be firms in the post-farm gate sector of the food system.

## MARKET REGULATIONS

One of the distinguishing features of Canadian agricultural policy is the development of marketing boards, beginning as early as the 1920s and 1930s. The purpose of these boards has been loosely defined as the "orderly marketing" of the agricultural commodities concerned. As in the United States, this expression usually translates as the desire to stabilize agricultural markets and to improve producer prices, particularly the latter. As they have evolved in Canada, these marketing boards have had the potential for greater market power and intervention than in the case of the closest U.S. marketing institution counterpart, marketing orders. These boards are very heterogeneous in terms of their powers and economic effects, making it necessary in analyzing them to know a considerable amount of detail about their rules and procedures. This heterogeneity also makes it difficult to generalize about marketing boards.

There was a major development in the evolution of these boards during the late 1960s and early 1970s when some of them gained powers to restrict domestic supply. At the same time, some received import protection. This occurred in the dairy, poultry and egg boards and these commodity groups are the focus of the following discussion on supply management marketing boards. The powers these boards have acquired made them one of the most significant set of marketing interventions in Canadian agricultural policy. They are also one of the most contentious policies within the country and with Canada's trading partners.

The discussion below will also include a marketing board that does not have powers of supply control, but has other powers in the grains and oilseeds sector that have made it the largest marketing board in the country—the Canadian Wheat Board (CWB).

## Supply Management

Although the details of operation differ among the dairy, poultry and egg boards, their basics are similar. They enjoy three important powers, two of which are independent. First, they have been provided protection from imports through import quotas.<sup>3</sup> In practice imports have been held to very low levels, between zero and ten percent of domestic consumption. The use of these quotas was applied under the GATT due to a subsection of Article 11 that permitted the use of such import restrictions under the condition that domestic production was also restricted. The second power follows to meet that condition, a domestic quota system to restrict domestic producers to market less than they would prefer at the price levels established. The third power is the mechanism to set domestic prices, where it is based on a cost-of-production formula, or other procedures (e.g., public utility-type hearings) that give significant weight to changes in farm costs. Typically these formulae do not reflect much technical change, with the result that whatever profits were initially protected by the pricing formula, have grown over time with the ongoing increases in farm productivity.

The outcome of this situation is relatively high product prices and at the farm level, either large rents or inefficiency due to high cost of production. The powers these boards have been given have made them into, effectively, a domestic cartel. As is the case for cartels, a large part of keeping the supply management regime operating is enforcement of the quota restrictions. In addition to an array of penalties and levies for producing in excess of quota, many of the regimes have allowed the flexibility of individual producers being able to trade the quota rights.

With the quota giving access to above-average profitability, the quotas have taken on values through capitalization of program benefits. With the high product prices that occur in most cases, this has led to quota prices that are also high by most regulatory standards. For example, one can find milk quota prices at a level where the cost of quota needed per cow is roughly ten times the cost of the cow itself. One result is that the considerable benefits of this regime accrue to the initial holders of the quota. New entrants must pay for the benefits they will enjoy through the costly purchase of the necessary quota, leaving them with no above average profits if they pay the market price for the quota. Unlike the case for new farmers obtaining land for any farming enterprise, typically there is no option for entrants (or anyone else) to rent the quota. This contrasts the ability of farmers able to acquire land for a farming enterprise through rental; quota is not allowed to be rented and not much of a rental market exists.

Another result of the high prices in these commodities is that the enforcement problem gets tougher, and this leads to more restrictions, and in some cases legal challenges to the managers of the regime. Most of these complications arise in the area of quota allocation and transfer procedures, not in the area of marketing the product. So the costs of dealing with the extra restrictions and legal costs are at the expense of attention and innovation a variety of other areas of concern to participants in the industry

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<sup>3</sup> In fact, the boards do not themselves control imports of the supply-managed commodities. Rather, the federal government does so through the Department of External Affairs using the Export Import Permits Act and the Import Control List.

(including marketing), and they reduce the benefits that producers would otherwise receive from the marketing board regime.

In sum, these supply management marketing board regimes are characterized by:

- i) high and relatively stable commodity prices;
- ii) high prices for the farmers' domestic marketing quota;
- iii) a complex system of regulations and restrictions; and
- iv) a regime that is not easy to operate due to enforcement problems and legal challenges.

These regulations, restrictions, enforcement problems and legal challenges, plus the need to dispose of surpluses, eat away at some of the initial rents to farmers. Still, the remaining rents have been large enough to keep the system intact, even if its management is rocky and many inefficiencies creep in.<sup>4</sup>

Other difficulties faced by the supply management regimes come from our trading partners, and the most substantial challenge has arisen through the recent Uruguay Round and perhaps the NAFTA. Even if this regime does not result in significant dumping of surplus product on world markets, it does limit market access by would-be exporters. Therefore, there is a common conclusion from our trading partners that if the regime were not in place, there would be large scale importation of the product in question. This is almost certainly a misconception. High domestic prices and import restrictions do not necessarily mean high domestic supply prices. The domestic quotas conceal the true supply price which may be as low as the U.S. supply price, a conclusion that arises when we share common technologies and know-how, and most of our factor inputs are available with small or no trade barriers. It would not be outrageous to claim that some supply management regimes in particular regions may actually restrict exports to the United States compared to a lifting of supply management.

The GATT Uruguay Round (UR) changes the underlying economics of supply management significantly. The import quota has been replaced with tariffication, and initial over-quota tariffs range from about 150 to 350 percent. These tariffs are obviously prohibitive, but they are vulnerable to reductions, either through future GATT Rounds or through the application of NAFTA tariff reduction provisions. Also, the pricing mechanism will change as tariffs fall in the future. Once tariff levels become less than prohibitive, and that is only a matter of time, it will be the external tariff on a world trade price that will determine prices. However, for the next six years, the only change due to the Uruguay Round will be a small expansion in certain import quotas.

The issue of whether NAFTA tariff reduction rules will apply to tariffs newly created by the UR remains unresolved, and it applies to a range of commodities, including the supply management commodities in Canada and sugar and peanuts in the United States. If the NAFTA rules do apply, then following UR tariff reductions (i.e., year 2001), the Canada-U.S. tariff rates will decline to zero by 2011. If so, the Canadian supply management sector will have a significant adjustment to deal with. In practical terms, farmers may have to face a decline in industrial milk prices of some 20 to 30

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<sup>4</sup> Editors Note: A reviewer observes that interprovincial disagreements have begun to erode some of the rent seeking capability of this cartel arrangement.

percent as Canadian prices adjust. There may also be adjustments in the rest of the industry in terms of competition with U.S. processors and marketing strategies more generally, in addition to the farm price decline noted. It is also likely that ice cream and yogurt prices may decline to U.S. levels more quickly, following resolution of the outstanding GATT Panel on Canada-United States trade in these commodities. These kinds of changes will be difficult enough for the industries affected with a lead time of ten years, but they will become more and more difficult by year if they are not anticipated or planned for by the affected industry groups.

### **Canadian Wheat Board (CWB)**

Of all marketing boards in Canada, the CWB is the largest and most important. It was formed in 1935 and is essentially a centralized state trading agency selling all wheat and barley<sup>5</sup> grown in its designated area of western Canada. Its four major objectives, as set out in legislation (Loynes and Carter, 1984) are:

- i) to maximize producer returns from the marketing of CWB-area wheat and barley,
- ii) to provide producers with federal government-guaranteed initial payments,
- iii) to equalize prices for the same grain across all producers and within a crop year by pooling, and
- iv) to equalize access to the grain delivery system, hence the available markets, by the use of delivery quotas.

To meet these objectives, the CWB has very wide powers, basically monopoly rights over the acquisition, storage, movement and sale of all wheat and barley grown in the CWB designated area, whether for export or domestic food grain markets, and the power to limit access to the grain handling and transportation system. It has the obligations to accept all grain delivered, make initial payments and give producers their rights to share in pool proceeds. To do this it is given the monopoly powers mentioned—the sole exporter and importer of wheat and barley, the sole transporter, and the sole buyer and seller of grain for both export and domestic purposes.

The rationale for these powers is, in part, to gain marketing advantages, to offset perceived monopsony powers in the international grain trade, to achieve potential economies of scale in transportation and marketing and to gain higher prices in certain markets when it has the market power to do so (i.e., practice price discrimination). Whether it has such market power is a matter of some debate. It is a sizeable player in the international wheat trade, but it works among another half dozen or so large sellers that constitute its main competition. The result is that it has little overall market power to affect prices, although in specific country markets in specific periods and for certain grades it may have a limited degree of influence over the prices it receives if most of the other sellers are not active in that market.

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<sup>5</sup> The use of the term "grain" in the discussion of the CWB is meant to include wheat and barley. However, the Government of Canada can add or delete grains from the CWB's authority, as it did by deleting oats in 1989.

Another important element of the CWB's mandate is the pooling of returns. All revenues from sales are placed in a pool for each grain quality designated, against which grain selling costs are subtracted (transportation costs are not pooled, so the net price received by a producer is the pool unit revenue less the cost of transportation and handling at a particular delivery point). The pool is debited for the cost of the initial payment, and after all other revenues and costs for that grain year are tallied, the remaining revenues are divided among pool participants per unit of grain contributed. The objective of pooling is to achieve equity among producers. Pooling is designed for all producers to share within a given crop year in the timing of sales, different sales opportunities, infrastructural constraints, and CWB costs. It is not intended that revenues from different grain qualities are pooled, nor is it intended to pool revenues from different locations of production (i.e., transport costs are not pooled).

To understand the effects of this agency it is also important to know what the CWB does **not** do. It has no taxing power or revenue source other than the revenues it receives from its sales. In the literature on state-owned enterprises, the CWB would be described as facing a "hard" budget constraint. As a result, it cannot subsidize grain prices. And despite its pooling obligations and powers, it cannot stabilize prices between years. The "initial payments" made for wheat are administered by the Board, but their level is set and guaranteed by the federal government. If the initial payment is higher than the price obtained on the market, the federal government will underwrite that payment, paying the CWB for any losses incurred. This has occurred in the past decade or two, but rarely. All it can do to raise producer prices is to sell more effectively, using its single desk selling advantages and its small amount of market power in certain markets.

It is beyond the terms of this paper to evaluate this complex institution, but we can note several issues of contention surrounding the CWB and the grain sector in general. Most of these issues relate to the monopoly powers and regulations applied, and include grain marketing, transportation and handling. First, the effectiveness of CWB marketing has been debated, most recently surrounding the question of whether the barley market should be opened up, instead of remaining under Board control. Second, the transport costs associated with the WGTA have been contentious for reasons of local market distortions (as a tax on users (further processors) of grain), budgetary costs and trade policy obligations. Thirdly, the control and regulation of elevator and handling charges have been raised more recently, particularly with how the higher charges faced by Canadian grain growers compared to those in the United States will affect the Canadian industry's competitiveness when there has been a substantial increase in cross-border grain flows since, but not necessarily caused by, the Canada-United States Trade Agreement (CUSTA).

## **OTHER POLICY INSTRUMENTS**

There are a variety of other policy instruments that are less important than those already discussed but that are very relevant for particular commodities and in certain

regions. We will only deal with three: tariffs and trade policy, research and extension, and sustainable agriculture.

### **Tariffs and Trade Policy**

This general policy instrument is highly important within Canadian agriculture, given the generally open trading environment found in most of the agricultural sector (e.g., grains and oilseeds, and red meats). For these sectors, the most important aspect of trade policy is the access to foreign markets, given that these commodities are export competitive and their sales revenues are heavily dependent on export markets. Trade policy from a domestic perspective is particularly important within the supply management sector because its main element of protection has been a set of restrictive import quotas. Any changes in these restrictions could have important income implications to the sector and would be closely scrutinized by the industry. This was readily observed in the Uruguay Round negotiations. However, these issues have already been discussed under previous headings.

An area that has not been discussed is the use of tariff protection within Canadian agriculture. This is important in the horticultural industry where tariff protection has been a primary component of its protection, particularly for vegetables. It is also important in the context of recent trade agreements because all tariffs are being reduced to zero between Canada and the United States under CUSTA in a ten year process begun in 1989. One indication of the importance of this instrument to the horticultural sector is that in 1992, its value was estimated to be \$29 million, only slightly more than 10 percent of the total government program benefits the industry received that year. The other main area of tariff protection in the Canadian food sector is on certain processed foods, where the tariff is protecting food processors and, indirectly, farm producers. In the future, there will be some increase in areas with tariff protection, due to the Uruguay Round process of tariffication of existing quotas and other non-tariff protection. Within Canada, this is leading to significant tariff levels on the supply managed commodities, where new over-quota tariffs will range from 150 to 350 percent, for poultry, egg and dairy products.

An area of growing importance, involving what are in effect tariff surcharges, is the use of countervailing and anti-dumping duties. As other forms of protection are declining, claims for either of these contingent protection measure are growing, particularly between Canada and the United States. Many of these have been introduced by the United States and imposed on Canadian products. Two examples where Canada has levied such duties are the corn countervail and the anti-dumping surcharges on Red Delicious apples being imported into British Columbia.

### **Research and Extension Activities**

Agricultural research is not directly part of trade disputes, but it has been a major expenditure area for many years so it is discussed briefly. In conjunction with extension expenditures noted below, this has been the major government program area with the objective of increasing farm productivity. In 1992, federal research expenditures were

\$232 million, roughly the nominal level around which research spending has been maintained for the last decade. In addition the provinces contribute to research programs at a level of about one-third of federal government spending, roughly \$75 million in 1992, although the level varies considerably by province.

Increasingly, federal research spending has been allocated to avoid duplication with private sector research. These funds are aimed at projects that are likely to benefit the country as a whole but that the private sector, working alone, is unlikely to undertake. There are also initiatives where Agriculture Canada engages in joint projects with the food industry. The two main priorities for research funding by Agriculture Canada are projects that will improve the health and safety of the food supply, and those that will add value to Canadian agricultural production. With the goal of communicating research findings to farmers, extension activities have also received a relatively high priority in government spending, although for constitutional reasons these are the responsibility of the provincial governments. This spending has amounted to about \$130 million or just more than half of federal research spending.

The importance of spending in this category can be seen by the high rates of return to research investments, and by the difference it makes in competitiveness by increasing productivity in a sector with higher yielding fruit varieties or improved crop varieties like canola. Even if research and extension expenditures are added, the total is in the range of \$350 to \$400 million. This can be compared to total market sales of Canadian agriculture of \$21 billion, in which case all research and extension expenditure amounts to no more than two percent of market sales.

### **Sustainable Agriculture**

This is another policy area that is not usually considered as relevant to trade disputes, but is worth noting because of the rapid growth in attention to sustainability and environmental issues, and because the total expenditures involved are no longer small. For constitutional reasons, most of this spending has come through federal-provincial programs or directly from provincial initiatives. Expenditures usually are for a large number of small projects. Basically this category includes: irrigation (dealing with irrigation, soil loss and water quality externalities); providing public goods such as wildlife habitat; providing water infrastructure; and encouraging changes in certain farm practices. The activities financed under this heading are focused on the conservation and development of the soil and water resource base (reducing soil degradation, improving water systems); the development of better systems of farm practice; tree culture; water supply; land utilization and land settlement (such as removing marginal lands from annual crop production into permanent cover); the improvement of water habitat for wildlife; and economic diversification more generally within the regions.

The main area for such spending is the three Prairie provinces, although some of the programs are cost-shared federal-provincial programs that can be joined by other provinces. The number of programs and total resources in this area has been growing, but budget cuts will likely reduce federal spending in the coming years. For example, federal government spending in this area for the 1993-94 fiscal year was \$101 million, but the

comparable estimates for the coming year, 1995-96, are \$65 million. To see these expenditures in more perspective, federal and provincial research and extension expenditures amounted to no more than 2 percent of farm cash receipts from the marketplace, while sustainable agriculture federal expenditures at their high point in 1993/94 were only one quarter of total research and extension expenditures.

There are a host of other government programs that affect farmers, but their effects are small in relation to those already discussed. It is beyond the scope of this paper to cover more of these programs. One program area that has not been mentioned but that has grown in importance over the last decade is program assistance beyond the farm gate, in the area of assistance to processors and market development activities. Even if these expenditures go directly to other parts of the food chain, they usually benefit farmers as well. However, one policy area that has large effects and hence should at least be identified is the area of favourable tax provision available to farmers--the effects of which are termed tax expenditures. While there has been a trimming in recent years of special tax advantages for the population at large, these cuts have tended not to involve farmers. One example is the capital gains lifetime exemption of \$500,000 that was initially available generally, but is now available only to farmers and small businesses. There are few estimates of the value of these tax expenditures, but an estimate of the value of one provision, this favourable capital gains tax treatment (compared to no such lifetime exemption) is relatively large. Measured in 1981 dollars, the present value of this advantage is \$3.2 billion. On an annual basis, this one component of existing tax expenditures available to farmers would be worth at least \$320 million, comparable to the major, not the largest, farm program expenditures.

## **COMMODITY BY COMMODITY REVIEW**

In this section farm policy in Canada is discussed by each of four major commodity groups instead of by instrument as was done in the preceding section. The four commodity areas included are i) red meats, ii) grains and oilseeds, iii) supply management, which includes dairy, poultry and eggs, and iv) horticulture, including fruits and vegetables. The numbers that we will use to quantify the program benefits to farmers are what have come to be known as "net benefits" (Gellner, 1991). They are not what one would describe as the net economic benefits to farmers, but rather could be described as the program expenditures or financial transfer incurred, on the simplifying assumption that if a dollar were spent on the program, farmers benefitted by a dollar. They could also be described as supply-demand rectangles of transfers, ignoring any welfare triangle losses. In the case of market regulatory programs that raise consumer prices but do not involve taxpayer-financed transfers, the estimated program benefits are calculated with reference to border prices (e.g., the difference in price between that which was actually received and that which would have been received if the commodity were imported). The most recent period for these calculations is 1992, and unless otherwise noted, all net benefits numbers refer to that year.

## Red Meats<sup>6</sup>

This sector includes beef and hog farmers, which covers some 75,000 farmers. Its farm cash receipts over the last four years (1990-93) has ranged between \$7.9 and \$9.7 billion, or \$115,000 in cash receipts per farm. The net benefits that this sector has received from federal and provincial government program expenditures for 1992 was \$503 million or between 5 and 7 cents per dollar of cash receipts, depending upon the level of farm cash receipts used.<sup>7</sup> The main programs contributing to this level of net benefits were safety nets (specifically NTSP), industry infrastructural expenditure, local property and fuel tax relief, and miscellaneous input subsidies (credit and Feed Freight Assistance).

The NTSP program expenditure accounted for 1/4 of all net benefits (\$130 million) by itself, and industry infrastructure programs (research, extension and inspection services) accounted for \$170 million, together constituting 60 percent of all transfers. Local tax relief (\$35 million) and input subsidies (credit and Feed Freight Assistance, \$32 million) added another 15 percent. The balance of expenditures are mostly from a large number of small programs and projects, especially from the provincial governments. There is a *negative program effect* on red meats that is included, from the higher feed costs due to the Western Grain Transportation program. There was an expenditure program to offset the effects of the "Crow" in Alberta, but the net effect of both programs combined was negative, and largely offsetting the local tax relief and input subsidy programs.

The most significant recent program change in the last few years is the termination of NTSP, the largest single program support. What is now remaining is a set of small, heterogeneous programs contributing only 3 to 4 cents of support per dollar of farm revenues.

## Grains and Oilseeds

In the grains and oilseeds sector there are approximately 90,000 farms with annual farm cash receipts over the 1990-93 period in the range of \$6.5 to \$7.3 billion, or \$75,000-80,000 per farm. Total net benefits to this sector, however, were a little more than \$3 billion in 1992. This illustrates a rather striking difference in support across commodities. Compared with red meats, the grain and oilseed sector is a little smaller in farm sales and involves some twenty percent more farmers, but receives government program support, mostly expenditures, that are at least six times larger. On a dollar of cash sales, these income transfers amount to 40-45 cents.

Almost ninety percent of this government support arises from five programs. Safety nets (largely GRIP, NISA, and Crop Insurance) contribute half of this support (\$1.6 billion), the WGTA transportation subsidy counted for another quarter (\$0.8 billion),

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<sup>6</sup> The data for this section were obtained by personal correspondence from Statistics Canada and from unpublished AAFC data.

<sup>7</sup> At the actual level of farm cash receipts for 1992, \$9.150 billion, the net benefits this sector received from government programs were 5.5 cents per dollar of cash receipts.

infrastructure in the form of research, extension and inspection cost \$170 million, local tax exemptions added \$315 million, and several credit subsidies added \$36 million. This list covers 87 percent of the total net benefits, and the balance is due to a variety of small programs, from irrigation and soil conservation activities to farm debt review and credit sales on exported grain.

As in the case of red meats, recent program changes will have a significant effect on these net benefits, mostly to reduce the levels of support. Two changes alone, the removal of the WGTA grain transportation subsidy and a reduction in safety net programs including withdrawal from the GRIP program, will remove over half of this sector's net benefits. In the short run there will be a one-time offset payment, but in the medium term the cuts will be felt directly, reducing net benefits as reported.

### **Supply Management**

This sector covers the dairy, poultry and egg sectors, which affect 30,000 farmers. Farm cash receipts in this sector amount to \$5.8 billion, or an average \$190,000 per farm. Net benefits are \$2.4 billion in 1992, or equivalent to 41 cents on every dollar of sales. In this sector the net benefits arise primarily from market regulation (i.e., import and production quotas), making the sources of net benefits particularly concentrated compared to other sectors. In fact, the import quota and domestic supply control regulations account for \$1.9 billion in net benefits, the federal dairy subsidy (direct deficiency payment) accounts for \$225 million, and research, extension and inspection activities add \$122 million. These three program areas add up to \$2.25 billion, or 93 percent of all transfers. The remaining 7 percent arise mostly from small provincial programs.

Recent program changes in the government budget will have a small effect on the net benefits enjoyed by this sector. The dairy subsidy will be cut over two years by 1/3, but that will reduce expenditures by only \$70 million, or a reduction in net benefits of only 3 percent. The Uruguay Round will affect the net benefits from market regulation, but at this time the only effect will be via a small increase in import quotas. In the longer run, there will likely be tariff reductions and when these become binding there will be reductions in program benefits, but those effects are not likely to be seen for some years.

### **Horticulture**

This is the smallest of the sectors covered, including only 9000 farmers. Farm cash receipts have ranged between \$1.1 and \$1.3 billion over the period from 1990 to 1993, and this amounts to \$130,000 per farm. Net benefits for 1992 in this sector were \$280 million, or 23 percent of farm cash receipts.

When disaggregated, these net benefits arise from four major areas. The most important are the safety net programs, such as NTSP, NISA and Crop Insurance, which account for \$84 million or 30 percent of total net benefits. Tariff protection is valued at \$29 million (10 percent of total benefits). Research, extension and inspection services account for \$70 million (25 percent). Local tax assistance amounts to another 8 percent

of the total. The balance is due to a series of small programs, mostly grants and subsidies at the provincial level.

The recent changes are planned termination of the NTSP program, and a steady reduction in tariff levels due to the Canada-United States Trade Agreement and the Uruguay Round. However, as tariffs are already quite low, removing them will have little effect. The more significant effect will be the reduction in safety net spending and ad hoc financial programs arising from federal and provincial government budget cuts in the future.

## SUMMARY AND CONCLUSIONS

Agricultural policy in Canada incorporates a wide array of instruments, complexity in programs and implementation regulations, and in some cases, very large transfers to producers. This discussion has focussed on the policy instruments which account for the bulk of financial transfers. There are other programs, particularly at the provincial level, which were excluded because they are relatively small. The total value of transfers in 1992 was \$7.1 billion. Of this, \$3.7 billion were due to federal government programs, \$1.9 billion were from provincial programs, and \$1.5 billion arose from federal-provincial cost shared programs. Of this \$7.1 billion total, \$5.1 billion was from direct and indirect financial transfers while \$2 billion was the dollar equivalent benefit from market regulations but where the cost is paid for consumers instead of taxpayers.

When one looks at individual programs, there are many differences between Canadian and U.S. programs, with much greater emphasis in Canada given to safety net programs and market regulation. Import and domestic quotas are the heart of Canadian supply management regulation. There is much less use of direct subsidies, such as deficiency payments and export subsidies in Canada, than in the United States. The reasons for these different choices are beyond the scope of this paper but one can speculate that the importance in Canada of selling onto the world market, and the implications of that for price stability, is a major explanatory factor.

Whatever the reasons for the existing program mix, it is clear from events of the last year or two that the programs and instruments used in Canada are changing. There is a general movement at both federal and provincial levels to programs that will cause fewer trade actions and be designated as "green" in terms of the GATT. Similarly, there is a shift away from large programs that are costly to taxpayers, to less expensive programs that share costs with producers and give them a greater say in how those funds are to be spent. The February 28, 1995 budget gives ample and recent evidence of such a shift.

Another observation on the Canadian agricultural policy situation is how wide the differences are in public support across commodities. When calculated as a percent of farm cash receipts, government transfers to the red meat sector constitute only 5 percent, while transfers to the grains and oilseeds sector and the supply management sector (dairy, poultry and eggs) constitute 40 to 45 percent. Within the next few years, this range will

widen (perhaps temporarily) as red meats commodity support should decline by about a third. Grains and oilseeds support should fall by one-third to one-half. Supply management support may not show much decline, however given that new tariffs will be prohibitive.

Looking ahead, there are two factors that will dominate policy developments for at least the next five years. These are the two underlying reasons for the recent program changes that have been announced: the political priority being given to budget cuts at the federal and provincial levels in order to reduce government deficits, and the importance to Canada and our trading partners of new trade agreements. An immediate question is whether these changes will be superficial or temporary. Is it likely that the politics of support to Canadian agriculture has changed, or will current budget cuts and trade policy issues fade after several years, and allow the underlying political economy factors to re-emerge as they have in the past, with only some re-instrumentation.

It would seem at this point that these changes may be more permanent. What appears to have changed this time is the underlying politics. Through trade agreements, our trading partners now put limits on what Canada can do in terms of international policies, and the implementation of domestic policy. This shift in power means stronger competition for Canada's farm lobby groups. For example, it is no secret that U.S. dairy farmers believe they have a right to access Canada's domestic dairy product market, and that pressure from the United States on this matter will be in conflict with Canada's dairy lobby in Ottawa. Similarly, Canada's wheat competitors on the world market will have some influence on what is defined as an export subsidy. The WGTA constituted such a subsidy, and was removed.

In the case of the budget, there is now a new or strengthened lobby that demands budget cuts, and this runs against the interests of some farm groups. The result is a reduction in agricultural spending programs that will signal a shift in influence from certain farm groups to taxpayer interests. Although there will be some substitute programs, this is likely only to offset partly the cut in budget that is now occurring.

If these interpretations are correct, there will be more constraints placed on market regulatory policies and reduced budget expenditures on farm programs in Canada in the coming decade. These will be in the direction of smaller financial transfers or their equivalent. With these developments, programs will be less distorting to international trade and funding will be allocated in areas where there is a broader consensus of support. For example, spending will be more likely in pursuit of international competitiveness and environmental sustainability. This will produce a larger number of well focussed programs that are less costly. Demands from farm lobbies will continue, but they will be met by options within the constraints of budgets and possible trade actions.

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## FARM PROGRAMS AND RELATED POLICY IN THE UNITED STATES

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### INTRODUCTION

Farm policy in the United States has evolved slowly in the six decades since the New Deal created most of the basic programs that continue to govern U.S. agriculture. The durability of farm programs is often remarked upon, but views differ about the implications. The advanced age of farm programs is one of the standard criticisms of farm policy. Critics point out that agriculture has been transformed since the 1930s, but the programs have changed relatively little. They argue that the original rationales, that might have been appropriate in the first half of the 20th Century, no longer apply as we enter the 21st Century. Program supporters note that under the current farm programs, agriculture has prospered and benefited consumers and producers alike. Further, program defenders argue that the farm programs have been built into the very fabric of agriculture in America, and that it would be unfair to change the rules of the game now, for no compelling reason. Finally, they claim that it would be deeply unwise to take the risk of destroying a successful industry by undermining the regulatory foundations that govern U.S. agriculture.

The discussion of the future of farm policy is not an idle academic exercise. Especially in 1995, a live and pressing debate is engaging all with an interest in agriculture and many with an interest in public policy generally. The 1995 Farm Bill debate has raised more than the usual amount of discussion about the fundamentals of farm policy.

The focus of this paper is on policy that regulates and subsidizes production and marketing of commodities. Topics include farm income and price supports, agricultural export programs and import barriers, agricultural conservation programs and regulations, and finally, crop insurance and disaster programs.

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Whereas the list of topics covered in this overview is long, the list of agricultural topics not covered is even longer. Agricultural policy in general could be defined as those issues under the purview of the U.S. Department of Agriculture (USDA) or the Congressional agriculture committees, or included in the periodic "Farm Bills." Such a definition would include: food subsidies; food safety and plant and animal health; regulations or subsidization of commodity marketing and promotion; farm and rural credit policy; rural community development; agricultural research, extension and higher education; and some forestry issues. The Food Agriculture, Conservation and Trade (FACT) Act of 1990 included 25 separate titles that range from "Global Climate Change" to "Honey." If all policies affecting agriculture in a major or primary way were included, the list would be longer yet.<sup>1</sup>

The support and regulation of agriculture involves much more than the basic commodity programs. But, there is no doubt that these programs are the headline issues and the source of much of the subsidy for U.S. agriculture. Therefore, I begin with these programs and discuss them in some detail.

## **MAJOR COMMODITY PROGRAMS**

Key programs for a number of basic field crops and dairy comprise the heart of commodity policy in the United States. In addition, export subsidies, import barriers and land idling are often intimately linked to the direct commodity subsidy programs. These are all discussed in this section but, the amount of detail provided is limited, and the reader is referred to chapters in the "Commodity Policy Issues" section of Hallberg et al. (e.g., Knutson and Smith, 1994), to forthcoming USDA, ERS publications, and to Cooperative Extension Service policy bulletins (1994) for more information on the current state of programs.

### **Deficiency Payment Programs**

Price and income support programs continue to contain price supports (loan rates) which provide a price floor, target prices which determine direct payments to producers, and land set-aside requirements which reduce output and raise market prices. Since at least 1990, the key government support for feed grains and wheat has been the deficiency payment program. Price supports, and the commodity loan programs that are used to implement them, are still on the books and still have some potential for significant government outlays and stock accumulation. As a practical matter, however, effective loan rates have remained well below market prices in almost every market, almost all the time. Table 1 provides basic data related to the deficiency payment programs for major

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<sup>1</sup> For a treatment of the whole array of issues likely to be important in the 1995 farm program debate in the United States see Hallberg, Spitze and Ray, (1994).

crops including wheat, corn, rice and cotton. Note the average market prices reported have been well above the effective loan rates in recent years for wheat and corn.

**Table 1. Program Data for Direct Income Support Programs**

<b>WHEAT</b> (Target Price = \$4.00/bushel <sup>a</sup> )				
Crop year <sup>b</sup>	1991/92	1992/93	1993/94	1994/95 <sup>c</sup>
Average Market Price (\$/bu)	3.00	3.24	3.26	3.50
Effective Loan Rate (\$/bu)	2.04	2.21	2.45	2.58
Deficiency Payment (\$/bu)	1.35	0.81	1.03	0.95
Effective Base (Mil. Acres)	79.2	78.9	78.4	78.2
Participation (%)	85	83	88	87
Acreage Reduction Prog. (%)	15	5	0	0
0/92-Idled (% of Part. <sup>d</sup> Base)	6	11	8	7
<b>CORN</b> (Target Price = \$2.75/bushel)				
Crop year <sup>b</sup>	1991/92	1992/93	1993/94	1994/95
Average Market Price (\$/bu)	2.37	2.07	2.50	2.20
Effective Loan Rate (\$/bu)	1.62	1.72	1.72	1.89
Deficiency Payment (\$/bu)	0.41	0.73	0.28	0.45
Effective Base (Mil. Acres)	82.7	82.1	81.8	81.6
Participation (%)	77	76	81	82
Acreage Reduction Program (%)	7.5	5	10	0
0/92-Idled (% of Part. <sup>d</sup> Base)	2	2	4	3

<b>RICE</b> (Target Price = \$10.71/cwt.) <sup>e</sup>				
Crop year <sup>b</sup>	1991/92	1992/93	1993/94	1994/95
Average Market Price (\$/cwt.)	7.58	5.89	8.09	6.25
Loan Rate (\$/cwt.)	6.50	6.50	6.50	6.50
Loan repayment rate (\$/cwt.)	5.83	4.85	6.09	5.25
Deficiency Payment (\$/cwt.)	3.07	4.21	3.98	3.79
Effective Base (mil-Acres)	4.16	4.14	4.14	4.16
Participation (%)	95	96	97	95
Acreage Reduction Prog. (%)	5	0	5	0
50/92 Idled (% of Part. <sup>d</sup> Base) <sup>f</sup>	131	1	12	6

<b>COTTON</b> (Target Price = \$0.729/lb.)				
Crop year <sup>b</sup>	1991/92	1992/93	1993/94	1994/95 <sup>g</sup>
Average Market Price (\$/lb.)	0.58	0.55	0.5	-
Loan Rate (\$/lb.)	0.508	0.524	0.524	0.50
Loan Repay Rate (\$/lb.)	0.472	0.438	0.49	-
Deficiency Payment (\$/lb.)	0.101	0.203	0.194	0.069
Effective Base (Mil. Acres)	14.6	14.9	15.1	15.3
Participation (%)	84	89	91	89
Acreage Reduction Prog. (%)	5	10	7.5	11
50/92-Idled (% of Part. <sup>d</sup> Base)	5	3	3	1.5

Source: Various USDA Publications from ASCS and ERS.

#### Notes

<sup>a</sup>A bushel of Wheat is 60 pounds a bushel of Corn is 56 pounds.

<sup>b</sup>Crop years are June to May for Wheat, September to August for Corn, August to July for Rice and Cotton.

<sup>c</sup>Data for 1994/95 are based on projections and partial information in some cases.

<sup>d</sup>Participation Base.

<sup>e</sup>Rice information is traditionally presented per hundred weight.

<sup>f</sup>For Rice a substantial amount of acreage (about 50 percent of that eligible) has been also idled under the normal flex. provisions.

<sup>g</sup>The USDA is precluded by law from publishing cotton price forecasts. Currently cotton prices are at record high levels.

The deficiency payment programs for all crops were revised in 1985 and again in 1990. Both sets of revisions reduced projected outlays from what they would have been under the previous program and reduced government regulation of production and prices. The most important deficiency payment program changes in 1985 included:

- i) lower effective price supports;
- ii) lower target prices;
- iii) marketing loans for rice and cotton so that loan rates do not create a price floor;
- iv) the 0/92 option (wheat and feed grains) and 50/92 option (rice and cotton) for growers to plant as little as zero percent of base acreage (50 percent for rice and cotton) and receive 92 percent of their projected deficiency payment on idled acreage; and
- v) yields per acre frozen at their 1985 levels to be used for payment calculations.

The most important changes in 1990 were the so-called flexibility provisions that reduced the acreage eligible for payments by declaring 15 percent of base acreage not eligible for payments, and declared another 10 percent of base acreage to be eligible for planting certain other crops, with no payment but no loss of program base.

Deficiency payment programs are voluntary and participation requires compliance with planting restrictions and with other rules such as conservation. For all programs base acreage is determined by a farmer's history of planting the crop. For wheat and feed grains, base acreage is calculated on a five year moving average of acres planted and considered planted to each crop. Rice and cotton use a three year moving average for base calculations. Compliance within the flex acreage provisions requires the grower to plant on 75 to 100 percent of base acreage less the ARP. Exceptions include the 0/85 and 50/85 (0/92 and 50/92) programs under which a farm plants as little as zero and gets 85 percent of the projected deficiency payment for the crop. (Prior to 1994 the farmer got 92 percent of the projected payment hence the change in the name of the program.) Growers are also allowed to certify zero planting prior to the crop year and maintain base but get no payments. If a farmer plants more than the previous base, their base can expand; if they plant (or have "considered" plantings) less than the previous base, they lose base. Participation in the program means the farmer will be "considered" to have planted the full base. Therefore to build base or to lose base the farmer must be outside the program.

With the introduction of normal flex acres in 1990, the maximum payment acreage (MPA) is calculated as base minus ARP acres minus normal flex acreage. For example, a farm with 1000 acres of corn base in a year with a 7.5 percent ARP would have a MPA of 775 acres ( $1000 - 75 - 150 = 775$ ). Deficiency payments are made on acres planted up to the MPA.

### **Deficiency Payment Programs for Feed Grains and Wheat**

The reforms in 1990 mean that the major effect of the deficiency payment program for wheat and feed grains is simply to transfer income to farms with base in selected crops. For recent years only a small share of base acreage is required to be idled but some acreage is idled under the 0-92 (now 0-85) programs (Table 1). Further, most

eligible base continues to participate in the programs and relatively little acreage is flexed into or out of the crop for which base is assigned. These facts about the recent allocation of crop land, together with fixed program yields, suggest that the wheat and feed grains programs now have relatively little net effect on the total production or the market price of these crops in the United States.

For wheat (and perhaps barley) the conclusion that the program has relatively little impact on total output and market price is complicated by the influence of the Export Enhancement Program (EEP) which has allocated roughly one billion dollars per year to export subsidy bonuses. The federal crop insurance subsidies and disaster assistance have also provided substantial aid to wheat producers in some regions (Coble and Harwood, 1994). Finally, the Conservation Reserve Program (CRP) has idled 36 million acres, much of which is program base acreage including more than 10 million acres of wheat base. Each of these additional subsidy programs may affect the amount of land allocated to grain production and the domestic market price. These programs are discussed in more detail below.

As a conceptual matter, the deficiency payment programs can increase the incentive to keep land in grain production in the long run, or to build base. Therefore, the programs could increase the overall size of the U.S. grain industry, even if production were relatively unaffected in the short run. Evidence concerning the flexibility in the current program suggests that the programs hold relatively little land in production that would not be there without the programs. First, under the 0/92 program and flexibility provisions farmers can now maintain base and payments, and reduce plantings. About 8 percent of wheat base and 4 percent of corn base are idled under the 0/85 provisions. These percentages are higher for barley and the other feed grains. For wheat, about 2.5 to 3.5 percent of wheat base is flexed out (net) to another crop, compared to 5 to 6 percent of corn base flexed out (net). Given this flexibility, there seems to be little reason to expect U.S. grain production to be smaller without the programs. The same statement cannot be made about the neutral impact of crop insurance and disaster assistance subsidies, particularly in regions with very high loss ratios.

If, as we argue, the feed grains and wheat programs are primarily direct income transfers, with relatively small allocative impacts, then the major effects of the programs are on the rental earnings and the capital value of land with program base. For wheat, deficiency payment outlays have totalled between about \$1,400 million and \$2,400 million per year since the revision of the program in 1990. In addition, another \$600 million to \$1,000 have been spent on export subsidy bonuses and an average of several hundred million dollars per year in outlays on crop insurance subsidies and disaster assistance.

Total market revenue for the wheat industry has ranged from a low of about \$6.0 billion for the 1991/92 crop year to between \$7.8 billion and \$8.1 billion in each of the last three years. Under current farm legislation, deficiency payment outlays have been about 25 percent of market revenues. Export subsidies are paid to exporters and affect market prices directly by increasing the price exporters are willing to pay for wheat in the U.S. market. With a national average payment yield of 34.4 bushels per acre, and a projected deficiency payment of about \$0.85 per bushel, the program would generate additional revenue of about \$30 per eligible acre. This calculation indicates the flow of

payments per acre. If the output and market price effects of the program are small then this revenue impact is also the net effect of the program on producer total revenue.

An appropriate capitalization rate is required to find the asset value of these payments. We use a capitalization rate of about four to one to capitalize farm program benefits. (If this capitalization rate is not a universal constant, it is at least a rate that is consistent with findings for several commodity programs such as dairy and tobacco for which program risk is also an issue.) The implied capital value of wheat payments is about \$120 per acre eligible for payments, or about \$7.0 billion for the 58 million acres that have received payments in recent years (the ARP has been zero). Spread over the total participating wheat base of about 68 million acres the program generated a capital value of about \$100 per acre. Of course, these benefits vary by region and the costs of program participation have not been included in the estimates. In addition, disaster payments and crop insurance benefits have added substantially to wheat industry revenue and these benefits vary even more dramatically from year to year and region to region. Finally, analysis reported in Alston, Gray and Sumner (1994) suggests that import barriers for wheat have likely provided relatively little benefit to producers. (Also see, USITC, 1994, and Haley 1994.)

For feed grains, deficiency payments have totalled from about \$1.9 billion in the flood year of 1993 to \$4.1 billion in 1992. Another \$2,000 million of disaster assistance was provided in crop year 1993. The feed grains industry in the United States is four or five times as large as the wheat industry by production (output was more than 280 million metric tons in 1994), substantially larger in terms of total revenue (the 1994 crop was worth more than \$24 billion) and larger in terms of total acreage (about 93 million harvested acres in 1994). The U.S. feed grains industry is dominated by corn production which accounts for about 90 percent of the revenue in a normal year.

Whereas a single program covers all the feed grains, other data are more readily available and more meaningful for individual feed grains. To evaluate the amount of support provided, we will examine data on the corn industry (also in Table 1). Under the current program, effective base is about 82 million acres and the participation rate is about 82 percent which leaves about 67 million acres of participating base and about 50 million to 57 million acres of payment base when the ARP ranges from 10 percent to zero. Corn deficiency payments are in the range of 10 to 20 percent of market revenue. With an average projected deficiency payment for corn of \$0.50 per bushel and payment yield of 104 bushels per acre, the average payment is about \$52 per payment acre or from \$40 to \$45 per acre of participating base. Multiplying the annual revenue times four (as was done above for wheat) the program has a capital value of about \$160 to \$180 per acre of participating base and, for the 65 million to 67 million acres enrolled, the total value of the corn program is about \$10 billion to \$12 billion. All the caveats listed above for wheat also apply here, including especially the value of disaster program payments in the last decade.

**Deficiency Payment Programs for Rice and Cotton**

The basic rules for the commodity programs for rice and (upland) cotton were discussed above. However, for these crops marketing loans are an additional source of government payments. Also, the per person payment limits, that apply to all programs tend to be more binding on individual producers of rice and cotton and therefore have more effect on the legal arrangements under which farms operate.

The marketing loan gains for rice and cotton growers are the difference between a USDA calculated world price and the loan rate, or zero when this difference is negative. Participating growers are eligible for these payments on all acres planted and are paid on actual yield, not the program yield on which deficiency payments are made. In addition loan repayment rates vary weekly depending on international market conditions. The loan gain payment is therefore paid out on all acres planted (within compliance limits) and on actual yield. For cotton, since 1991 an additional set of "User Certificate" payments are made that are also based on U.S. domestic and international prices.

As Table 1 shows, the recent rice and cotton programs have required low levels of land idling under the ARP. For rice we have observed relatively little normal flex acreage planted to rice and a relatively large enrollment in the 50/85 program, especially in Texas, and in California during the drought years. This indicates that, in some places at least, rice is not profitable at the margin. Furthermore, some growers are willing to produce at or near the compliance minimum in exchange for a deficiency payment plus market returns and marketing loan gains, but do not plant rice when no deficiency payment is earned.

The low ARP, low percentage of rice on normal flex acres, and high 50/85 participation are all indications that the current program does not limit rice output from above for many growers. If the current commodity program were lifted some decrease in domestic production of rice would occur along with corresponding increases in domestic price. For cotton the current program likely has relatively little impact on acreage—a result similar to that for wheat and feed grains. However, unlike other crops, cotton price exceeded the target price during 1995 and, if this price continues, no payments would be forthcoming.

**Price Supports for Soybeans and Other Oilseeds**

Soybeans and other oilseed crops are supported only by a loan program. The national average loan rate for soybeans is currently \$4.92 per bushel. For 1991 to 1993 the national average loan rate was \$5.02 and there was a loan origination fee of \$0.10 per bushel. For oilseeds (and for wheat and feed grains) the loan rates vary weekly and by county. They generally remain well below local market prices and provide only some relatively low cost short term credit. The loan repayment rates also vary by week and locale, and have remained at the loan rate plus interest and carrying costs.

Other oilseed crops, such as sunflower seed, safflower, mustard seed, canola, rapeseed and flaxseed all have loan rates that average \$8.70 per hundredweight with similar provisions as for soybeans. These are all relatively minor crops. Sunflower is the

most important after soybeans and had a farm value of about \$340 million in 1993/94 compared to a farm value of soybeans of about \$11.6 billion in 1993.

It is generally noted that the deficiency payment programs aid soybeans and other oilseed industries because these crops are often grown in rotation or at least in the same regions as the crops which are eligible for direct payments. The logic is therefore that the planting requirements of the deficiency payment programs reduce the total plantings of oilseeds. This effect is less important, now that flexibility provisions allow acreage to shift on the margin. For example, between 4.5 million and 6.0 million acres have flexed from program crop base into soybeans in recent years.

The soybean industry also receives some protection from a binding import tariff on vegetable oil which has been approximately 22.5 percent and is scheduled under the Uruguay Round agreement to decline by 15 percent gradually over the next six years.

### **Import Barriers, Price Support and Allotments for Sugar**

The U.S. sugar program has long engendered strong support from the industry, strong disapproval from economists and controversy in domestic and international policy circles. The program details are complex and have changed several times in recent years, but the basics of the program are simple. The domestic price is well above the price of most internationally traded sugar and is insulated from imports by a tariff-rate quota with a high duty applied to imports above a certain quantity. Currently domestic marketing allotments (along with the import barrier) keep the domestic price above the price support. Overall, subsidy for the industry derives mainly from the import barrier. The domestic market price is usually about double the price of sugar on the international market—about 22 cents per pound for domestic sugar compared to about 10 to 14 cents per pound for imported sugar.

The Uruguay Round agreement led to a change in the tariff-rate quota for sugar. It fixed the quantity for import at not less than 1.136 million metric tons (about 15 percent of U.S. domestic use) and raised the second tier GATT-bound duty from 16 cents per pound to about 17.6 cents per pound in 1995. This duty will decline by 15 percent by the year 2000.

U.S. sugar policy has long been seen as an example of a trade distorting policy with substantial costs to consumers (Johnson, 1974). The Uruguay Round agreement failed to cause any significant reduction in the program costs borne by domestic consumers, at least in the short run. Nor did it reduce the excess resource cost of producing sugar in the United States when it could be imported at roughly half the cost. A larger tariff-rate quota would reduce economic costs of the program. For example, the benefit of an expanded quantity of low-tariff imports of, say, 0.5 million tons of sugar, would be a direct gain of about \$100 million to consumers. The losses to growers and those who own sugar producing land or other resources would be less than these gains to consumers, because much of this sugar is produced at high cost on land that is environmentally fragile or better suited to other uses (Hafi, et al., 1994).

The 1990 FACT act complicated the sugar program by adding authority for marketing allotments whenever projected U.S. production and consumption (at the support price) are such that imports would have fallen below 1.136 million metric tons. Marketing of domestic sugar is restricted so that imports are at the 1.136 million metric ton minimum. The domestic price remains approximately equal to the support price, so that loan forfeitures do not occur. In that way, U.S. sugar policy was made more similar to U.S. peanut policy and policies in Canada for supply managed commodities. For cane sugar, allotments are redistributed to other firms by USDA if any processor cannot meet its allotments. For beet sugar, annual allotments may be sold to another processor. In 1993, allotments were sold for about one cent per pound by a processor in California to beet processors in the Midwest.

### **Import Barriers, Price Support and Marketing Quotas for Peanuts**

The peanut program has long had an import barrier to insulate the U.S. domestic market from imports, a price support at about double the price of internationally traded peanuts, and domestic marketing quotas to keep the U.S. market price above the price support. Unlike the case of sugar, the United States is a low-cost high-quality producer of peanuts and exports non-quota peanuts into the world market. The Uruguay Round agreement caused several changes in the peanut program but it did not change the level of protection, the degree of support for the industry or the cost to domestic consumers (Rucker, Thurman and Borges, 1994).

The following changes in peanut policy were introduced as a part of the agreement:

- i) The peanut import quota became a tariff rate quota with the over-quota duty set at more than 150 percent for each relevant tariff line.
- ii) The import quantity was increased from about zero to three percent of domestic consumption.
- iii) The quantity of manufactured peanut products was reduced to offset the increase in imports of peanuts themselves.

The result is no net trade impacts on the domestic industry.

Peanut marketing quotas have been in place for many years. They are a valuable asset owned by individual growers or land owners and are tradeable within local areas on an annual basis. Because the price of quota peanuts is double the price of peanuts without quota, the value of quota is about equal to the value of the peanuts themselves.

Peanut and sugar producers receive little support from taxpayers and this has insulated them from the federal budget pressure facing other commodity programs. However, these programs are known to cause at least as much economic distortion as others and they are currently under pressure politically, because they involve stifling regulations.

### **Import Barriers, Price Support and Production Quotas for Tobacco**

Tobacco policy has similarities to peanuts and sugar. However, the differences are even more important. Tobacco operated without significant import barriers until 1994 and the domestic content rule introduced then is now being revised to eliminate any sizable trade impact. Production quotas raise the market price and exports are maintained because of the unique quality of U.S. leaf. The United States remains a major importer and exporter of tobacco.

Tobacco production quota is marketable within local areas. The rental rate for quota averages roughly 25 percent of the price of tobacco, and varies inversely with production costs (Rucker, Thurman and Sumner, 1995). The Uruguay Round agreement had little impact on tobacco policy in the United States and controversy over health effects and excise taxes are the major issues for the industry. In order to insulate it from these controversies, the tobacco program is separate from the legislation that is renewed in the periodic farm bill process and so is not a part of the 1995 Farm Bill debate.

### **Import Barriers, Price Supports and Marketing Orders for Dairy**

The dairy industry is large, widespread and diverse. The value of total milk production in the United States is approximately \$20 billion per year. The price of milk is supported at \$10.10 per hundredweight (cwt) of milk by federal government purchases of manufactured dairy products. This program has existed for many years and the price support has been \$10.10 per cwt since 1990 after declining from \$13.10 per cwt in 1980. The price of milk is above the support price in almost every market almost all the time, so the net government outlays under the purchase program have remained below \$300 million in each of the last four fiscal years. These outlays amount to only about 1.5 percent of industry revenue and government purchases are less than five percent of production.

In order to reduce outlays under the price support and to otherwise raise the price of milk, the 1990 farm legislation introduced a milk tax (of about \$0.18 per cwt.) to be paid by those farms that increased production during the calendar year. This milk tax has a variety of perverse impacts on the growth path of farms, but the general effect is to tax efficient farms that are operated by younger farmers in growing markets in order to benefit the inefficient and old ex-farmers in stagnant markets. The idea of the tax was to reduce the net budget costs of the price support. Tax exemption for stagnant or shrinking farms is based on the silly notion that the problem of budget cost is caused by farms that are growing rather than by farms that are not shrinking fast enough or by high cost farms that are remaining in business.

Outlays on the price support programs are minimized by the import barriers for dairy products. Prior to the Uruguay Round agreement dairy import barriers were mainly quotas authorized under Section 22 of the Agriculture Adjustment Act of 1933 (as amended). These have been converted to tariff-rate quotas with very high tariffs for the over-quota and some slight expansion of import access in those cases where the previous import quota was below three percent of domestic consumption. Tariff rates are likely

to be prohibitive throughout the six year implementation period and quantities subject to low tariffs remain relatively small. Remaining import barriers for manufactured dairy products will keep domestic prices well above those of potential imports.

Most of the U.S. domestic dairy industry could compete on international markets with no subsidies, but the combination of domestic price policy, import barriers, and export subsidies make the U.S. prices much higher than international market prices for manufactured dairy products. There are regions of the world, such as New Zealand and parts of Australia, that can produce tradeable dairy products at lower cost than anywhere in the United States. But, the production capacity of these regions is very limited compared to the size of the world market. Opening the U.S. and other domestic markets and eliminating dairy export subsidies would cause higher international prices for dairy products, allow U.S. producers to compete in a world export market and allow access to the United States for additional low cost dairy products. Current prices at which dairy products are traded internationally are about 40 percent lower than internal prices in the United States. But, using such a measure would substantially overestimate the gain to consumers from opening the U.S. market to non-subsidized imports, because an open U.S. market would cause international dairy prices to increase.

The final part of U.S. dairy policy consists of marketing orders. These policies set minimum milk prices based on end-use and regional market, pay producers a blend (weighted average) of these prices, and restrict the movement of fluid milk across regions. Every major dairy region except California, which accounts for about 15 percent of the total, participates in the federal marketing order program. The marketing orders, including the state policy in California, raise the average farm price of milk by about 15 to 30, increase milk output, and cause a reduction of fluid and soft product use relative to manufactured, storable product use (Sumner and Wolf, 1994 and Helmberger and Chen, 1994). Overall, the complex combination of milk policies in the United States operates at substantial costs to consumers and provide much smaller benefit to producers.

### **Other Regulation and Subsidies**

Most other agricultural policies are produced with relatively little direct government support. Marketing orders for fruits and vegetables, for example, have little remaining supply control and no direct subsidy. They generally do almost nothing to enhance producer price. However, limes, juice oranges and a few other crops have relatively high tariffs, as does beef. The U.S. beef industry receives access to low cost grazing on federal land in the Western States. The size of the subsidy is relatively small, at most a few hundred million dollars for an industry with farm sales of almost \$40 billion. Imports of beef have been limited by the Meat Import Law which now applies a tariff-rate quota with the over-quota tariff of 31 percent. After adjusting for quality and shipping cost, the price impact of the protection is relatively low, probably no more than a few percent of the price of beef in the United States. Early work at the Organization for Economic Cooperation and Development (OECD) on the beef producer subsidy equivalent (PSE) is now acknowledged to have been flawed and a much smaller number applies (Sumner, 1995).

Farm production also benefits from irrigation water subsidies from federal projects. Evaluation of that subsidy is complex, given that the projects were built many years ago and they produce water, power and recreation as joint products. In California, where about half of federally subsidized water is used, the average subsidy (calculated as the marginal opportunity cost minus the price to growers) is about \$20 per acre foot. About 8 million acre feet of federally subsidized water is used in California, and after adding the subsidy for power used for water delivery, the total subsidy is about \$200 million. This subsidy is distributed across irrigated crops worth about \$10 billion. It likely contributes marginally to the California dairy industry. The value of irrigation water subsidy in terms of lower feed costs (mostly alfalfa) may lower milk production costs in California by about \$0.10 per cwt. or one percent. In the Western United States, total irrigation water subsidies are likely to be about \$0.5 billion per year.

## **EXPORT PROGRAMS**

Export policy in the United States covers a host of commodities and an alphabet soup of programs including EEP, DEIP, COAP, and SOAP, which provide export price subsidies, MPP and FMD which provide aid for export marketing, GSM-102 and GSM-103, which provide credit guarantees for export sales and PL-480 which provides food aid. All of these programs use government resources to aid farm exports and have been around in one form or another for decades (see Johnson, 1950 and Benedict and Stine, 1956). This section reviews a variety of programs and draws on the analysis in Sumner, (1995).

### **Market Promotion**

International market promotion programs subsidize participation in trade shows, store displays and similar activities. The headline case is the Market Promotion Program (MPP) which was renamed from the Targeted Export Assistance Program (TEA) in 1990. Other, older but smaller USDA programs, such as the Foreign Market Development (FMD) program, also have provided promotion funding and assistance for food and other agricultural exports. The MPP was originally funded at \$200 million per year (the authorized maximum). After being cut in each of the previous two years as well, MPP funding was reduced further to \$85.5 million in 1995.

MPP funds are used for a variety of activities such as advertising of branded goods by large multinational firms and generic promotions by industry organizations. A large share of the funds are used to promote fruits, vegetables, tree nuts and other high value-per-unit and value-added products. It is sometimes argued that some unspecified barrier or market failure causes firms to under-spend on advertising overseas and therefore a subsidy is warranted. A second argument focuses on generic products for which no single firm would have the incentive to undertake promotion and therefore a subsidy is required to encourage export sales. Even if such promotion were profitable for the industry,

however, this argument suggests funding by an industry consortium and not by the general taxpayer.

The Foreign Agriculture Service of the USDA has attempted to provide empirical evidence to support the payoff to market promotion funds. These efforts indicate amazingly high returns to promotion, but this work suffers from methodological defects that render the results unconvincing (Dwyer, 1994). The major problem with such empirical estimates is the difficulty of isolating in the time series the effects of promotion from the myriad of other factors that affect sales.

### **Export Credit Subsidies**

The Export Credit Guarantee Program (GSM-102) provides backing for commercial loans to importers for terms of up to 3 years. The Intermediate Export Credit Guarantee Program (GSM-103) is similar, but allows loans of between 3 years and 10 years. GSM-102 provides guarantees for about \$5 billion of credit per year and GSM-103 has an authorized limit of \$1 billion per year. In recent years, about 10 percent of all U.S. agricultural exports have been shipped under these credit programs. About 20 to 30 percent of grain and oilseed exports have been financed with credit guarantees, while less than 10 percent of exports of other commodities have used these programs.

The Department of Agriculture determines eligible countries based on assessments of credit worthiness and potential benefits. Participating buyers obtain credit from U.S. commercial banks or other financial institutions and the export shipper receives cash upon shipment. If the foreign buyer fails to repay its loan on schedule, the U.S. Department of Agriculture repays the U.S. financial institution and attempts to collect the repayment directly from the foreign buyer.

As with export promotion subsidies, credit programs that meet some basic international criteria are not subject to Uruguay Round GATT disciplines. Nonetheless, export credit programs are similar to explicit price subsidies in several ways, such as the effects on the quantity of exports, market prices, and the net government farm subsidy outlays (Vercammen and Barichello, 1994). In addition, credit subsidies, as implemented by the United States and other major export competitors, are targeted to particular buyers and therefore have the potential to facilitate price discrimination. Unlike explicit price subsidies, with credit guarantees, the amount of subsidy provided may not be evident.

The amount of implicit export subsidy included in credit guarantees may be assessed in several ways. One way is to use the budget costs associated with the credit guarantee. For example, for fiscal year 1993 the budget cost originally assigned to credit programs was \$158.5 million or 2.78 percent of the program level of \$5.7 billion. The 1993 rate has been revised to 13.2 percent based on the subsequent experiences. A larger program level or a more risky portfolio of loans each implies a larger expected budget cost. Currently the executive branch uses an ex ante rate of about seven percent and the Congressional Budget Office uses an anticipated loss ratio of about 12 percent for agricultural credit guarantees.

In 1993, the average explicit export price subsidy was approximately \$40 per ton for wheat—approximately 25 percent of the export price of wheat. Thus the credit guarantee represents an implicit subsidy that is about one quarter to one half as large as the explicit price subsidy and applies to a smaller percent of the wheat crop. Of course, seven percent of the export price is not a fully accurate measure of the effect of the credit guarantees on the quantity or value of exports. Some countries that makes use of export credit guarantees may place a high value on a subsidy in this form. Alternatively, when a credit guarantee is available, a country may use it even though its risk of default is low and it could have access to commercial credit at only slightly higher rates. The value to the importer may be larger or smaller than the expected cost to the U.S. treasury.

In some limited cases, government backed credit guarantees could add to the efficiency of international market transactions. Export buyers are often foreign governments that may be heavily influenced by the participation of the U.S government to repay loans for which they might not otherwise qualify. Some U. S. government participation in the credit process therefore may be useful. However, this participation could take the form of a commitment to help enforce contracts rather than a financial commitment to repay the loans.

### **Explicit Export Price Subsidies**

The Export Enhancement Program (EEP) subsidizes several commodities but focuses 80 percent of its aid on wheat. It began operation in 1985 and was subsequently authorized under the 1985 Farm Security Act. (See Ackerman and Smith, 1990, and Gardner, 1994.) The Dairy Export Incentive Program (DEIP), the Sunflowerseed Oil Assistance Program (SOAP) and the Cottonseed Oil Assistance Program (COAP) also began in the later half of the 1980s. The importance of export subsidies varies widely even among the commodities to which they have been applied. For example, only a tiny share of rice, beef or pork exports are made under EEP, but recently almost all barley and more than half of all egg, vegetable oil and wheat exports have been made under the applicable export subsidy programs.

Export subsidy program characteristics include the following.

- i) The subsidies are targeted (for example, the subsidies have not been provided to Japan, Korea, Taiwan, the EU, or much of Latin America).
- ii) They are now provided in cash to the U.S. export firms.
- iii) The EEP process requires that national markets be judged eligible to receive an allocation before potential subsidies can be discussed.
- iv) Export firms deal with export buyers directly to determine the export subsidy required to complete a sale. Per unit subsidies are supposed to be the minimum necessary for the given transaction.

Programs that apply direct export price subsidies (including the EEP and similar programs) are subject to the Uruguay Round agreement disciplines on export subsidies. For each commodity, subsidized export quantities in year 2000 must be 21 percent below the average during the 1986 to 1990 base period. In addition, the value of export subsidies must be reduced by 36 percent compared to the base period values for each

commodity. The schedule of reductions requires that export subsidies be cut in equal instalments from either the 1986-90 base or from the 1991 levels if export subsidies in that year were higher than they were in the base period. The U.S. commitments are noted in Table 2 for each commodity.<sup>2</sup>

**Table 2. U.S. Uruguay Round Agreement Commitments Regarding Export Subsidies**

Commodity	Annual Quantity		Annual Outlay (\$1,000)	
	1995	2000	1995	2000
Wheat (and Flour)	20,238,000	14,522,00	765,490	363,815
Coarse Grains	1,906,000	1,561,000	67,735	46,118
Rice	272,000	39,000	15,706	2,369
Vegetable Oil	587,538	141,299	52,960	14,083
Butter & B. Oil	42,989	21,097	44,793	30,497
Skim Milk Powder	108,227	68,201	121,119	82,464
Cheese	3,829	3,030	5,340	3,636
Other Milk	12,456	34	14,374	21
Beef	21,486	17,589	33,520	22,822
Pork	483	395	730	497
Poultry	34,196	27,994	21,377	14,555
Eggs	30,262	6,920	7,588	1,604

Source: USDA, FAS, "Gatt/Uruguay Round Fact Sheets" February 1994.

Export price subsidies have been the subject of a vigorous academic and political debate in recent years. (See for example Alston, Carter, and Smith, 1993.) Almost all of the analyses have focused on the EEP and especially the effects of the EEP for wheat. The export subsidies for other commodities are similar and many of the conceptual issues apply to them. Any evaluation of a complex commodity policy such as the EEP hinges

<sup>2</sup> See the summary of the agriculture agreement in IATRC (1994) for more details and analysis.

on what other policies and market conditions are expected to hold independently of the policy evaluated. In particular, in the case of the EEP, one must decide how the income and price support programs respond to EEP operation.

Several conceptual arguments have offered support for the idea that targeted export subsidy programs may increase national income. The first relates to terms-of-trade gains in the non-subsidized export market. An export subsidy to only part of the market can be used to raise overall quantity demanded and to raise the export price in the non-subsidized part of the market. Then, the additional profits from this higher price offset some of the costs of the original subsidy.

The terms-of-trade benefit of the targeted export subsidy may be indicated by comparing the export subsidy cost to the added export revenues from the non-subsidized market. With plausible supply and demand elasticities it is difficult to see how total revenue in the non-subsidized market could rise by any more than \$200 million (at most \$15 per ton on at most 13 million tons) compared to EEP outlays of more than \$1,200 million in 1994 (Sumner, 1995). Excess outlays on the EEP are surely larger than revenue gains in the non-subsidized export market. Thus, the terms-of-trade gains are positive, but limited.

The second conceptual argument relates to the ability of export subsidies to reduce the total budget cost of all program subsidies principally by reducing the budget costs of direct payment programs. For example, by shifting out total demand, a targeted export subsidy raises the domestic price to producers. When this price is also used to calculate the domestic farm program payments, part of the potential gain to producers is transferred back to taxpayers in the form of lower outlays for the domestic subsidy. In theory, the domestic price effect could be large enough that the savings in domestic program costs more than offset the expenditures on the export subsidies.

Government budget costs of farm programs are a particular interest for two reasons. First, the total outlays available for farm subsidies may be limited. Therefore, if a combination of programs can achieve a given farmer benefit, with the same or lower government outlays, it may be preferred by farmers. Second, taxation itself has costs to the economy. If the outlay of tax money can be reduced for the same income transfer to farmers, the overall national economic well-being may be increased. Estimates of the deadweight costs of taxation (the excess burden) vary widely, but these costs are likely in the range of 10 percent to 30 percent. (Alston and Hurd, 1990 discuss the issue in terms of farm programs.) Recognizing the deadweight cost of taxation, it is theoretically possible that a targeted export subsidy could be devised that would benefit the whole U.S. economy by reducing deficiency payments by more than the total value of export bonuses. Unfortunately, such a program does not seem likely under realistic market and program parameters. Sumner (1995) provides some sample calculations that show how unlikely it is for the EEP program to reduce total outlays.

A third conceptual argument for export subsidies relates to mitigating the economic resource cost of the domestic farm payment scheme rather than the budget costs. In particular, the amount of land required to be idled under the farm program may be reduced in response to an increase in demand caused by the export subsidy. In that case,

the national welfare losses associated with land idling are smaller and this improvement may offset some of the economic cost of the export subsidy.<sup>3</sup>

The Office of Management and the Budget (OMB) has assumed that the budget costs of the EEP program were generally offset by lower deficiency payments because the farm price of wheat rises with the EEP. However, the Congressional Budget Office (CBO) has assumed that the acreage reduction programs are relaxed to accommodate increased export subsidies so that market price is constant and total budget costs rise when the EEP increases. If the acreage planted under the wheat program increases when the export subsidy program expands export sales, the quantity produced may rise enough that the market price does not change. With a constant domestic price, there are no budget savings in the domestic farm program to offset export subsidy costs and, in fact, farm program payments increase because the production eligible for payments increases as the ARP is reduced. There are also no terms-of-trade gains in the non-subsidized export market.

When the price does not rise with more subsidized exports, U.S. consumers do not face higher prices, and farmers gain from a lower requirement to idle land and from additional direct government payments that are made on about two-thirds of the increased production. The national economy benefits when idled land is returned to production, but it loses when subsidies are paid to foreigners and when higher taxes or increased deficits are used to finance export subsidies and additional deficiency payments to farmers.

A few calculations will suggest the order of magnitude of the loss from more land idling. Assume, for example that if the EEP were removed the United States would export about 1/3 less or about 10 million bushels less. This assumes that the additionality of the EEP has been about 50 percent on the tonnage subsidized—a figure that is well above the proportion found in empirical analysis. Reduced production of 10 million tons would mean lower acreage by about 10 million acres (using an average yield slightly below the national average). If we take a rental value per year of the idled wheat acreage of \$40 per acre, this implies the value of the land idled would be approximately \$400 million.<sup>4</sup>

The \$400 million figure is likely an overstatement of the value to the economy of keeping wheat land in production for three major reasons. First, the additionality assumption is extreme; the acreage kept in production by the EEP is likely less than 10 million acres. Second, the 10 million acres assumption means that without the EEP there would have been a wheat ARP of at least 15 percent in recent years. These points suggests some lower acreage figure to be more plausible. Finally, wheat land has some value when it is idled, and this land is expected to be of lower than average productivity, therefore the \$40 per acre rental value probably over-states the value of keeping idled land in production.

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<sup>3</sup> See also USCBO, 1994.

<sup>4</sup> The \$40 per acre figure is based on an approximation of the national rental rate of wheat land that would be idled if the ARP was raised.

The forgoing analysis has provided an extensive discussion of the export subsidy programs focusing particularly on the export enhancement program for wheat. The details of the analysis would differ for analysis of export subsidies for other commodities, but the policy conclusions would not differ. In fact, for a number of commodities to which the export subsidies are applied there are no deficiency payments to be offset. Further, for some commodities almost all exports are shipped with subsidy, the United States is a relatively minor player in the world market or exports play a minor role in total demand for the product. For these commodities it is very hard to find any case under which export subsidies have even the potential to increase national income.

There is also an argument for export subsidies as strategic trade policy tools. For example, it is often argued that the EEP may have contributed to the European Union (EU) reform of the Common Agricultural Policy (CAP) and to the reduction of EU export subsidies through Uruguay Round commitments. The 1990 FACT Act explicitly required the use of the EEP and related programs to counter unfair trade practices. Further, the 1990 Omnibus Budget Reconciliation Act tied spending for export programs directly to progress in the Uruguay Round. The Act required spending on export programs to increase when the Round was not successfully concluded by June 1992. This threat failed.

Export subsidies now have even less potential to encourage international reforms. Further, they have counter-productive international policy consequences that should be considered. They almost surely affect non-subsidizing nations who are generally trade allies of the United States. Countries such as Argentina in wheat trade, or New Zealand in dairy product trade, do not have the policy clout that comes with large domestic markets, but they do play significant roles in multilateral negotiations. These countries are in a strong position to emphasize the hypocrisy of U.S. agricultural trade policy, particularly if export subsidies are directed towards competing with them for markets that are otherwise not subsidized. Australia has been vigorous in this way already in 1995.

The summary policy implication from the analysis presented here is the conventional one that export subsidies are counterproductive as trade policy for U.S. agriculture (Baldwin, 1992). Export subsidies may provide benefits to specific farm interests, but it is likely that larger benefits to recipients could be derived from the same budget and economic cost to the U.S. economy by using direct domestic payments.

### **International Food Aid**

The United States contributes about \$2 billion in food aid each year. This amount provides over half of the world's supply of food aid and about 20 percent of the total U.S. international economic assistance. International food aid is authorized under three distinct titles of the Food for Peace or PL-480 program, under Section 416 (b) of the Agricultural Act of 1949, and under the Food for Progress Program of the 1985 Farm Security Act. The Food, Agriculture, Conservation and Trade Act of 1990 made substantial changes to these programs.

Since 1990, Title I of PL-480, operated by the USDA, provides mostly aid to stimulate development and encourage the expansion of commercial markets. Title II provides humanitarian donations and other donations to stimulate economic reforms

through private organizations and multilateral programs. Title III provides aid to the least developed nations based on criteria related to relieving malnutrition. These latter two titles are administered by the Agency for International Development. Food aid under section 416 (b) relies on surplus commodity stocks.

Food aid is not limited by the Uruguay Round agreement. In fact, so long as it is accepted that shipments meet food aid criteria, the Uruguay Round agreement encourages food aid as a part of the effort to assure that the agreement does not harm developing countries. A decline in U.S. food aid in the future will depend on budget costs not international agreements.

### **Summary on Export Policy**

In response to the Uruguay Round agreement the United States Administration pledged to treat maximum subsidy limits as minima as a part of their domestic policy agenda. Oddly, at the same time that many have questioned the rationale and effectiveness of export market promotion and credit programs, in the context of the Uruguay Round agreement, spending for these export programs may actually increase.

The Uruguay Round implementing legislation did not require additional export measures. However the Administration made public promises to proceed along these lines. The Secretary of Agriculture and the Director of OMB jointly stated in a letter on September 30, 1994 to Chairmen and Ranking members of the House and Senate Agriculture committees that export subsidies would be continued at the maximum allowable levels for the next six years (Espy and Rivlin, 1994). They further stated that the administration would propose increasing the funding for domestic and export programs by \$600 million over five years.

## **THE CONSERVATION RESERVE AND RELATED PROGRAMS**

Environmental motivations for farm programs have been with us for many years now. Sometimes people forget that the Soil *Conservation* Service and the Agricultural Stabilization and *Conservation* Service were traditional farm agencies. The importance of purely environmental regulations on farming and land use is a newer phenomenon, but these regulations are outside the scope of this paper.

### **Land Idling Programs**

The Conservation Reserve Program (CRP) and related long-term land idling schemes that focus on water quality and wetlands, cost the government about \$2 billion per year and idle about 37 million acres. These programs began to enroll land in 10 year contracts in 1986 and thus acreage enrolled in the early years was originally scheduled to begin leaving the program soon. The current debate relates to extending the program and

changing its focus. Most observers suggest that the environmental benefits have been low relative to the cost of the program. However, the CRP is very popular among farmers.

Currently, budget technicalities are seen by some as important to the likely life of the program. On a more basic level, the issue is whether the program is cost effective in dealing with environmental externalities given deficiency payment program savings, resource costs of land idling, and the budget cost of the program itself.

The CRP asked farmers to offer bids for long term leases under which their erodible crop land would be held out of production. The USDA accepted the lowest cost rental agreements, subject to eligibility criteria that spread the idled land across the nation. Later, related programs used more sophisticated methods to score the environmental benefits in order to better choose land to enroll.

Table 3 shows the distribution of CRP acreage across major crop production regions in the United States. Most of the land is in the Great Plains and the Northwest. About 11 million acres of land with wheat base is in the CRP. The second column of Table 3 reports recent estimates by the USDA of the number of acres likely to return to crop production as enrollment expires and the third column shows the percentage of the total for each region. Overall the USDA results suggest about 63 percent of this crop land, that is now required to be idled, would actually return to production.

A reasonable revision of the current program would idle fewer acres with more tightly specified environmental benefits that focus on externalities associated with erosion, water quality and wetlands rather than just meeting a erodibility criterion (Thurman, 1995). Such a reform may be likely in 1995.

### **Regulations Related to Land Use and Other Environmental Rules**

U.S. regulations of land use, such as the Endangered Species Act, wetlands restrictions and water quality rules are pervasive and complex. Farmers see these policies and other regulations, such as those related to farm labor, pesticides or animal waste, as significant burdens on their businesses. Reducing government involvement in agriculture may mean reducing the force of these regulations as well as lowering subsidies. If pressed, many farmers would see it as a positive trade to eliminate these regulations and farm subsidies simultaneously.

### **FEDERAL CROP INSURANCE AND DISASTER AID**

For more than 15 years the United States government had operated two programs, the ad hoc disaster payment program and multiple peril crop insurance, to aid farmers with crop losses resulting from weather and similar causes. The passage of the 1994 Federal Crop Insurance Reform Act in October 1994, however, will change the way the government responds to farmers' weather-related yield losses.

Despite federal efforts to make crop insurance the primary form of disaster protection, crop insurance participation has been low, reaching about one-third of eligible acreage nationally. At the same time, crop insurance losses have been high. Indemnities exceeded premiums by more than 50 percent for the period 1981-93, resulting in government outlays more than \$7 billion for this period. Ad hoc disaster payments to farmers also have been high. For the same period (1981-1993), uneven and uncertain federal "ad hoc" disaster spending was more than \$11 billion. Ever-increasing federal outlays for ad hoc disaster aid and crop insurance resulted in budgetary pressure and created a major impetus for the recent crop insurance reform (Goodwin and Smith, 1995).

**Table 3. Conservation Reserve Acreage and Acreage Projected to Return to Production if CRP Ends**

	Enrolled	Projected to Return	%
Northwest (WA, OR, ID, MT)	5.3	3.8	71.7
Northern Plains (ND, SD, WY, NE, CO, KS)	11.9	7.6	63.9
Southern Plains (NM, OK, TX)	5.8	3.2	55.2
Western Corn Belt (MN, WI, IA, MO)	6.6	5.1	77.2
Eastern Corn Belt (MI, IL, IN, OH)	2.0	1.5	75.0
South (KY, WV, VA,...)	4.1	1.2	29.3
Total	35.7	22.4	62.7
Others (not surveyed)	.6	-	-

Source: USDA, ERS Agricultural Outlook, August 1994.

The Reform Act revamps the federal crop insurance program to broaden producer participation and reduces the likelihood of future ad hoc disaster assistance. The main features of the Federal Crop Insurance Reform Act include the "on-budget"

designation of ad hoc disaster payment spending, a catastrophic crop insurance plan (CAT coverage), the option of subsidized "buy-up" coverage, linkage to certain farm programs, and a standing disaster assistance program (NAP) for non-insured crops. To reduce legislation, authority for the designation of "emergency" spending is repealed. Future outlays for emergency crop losses will be "on-budget" rather than "off-budget," requiring an offset in spending in other program(s). Federal crop insurance is supplemented with a new Catastrophic Coverage Level (CAT) available to farmers for a processing fee of \$50 per crop. The fee cap is \$200 per farmer per county and \$600 per farmer in total. CAT coverage will pay farmers for crop yield losses greater than 50 percent of their actual production history yield (a 4-10 year simple average) at 60 percent of the expected market price. Farmers may purchase additional insurance coverage, providing higher yield protection (up to 75 percent) and/or price protection (up to 100 percent). Added coverage is subsidized at a higher rate than under the pre-reform program.

To be eligible for commodity support programs, certain Farmers Home Administration loans, or CRP contracts, farmers are now required to have at least catastrophic coverage for each insurable crop. Under the new rules, crop insurance participation is expected to be high because it is required for producers that receive any other subsidy. CAT and NAP are likely provide lower benefits to farmers than the benefits provided under pre-reform ad hoc disaster aid. CAT now costs farmers nominal fees, and to receive payments, farmers must experience yield losses greater than the pre-reform level of 40 percent. However, farmers purchasing additional crop insurance coverage will be subsidized at a higher rate.

For crops for which insurance is not currently available, the Reform Act provides a standing disaster aid program under NAP provisions. NAP is similar to CAT in terms of coverage and eligibility requirements. However, NAP requires an additional eligibility condition—a 35 percent area loss to trigger any individual payments (Lee et al., 1995). Once the area-level threshold is reached, farmers will be paid for individual crop losses in excess of 50 percent at 60 percent of the price election announced by USDA in advance of the crop year. The area-triggered loss requirement of NAP will reduce significantly the likelihood of an individual receiving payments.

Many farmers will likely get no payment from the new programs and many express resentment at being required to enroll in something worthless. In addition, even growers who are willing to stipulate that they would never receive benefits are required to provide accurate and detailed production records under CAT (by farm, for operations with more than one farm). The future of the new program, however, is likely to be indicated by its success at forestalling ad hoc disaster assistance. It is also important to reduce losses of the crop insurance program and reduce the uneven crop and geographic pattern of excess loss ratios. Crop insurance and disaster aid programs were some of the budget-busting failures of the 1980s and 1990s. The 1994 Act reduced the generosity of the programs, but moral hazard and adverse selection inherent in crop insurance remain unresolved. Also, the demand for special disaster aid will still occur when television news pictures show farms blowing away or under water.

## CONCLUSIONS: THE GOVERNMENT ROLE IN AGRICULTURE

Agricultural subsidies appear in an impressive and imaginative array of form. Nonetheless these subsidies receive little support from economists or other outside-observers. Despite general skepticism about government current activities most analysis by economists suggests that there may be too little government in a few areas of U.S. agriculture. The payoff to more government activity in creating and disseminating knowledge has been established in many studies. (Wright, 1995; Alston and Pardey, 1995.) And there are cogent arguments for a government role in sponsoring and encouraging researchers.

Agricultural policy in the United States is complex and varied. About half of farm output receives relatively little direct subsidy, but some commodities such as wheat, have export aid, import protection, subsidized crop insurance, paid land reserves, as well as direct government payments. Other commodities such as milk have import barriers, and incredibly complex government price regulations that cost consumers much more than they return to growers. Finally, commodities such as peanuts and sugar have only import barriers that alone generate large rents to owners of land or marketing quota.

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**THEME: UNDERSTANDING THE CANADA/UNITED STATES  
GRAINS DISPUTES:  
BACKGROUND, FACTORS AND IMPACTS**

One paper on each country provides policy, program, institutional and market characteristics in the grains sector as background for the next two papers. The last two papers provide information on the disputes and attempt to identify some of the impacts of the disputes.



## CANADIAN BACKGROUND AND DESCRIPTION

*Bruce D. Kirk\**

### INTRODUCTION

The main purpose of this paper is to promote the understanding of "western grain policy" by describing the evolution and current mix of policy instruments and programs of this policy.<sup>1</sup> The policy instruments/programs described herein include the major federal and cost-shared federal-provincial initiatives applying directly to the western grain industry. They were selected on the basis that they account for both the largest amount of government expenditures and regulatory policy in this regard.<sup>2</sup>

The following section examines the evolution of government intervention in, and policy developments towards, the Prairie<sup>3</sup> grain industry. The third section provides a description of the operation of the current mix of policy instruments and programs that collectively comprise western grain policy. The fourth section summarizes the major changes in Canadian agricultural policy announced in the recent federal budget of February 27, 1995. The last section offers some observations and potential future trends in overall western grain policy. In addition to the main body of the paper, two appendices contain additional background information. Appendix A provides a description of the western grain production, handling and transportation system while Appendix B

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<sup>1</sup> The term 'grain' is used generically throughout the paper to include grain, oilseeds and special crops.

<sup>2</sup> Not all of these policy instruments are necessarily specific to the western grain - for example, NISA applies to most commodities across Canada.

<sup>3</sup> The term 'Prairie' is used synonymously with the area that falls under the jurisdiction of the Canadian Wheat Board, often referred to as the 'designated region.'

contains a list of crops and processed products eligible to be moved under the Western Grain Transportation Act.

## **EVOLUTION OF WESTERN GRAIN POLICY**

From the outset, agricultural development of the Prairies was a key federal policy goal. Settlement of the west was promoted by several means—the completion of the transcontinental Canadian Pacific Railway (CPR) in 1885; grants to immigrants; an active promotional campaign in Europe to attract new immigrants and so on. To help promote a sustainable agricultural sector, the federal government established the first experimental farms in 1885 (Drummond, Anderson and Kerr, 1966; p.16). In addition, separate grades for western wheat based on visual distinguishability were first defined in 1886. To further enhance the quality of Prairie grain, the grading of seed for commercial sale was made mandatory in 1923, establishing the principle of varietal licensing—that is, the testing of all new varieties before being licensed for sale (Irvine, 1982; p.56).

Concern about the competitive position of producers in production and marketing Prairie grain was a constant issue from the beginning of the settlement and agricultural development of the west. The major components of the regulatory part of western grain policy were implemented in the period up to 1955. They are summarized as follows.

### **Transportation Regulation (Alberta, 1980)**

- The Crow rates on eastbound grain and flour were fixed 'in perpetuity' in 1897. These were gradually extended to nearly all Prairie crops and to westbound export destinations over time.
- Producers received the right to load grain rail cars directly in 1900.
- Regulation of car allocation was implemented in 1902.
- Federal and Manitoba government subsidies were used to build additional transcontinental railways over the period 1901-14.
- As the new railways went bankrupt, they were consolidated by the federal government in 1919 into the Canadian National Railway (CNR).

### **Handling Regulation**

- The federal Manitoba Grain Act of 1900 provided for the licensing of grain elevators, mills and grains merchants as well as providing for the investigation of farmers' complaints about grading and dockage (Wilson, 1979).
- The Board of Grain Commissioners, the forerunner of the Canadian Grain Commission, was established in 1912 (Wilson, 1979).
- Primary and transfer elevator tariff regulation was instituted in 1917 and extended to terminal elevator tariffs in 1931 (CGC, 1986).

### Marketing Regulation (Wilson, 1979)

- Open market trading for wheat and flour was suspended in 1917-18 due to World War I.
- The first Canadian Wheat Board operated from 1919 to 1920 until international grain markets returned to normal pre-war conditions.
- With the onslaught of the depression, the federal government guaranteed bank loans of the three Prairie Pools beginning in late 1929. The Pools were established as producer-owned organizations to market wheat directly and pool or average returns to members over the crop year.
- The Canadian Wheat Board (CWB) was re-established in 1935 to sell wheat along side the open market.
- Delivery quotas were introduced by the CWB to ration access to scarce elevator space after the large 1940 crop. The original purpose was to provide an equitable sharing of delivery opportunities for all producers.
- In support of wartime wage and price controls, the CWB was given the sole authority for both domestic and export marketing of Prairie wheat in 1943.
- Following the passage of complementary legislation in each of the three Prairie provinces, the Board was given similar authority over oats and barley in 1949.
- In order to facilitate the CWB's annual sales program, the Board was given control over car allocation in 1955.

From the mid-1950s on, three trends have been evident regarding western grain policy. The first has been the growth of provincial intervention in agriculture following the implementation of the major recommendations of the 1937-40 Rowell-Sirois Commission. Established to examine the problem of the federal and provincial fiscal capacities during the depression, it resulted in a major federal transfer of fiscal capacity to the provinces. The longer term consequences included:

- Increased provincial spending on economic diversification in general and on agricultural development in particular;
- A relative reduction in the federal role in the agriculture sector and increased federal-provincial conflicts over agricultural policy.<sup>4</sup>

Second, with the full development of regulatory policy with respect to the handling, transportation and marketing of Prairie grain, concern shifted to the need for improved production and market risk protection programs—the so-called 'safety net' programs. Moreover, the development and implementation of the larger social safety net implied the need to provide agriculture with some degree of protection as was provided to other sectors through such programs as unemployment insurance. The origins of both stabilization and income support programs, including protection of the agricultural land base, date to the 1930s (Drummond, Anderson and Kerr, 1966; pp.41-43). These programs were expanded in scope with higher levels of government support from the mid-1950s on:

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<sup>4</sup> Much of this short discussion on Rowell - Sirois and its aftermath come from conversations with Doug Hedley of Agriculture and Agri-Food Canada.

- The 1957 Prairie Grain Advance Payments Act provided cash advances to producers of CWB grains when delivery quotas restricted grain deliveries. The cash advance program was extended shortly thereafter to other crops on a national basis via the Advanced Payments for Crops Act.
- The 1958 Agricultural Stabilization Act (ASA), applying mainly to eastern crops but including livestock nationally, provided systematic price support mandated by a formula contained in legislation.
- The federal Crop Insurance Act (1959) provided federal funds to provinces that wished to establish yield protection programs. It also made provision for cost-sharing provincial fund deficits between the two levels of government. The Crop Insurance program was mainly funded by producers and the federal government until substantive federal-provincial cost-sharing changes were implemented in 1989.
- The passage of the Western Grain Stabilization Act (1975) provided a federal-producer funded market risk protection program comparable to that established earlier for crop producers in eastern Canada under ASA (Gellner, 1991).

Changes in the 1981 and 1985 U.S. Farm Bills resulted in significant declines in world grain prices by the mid-1980s. The initial response of the federal government was to ride out the decline in prices by attempting to maintain producers' incomes. The Special Canadian Grains Programs of 1986 and 1987, costing over \$2 billion in total, convinced the federal government that it could no longer retain the sole responsibility to provide income support to the grain sector.

- The 1988 Canadian Crop Drought Assistance Program was cost-shared with the provinces on a limited basis, nonetheless establishing the principle of federal-provincial cost-sharing to provide market risk protection for grains.
- In 1989, major revisions to the Crop Insurance program rebalanced federal-provincial contributions to the program. Henceforth, each level of government would contribute 25 percent each of program costs with producers contributing the remaining 50 percent.

This tripartite cost-sharing principle was subsequently extended to the new stabilization programs implemented in 1991—the Gross Revenue Insurance Program (GRIP) and the Net Income Stabilization Account (NISA) program.<sup>5</sup> GRIP brought an end to the regional, if not commodity-specific, market and yield risk protection programs. While it began with a high level of support, it was designed to reduce the level of government financial support over time. Moreover, GRIP allowed governments to bring to an end the costly ad-hoc grain subsidy programs begun in 1986.

NISA was intended to provide whole-farm income support, both in recognition of the new constraints being proposed under a revised GATT and the need to maintain regional and commodity equity in domestic support programs.

The third trend that has been evident since the mid-1950s has been the reduction in western grain regulatory policy, due to both domestic equity reasons and the need to change or remove regulations inhibiting the competitiveness of Prairie agriculture.

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<sup>5</sup> Canada. *Agricultural Policy Review Report to Minister of Agriculture: Grain and Oilseed Safety Net Committee*. Ottawa: Agriculture Canada, August 1990.

- In 1957, in response to complaints from the grain trade about the manner in which the CWB was allocating grain cars, total CWB control over car allocation was reduced. Henceforth, other parts of the marketing system were included in the task of administering car allocation (Wilson, 1979; pp.250-259).
- A major overhaul of the CWB's quota delivery system occurred in 1970 in order to put more emphasis on efficiency and less on ensuring equity in delivery opportunities to all producers of Board grains (Wilson, 1979; pp.238-241).
- During the period 1974-76, the CWB monopoly on domestic sales of western feed grains was removed in response to complaints from eastern Canada about the Board's pricing of feed grains in the eastern market (Wilson, 1979; p.103).
- By the 1960s, the fixed Crow rates for moving grain off the Prairies were failing to cover the railways' costs, resulting in a significant reduction in railway investment in grain transportation infrastructure. The federal government undertook substantial expenditures throughout the 1970s and early 1980s on branchline subsidies and rehabilitation, hopper car purchases and boxcar repairs. Moreover, some branchlines were abandoned over the period 1973-78 with a basic Prairie rail network defined and frozen until the year 2000. A process was put in place to deal with the remaining lines outside the basic network, but it resulted in little if any significant pruning of the rail network after 1978 (Alberta, 1980; pp.24-28).
- By the early 1980s, mounting railway losses on grain traffic were preventing needed investments in mainline rail capacity, thereby threatening exports of other bulk commodities. Moreover, the increasing distortion in Prairie grain prices caused by the Crow rates was inhibiting value-added diversification of Prairie agriculture (Gilson, 1982). The Report of the Gilson Consultations recommended that the federal government should fund the railway losses—shared with producers over time—and that these funds should be paid to producers in exchange for the introduction of full cost freight rates on grain rail traffic. On January 1, 1984, the Western Grain Transportation Act (WGTA) replaced the Crow rates. It established the Grain Transportation Agency to monitor system efficiency and to lead the car allocation process. In addition, the WGTA directed that the federal government subsidy be paid to the railways, thereby keeping Prairie grain prices artificially high and inhibiting livestock production and value-added grain processing.
- Oats was removed from CWB control in 1989 in response to complaints from producers about the performance of the Board in marketing this crop.
- In 1992, delivery quotas on non-CWB crops were removed. At the same time, the federal government removed by Order-In-Council the Board's monopoly on barley sales into the U.S. The government was taken to court over the way in which it instituted the change and its decision to open the border to non-Board sellers of barley was overturned.<sup>6</sup>
- Maximum terminal elevation tariffs were removed in 1994.

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<sup>6</sup> For a review of the economic debate on a continental barley market, cf. Michele Veeman, "A Comment on the Continental Barley Market Debate," *Canadian Journal of Agricultural Economics*, Vol. 41, 1993: 283-87.

## **COMPONENTS OF WESTERN GRAIN POLICY**

The prairie grain industry is a mixture of government, regulatory, private sector and producer cooperative activity. Some of the basic industry structure is summarized in an appendix. This section reviews some of the major policy instruments that exist today before moving to the important 1995 federal budget changes reviewed in the last section.

### **Western Grain Transportation**

The Western Grain Transportation Act (WGTA) regulates the transportation off the Prairies of western grains, oilseeds, special crops and eligible products either for export or eastern domestic consumption. The current WGTA freight rate structure is essentially a distance and weight-related scale that averages total grain rail costs over all delivery points. It takes no account of the differential rail costs for grain originating on branch versus main lines. As a result, for delivery points located the same distance from export position (Vancouver or Thunder Bay), grain producers pay about the same rate per gross tonne-mile, regardless of whether the delivery point is located on a branch or main line or whether the movement is west or east bound.

Nearly all grains grown in the CWB designated area (Peace River area of BC plus the three prairie provinces), including peas, beans and lentils as well as processed grain and oilseed products such as canola oil and meal and dehydrated alfalfa, are eligible for this support. Appendix B contains a list of eligible commodities as of early 1995.

Under the WGTA, the freight rates are set each crop year based on the forecast grain volumes (provided by the Grain Transportation Agency) and the estimated costs to the railways of moving the grain to port position (as calculated by the National Transportation Agency). Freight rates have shown no increase in recent years, in spite of modest inflation in the Canadian economy as a whole. However, shippers have been paying an increasing portion of the rail costs. This is largely because shippers are responsible for the additional costs of any increase in the volume of grain moved, but partly due to a reduction in overall government funding. A review of the railway costs of moving grain is undertaken by the NTA every four years.

In the 1994/95 crop year:

- Railway costs for the carriage of WGTA commodities are estimated at nearly \$1.1 billion.
- Shipper (or producer) and the government shares are 48.5% and 51.5% respectively.
- For a haul of 976-1000 miles, the total rate is \$29.42, of which the producer pays \$14.27/tonne and the government pays \$15.15/tonne.

### **Car Allocation Policy and Procedures**

The railways are responsible for the actual movement of grain from the inland points to the ports. The two major railways are Canadian National (CN) and Canadian

Pacific (CP). There are also several other very small rail companies (mostly short line operations). However, neither the railways nor the commercial customers of the railways have the ability to allocate cars to move grain off the Prairies. Instead, car allocation is done through a complicated system administered by the Grain Transportation Agency (GTA), the Canadian Wheat Board (CWB) and the Canadian Grain Commission (CGC) in conjunction with the railways and the private grain trade.

For car allocation purposes, there are two main classifications of grain. Administered grains are wheat, barley, oats and canola. These are controlled and allocated by the GTA, the CWB and, in the case of "producer" cars,<sup>7</sup> the CGC. All other crops (e.g., rye, flax and specialty crops) are non-administered and their movement is negotiated directly between the railway and the shipper.

**Role of the GTA** The GTA is responsible for allocating cars to grain dealers and companies for canola, oats, and non-Board feed (NBF) grains. The primary purpose of the GTA is to ensure that grain from western Canada is moved in an efficient, reliable and effective manner. The GTA allocates rail cars on a sales basis when there are no system constraints. If the destination is Thunder Bay (TB), a terminal authorization is required before the GTA will allocate a car. For West Coast movement, the GTA requires a proof of sale or verification and a vessel for loading. Once the companies receive their allocation from the GTA, it is up to the individual companies to decide where to spot their cars, although this is usually coordinated with the CWB movement to enhance the overall efficiency of the system.

**Role of the CWB** The CWB is responsible for allocating cars to grain dealers and companies for Board wheat and barley as well as establishing weekly train runs to move grain off the Prairies. The CWB allocates rail cars to companies for malt barley and milling wheat sales first (i.e., direct-sale cars) and then allocates other Board grain cars. The Board's allocation of rail cars is based on companies' average handling percentage. These weighted average handling percentages are based on weekly receipts over the previous 52 shipping weeks. The most recent deliveries are given more weight in order to encourage a more performance driven system.

**Entitlement Under Constraint** When there are system constraints, an attempt is made to treat all participants and destinations equally. The GTA allocates the non-Board movement first and the CWB develops their shipping program on the cars remaining. Under a constrained system, Board and non-Board demands receive an allocation equal to their proportion of total sales. In times of constraint, priorities for car allocation on train runs are set according to the following: (i) non-Board cars, (ii) producer cars (CGC), (iii) malt barley and milling wheat cars (direct sale cars), (iv) space cars (CWB) and (v) other CWB cars.

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<sup>7</sup> Producer cars are grain cars secured through the Canadian Grain Commission and loaded by producers. They have major historic significance in the evolution of grains policy on the prairies.

### **Branch Line Abandonment Policy**

Almost all of the Prairie rail network, plus the Peace River area of British Columbia, is protected from abandonment until the year 2000 by a series of prohibition orders issued between 1974 and 1984. While some orders have expired and others have been amended to delete specific branch lines or segments, over 15,000 miles of the prairie rail network including main lines and branch lines are still contained within the prohibition orders.

For Prairie rail lines, the abandonment process is a two-step application process in which the railway must first apply to Transport Canada for removal of the branch line from the prohibition order. After removal is granted, the railway must then file notice of intent to apply for abandonment of the line with the NTA. At least 90 days must elapse after the notice before filing the application to abandon the line unless the Agency considers it in the public interest to abridge the time period or allow application without notice.

From mid-1977 through 1983 rationalization of Prairie grain-dependent branch lines proceeded at about 300 miles per year. Since implementation of the WGTA on January 1, 1984 the rate of abandonment of grain lines has declined to about 100 miles per year. Rail line abandonment has been a difficult process.

### **Canadian Wheat Board (CWB)**

The Canadian Wheat Board is established under the Canadian Wheat Board Act. The Board has the sole marketing authority over wheat and barley produced in the CWB area for domestic human consumption and their export, and imports of both food and feed wheat and barley. For the 1992/93 CWB Crop Year:

- 130,086 CWB delivery permits were issued to western Canadian producers
- The Board purchased 22,820,299 of wheat, 3,371,021 tonnes of amber durum wheat, and 4,246,977 tonnes of barley from western producers.
- The average value per tonne of wheat was \$149.14, the average value of amber durum wheat was \$154.50 per tonne, and the average values of feed barley and designated barley (for malting, pot or pearling) were \$108 and \$156 per tonne respectively.
- Total Canadian exports of wheat were 20,155,000 tonnes (including amber durum) and exports of barley and barley products were 3,036,000 tonnes.

**Canadian Wheat Board Price/Cost Pooling** The CWB pools costs and revenue for Board grains for each of the classes and grades of grain handled by the CWB. The CWB establishes jointly with the Government of Canada an initial price at the beginning of each crop year for each class of grain. This price for a grain is applicable at each of the two pooling points, Thunder Bay and Vancouver.

On delivery to a country elevator in the CWB area, the farmer receives the initial price less the transportation rate to the nearest pooling point and less elevation charges plus any costs associated with the cleaning or conditioning of the grain. The transportation cost deducted from the initial price received by the farmer is the producer

share of the regulated WGTA rate for the movement of the grain to the nearest export position.

The CWB price pooling is a mechanism by which:

- i) timing of sales are pooled;
- ii) sales opportunities are pooled;
- iii) infrastructure constraints are shared; and
- iv) costs incurred by the CWB are shared.

CWB price pooling was not intended to pool quality of grain among producers. As the grains are separated into separate pool accounts, there is separation of costs and revenue between grains and grades of grains. It is explicit in the CWB Act that producer receipts by grade from the Wheat Board pool accounts should thus reflect the relative economic value of that grade from sales throughout the pool account selling period. Moreover, CWB price pooling was not intended to pool location of production. Producers nearest to the export terminals receive the highest net prices for their grain relative to equal export positions.

### **The Canadian Grain Commission Quality Control System**

As set out in the Canada Grain Act, the Canadian Grain Commission has the responsibility to establish and maintain standards of quality for Canadian grain and to regulate grain handling in order to ensure a dependable product for domestic and export markets. This is achieved through a series of regulatory, monitoring and certification steps.

**Varietal Control** All varieties that enter the commercial grain-handling system for sale in the high quality categories must be registered by Agriculture and Agri-Food Canada (AAFC). The varietal quality control system ensures that only those varieties with the appropriate level of quality and specific quality characteristics for that class can be registered and are eligible for the top grades of grain. In the case of the Canadian Western Red Spring (CWRS) and Canadian Western Amber Durum (CWAD) classes of wheat, varieties can only be registered if they are shown to be equal to or superior in quality to named variety standards in terms of agronomic performance, disease resistance and quality characteristics. Committees, comprised of plant breeders, agronomists, plant pathologists and quality experts, assess new varieties and decide whether to support the application for registration made by the breeders. Once registration has taken place, seed growers, under the supervision of AAFC, then grow the breeder seed to produce *select* seed. The seed multiplication process continues until there is sufficient seed for sale to farmers.

**The Grading System and Visual Distinguishability** Canada's grading system employs the principle of Kernel Visual Distinguishability (KVD) which means that specific visual kernel characteristics are reserved for each class of wheat. In order for a new variety to be registered for a specific class, it must have both the visual appearance and the appropriate quality characteristics reserved for that class.

Grades are the means of characterizing grain quality rapidly and reliably to meet the demands of the handling, transportation and marketing systems. Grade profiles must be practical and meaningful to the entire industry and there must be a correlation between grade specifications and end-use quality. Grades are established under the authority of the Canada Grain Regulations and are assigned on the basis of measured tolerances and specifications.

***Quality Control At the Elevators*** The CGC's quality control system comes into effect as soon as grain is delivered to the primary elevators, which are licensed by the Commission. CGC assistant commissioners regularly inspect all licensed elevators and may also order clean-ups and fumigation as required. These assistant commissioners investigate and report on infested or contaminated grain, the delivery of unregistered varieties of grain, and farm drying of damp grain.

From the primary elevator, the grain is shipped to a licensed terminal elevator. Again, licensing of these elevators by the Grain Commission ensures control of the procedures to weigh, grade, clean and document ownership of the grain, and to maintain the good condition of the grain. When a car of grain arrives at the terminal elevator, Commission personnel verify the condition of the car, then supervise the weighing of the grain into the terminal, sample and inspect it and assign it a grade, so that it can be binned with grain of like quality in the terminal. Before the grain leaves the terminal, it must be conditioned to meet export standards. As the grain is discharged from the terminal, it is continuously sampled and graded, and officially weighed. Composite samples of the cargo are then prepared and closely examined before official cargo certificates are issued. If there is any indication of accidental admixture with grain that has been treated with toxic chemicals, the parcel of grain must immediately be segregated.

## **Safety Nets**

Safety net programs refer to stabilization and insurance programs. The federal legislative mandate for these programs is the Farm Income Protection Act (FIPA). It is principally an enabling Act to allow the Governor-in-Council to authorize the Minister of Agriculture to enter into agreements with one or more provinces to establish a net income stabilization account program, a gross revenue insurance program, a revenue insurance program or a crop insurance program. The Act sets out what things must be included in an agreement; however for the most part it does not specify how those items must be dealt with in the agreement. A section of FIPA deals with special measures and allows for action to be taken outside the scope of a program established by an agreement when exceptional circumstances exist.

***Net Income Stabilization Account (NISA)*** NISA is designed to help producers achieve long term improved income stability. Producers deposit funds into their own NISA account and receive a matching contribution from the federal and provincial governments. These funds accumulate in the NISA account earning interest at competitive rates. As well, producer deposits attract a 3 percent interest bonus paid jointly by the federal and provincial governments. In years of declining income, producers can draw on

their own NISA account. As long as they have built up a substantial stabilization account, they are assisted in effectively managing fluctuations in farm income. NISA is available in all ten provinces.

For the 1993 stabilization year, sales of grains and oilseeds, special crops and edible horticultural crops were eligible for matching contributions from the federal and provincial governments. Other commodities such as apples, honey and tobacco were covered in some provinces. Supply-managed commodities and red meats were not eligible for NISA although it is expected that with the phasing out of National Tripartite Stabilization Program (NTSP), red meats will become eligible for the 1994 taxation year. In 1992, there were 135,524 participants in the NISA program. The total value of federal government contribution was \$64,844,643. This federal contribution was forecast to be \$77,363,319 for 1993.

**Gross Revenue Insurance Program (GRIP)** GRIP offers protection for grains, oilseeds and special crops against reduced revenue arising from either natural hazards and/or market risks that are beyond the control of producers. The program began in 1991 and, in many ways, can be considered as an enhancement of the Crop Insurance program. GRIP is funded by producers, provincial government and the federal government. Although the program is national in scope, the provinces, as financial contributors to the program, have flexibility in the administration and delivery of the program.

With the exception of the provinces of Saskatchewan and Quebec, GRIP insures a target revenue at the individual farmer's level. Payments are calculated as the difference between a producer's target revenue for a crop and the market revenue for the crop less any crop insurance payments. Insurance payments are issued to individual farmers independently of the situation of their neighbours. Support prices are set using a moving average of historical regional prices over a fifteen year period. This moving average is indexed using a farm input price index to capture the effects of yearly changes in production costs.

Federal premium contributions to GRIP totalled \$468.49 million in 1993/94 with a further \$11.93 million being spent on federal administration costs. These numbers are expected to be \$414.25 million and \$10 million respectively for 1994/95.

The actual support from GRIP has been declining as the high prices from the 1970s are dropped from the support price calculation. It is worth noting that Saskatchewan, the largest grain-producing province, will not participate in GRIP after the current crop year ends July 31, 1995. In addition, Alberta has also indicated its intention to withdraw from GRIP.

**Crop Insurance** Crop Insurance is a voluntary program which provides insurance against crop losses resulting from natural hazards. Crop Insurance premiums are based on long-term historical losses. In most provinces, producers with above or below average loss experience are charged lower or higher premiums to reflect their individual loss experience. All premium rate calculations are certified by an actuary. The federal and provincial governments each contribute 25 percent of the total premiums; producers pay the other 50 percent.

Under Crop Insurance, producers are guaranteed a certain number of tonnes for each insured crop. This production guarantee is dependent on either the individual's or risk area's long-term average yield with adjustments for soil zones and a producer's yield performance. If actual production is less than the insured production, the Crop Insurance payment is equal to the yield difference multiplied by the insurance price. The insured price will be either an estimate of expected market prices that is established at the beginning of the crop year, or the producer can purchase an option to use the actual market price in the Crop Insurance calculations.

## **1995 FEDERAL BUDGET**

In the fall of 1994, the federal Minister of Agriculture and Agri-food announced that the government planned to reform the WGTA early in 1995 for the following four reasons.

- The WGTA continued to promote the export of raw grain off the Prairies by inhibiting the livestock sector and value-added grain processing.
- The new GATT accord implies a reduction in the allowable volumes of grain, beginning in 1996, that could be moved for export under the WGTA via west coast and Churchill ports.
- The WGTA was a major impediment to a faster pace of change in order to reduce costs in the handling and transport system.
- It was necessary to include the WGTA subsidy as part of the planned federal expenditure reductions in order to meet the government's deficit targets.

The February 27, 1995 federal budget brought down major changes in agricultural policies, especially, but not solely, affecting some of the major elements of western grain policy.

### **Transportation, Handling, Marketing**

- The annual federal subsidy to grain transportation, currently amounting to \$560 million under the WGTA, will be terminated August 1, 1995 with grain shippers to pay full-cost freight rates thereafter.
- In place of the subsidy, the government will make a one-time payment of \$1.6 billion to Prairie agricultural land owners as compensation for the resulting decline in land values. This payment will be taxed as capital rather than income, effectively increasing its value to about \$2.2 billion.
- Maximum legislated freight rates will be retained until the year 2,000 after which this rate regulation will be removed unless a review were to conclude otherwise.
- The CWB pooling points will be revised August 1, 1996, after industry consultation on a new proposal by the CWB, expected in April 1995.

- The Grain Transportation Agency will be eliminated August 1, 1995 with industry jointly assuming the responsibility to improve system efficiency and to modernize and conduct the car allocation function.
- The current rules for abandoning Prairie branchlines effective January, 1996 will be replaced with the streamlined process under the National Transportation Act covering rail line abandonment in other areas of Canada. An analysis of the least efficient lines will be completed by November 1, 1995 with all protection against their abandonment to be removed by December 31, 1995.
- An adjustment fund beginning in 1996-97 fiscal year and totalling \$300 million over six years will be available to offset negative impacts on producers from future branchline abandonments, CWB pooling change, roads impacts, and related factors.
- The federal government will provide a \$1 billion credit guarantee on export sales of domestically produced crops.

### **Safety Nets**

- There will be a reduction in federal safety net expenditures from their current level of \$850 million to \$600 million by 1996-97.
- Total federal and provincial safety net expenditures will decline to \$1 billion per year by 1996-97 following an earlier agreement between the federal government and the provinces on cost-sharing stabilization programs.

## **OBSERVATIONS AND POTENTIAL POLICY TRENDS**

The mix of western grain policy instruments continues to comprise two main parts: regulatory policy and stabilization/income support programs based on direct financial assistance. The various components of both parts were developed over time, generally as specific policy responses to correct particular problems as they arose.

Regulatory policy towards western grain, put in place over seventy years from 1886, has tended to decrease slowly, unevenly and yet, seemingly inexorably, since the mid-1950s. Three reasons would seem to account for the move away from tight regulatory control.

- The scope of regulatory control over the western grain industry has been revised or reduced in response to the need to remain competitive, especially in international markets.
- Domestic equity reasons, among western grain producers, between producers and other parts of the grain marketing system and across commodities and regions have resulted in regulatory reform.
- Recent trade agreements such as CUSTA, NAFTA, and the newly implemented GATT have placed greater restrictions on the scope of domestic policy.

Safety net policy, on the other hand, likely came into its own starting in the late 1950s for somewhat different reasons.

- Regulatory policy, in and of itself, could not provide sufficient protection against market and/or yield risk.
- Equity between agriculture and other sectors implied the need for similar protection for agriculture as was being introduced more widely, such as unemployment insurance, as part of the development of the overall social safety net.

Safety net policy has tended to undergo even more rapid change than regulatory policy over the past decade. The most recent move away from high levels of support and commodity-specific programs in favour of whole farm support, through expanding the relative importance of NISA, has been the result of both domestic equity concerns in agriculture and the need to make programs more acceptable internationally. Concomitantly, the need to reduce federal and provincial spending has played a major role in reducing support levels, similar to the reduction, if not complete elimination, of the grain trade war.

The 1995 federal budget represents a major change in the direction of agricultural policy-away from government control of, and high income support for, the sector in favour of policies both that remove disincentives to growth in value-added production and job creation and that foster producer and industry adaptability to changing market conditions. Hence the agriculture part of the budget is consistent with the government's goal for social policy reform.

Future policy trends will likely be driven by the same underlying conditions that led to the policy changes in the recent federal budget. Government deficit and debt reduction will continue to exercise a major influence on policy, including agricultural policy. Also, the prospect is for continued trade liberalization, likely including further reductions in agricultural trade-restricting policies in subsequent GATT accords, the possible extension of NAFTA, first to Chile and subsequently to the entire hemisphere, and freer trade among Pacific rim countries.

These likely will imply continuing and substantial agricultural policy reform, especially as it affects the western grain sector:

- continuing development of whole-farm versus commodity-specific market risk protection programs;
- on-going reduction and streamlining of grain transportation regulations, including a more market-driven car allocation process and less reliance on grain freight rate regulation;
- possible changes in the grading and quality control system to remove those aspects that might be viewed as barriers to trade;
- continuing pressure to move towards continental free trade in grains;
- potential changes in the functions assigned to the Canadian Wheat Board;
- in general, further policy development to assist producers in adjusting more easily to short and long term shifts in the market place, implying an on-going trend away from regulatory control of the western grain industry.

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## APPENDIX A

**OVERVIEW OF THE WESTERN GRAIN PRODUCTION  
AND HANDLING AND TRANSPORTATION SYSTEM (GHTS)**

Chart 1 shows a map of Canada, indicating the ten provinces plus the Yukon and Northwest Territories. The shaded area represents the grain growing area of the Prairies, also referred to as the Canadian Wheat Board (CWB) designated region. This region of Manitoba, Saskatchewan, Alberta and the Peace River area of British Columbia comprises the largest grain producing region in Canada. On average, it produces about 50 million tonnes of grains, oilseeds and special crops each year. Wheat, barley and canola currently comprise about 90 percent of production. About 60 percent of this production is exported each year. Export figures vary significantly by crop. For example, in the last ten years, average exports as a percent of production were:

- wheat : 76%
- rye : 48%
- barley : 36%
- oats : 7%
- canola : 52%
- flax : 75%

**Chart 1. Grain Growing Area of Western Canada**



There is fundamental distinction made in the western grain industry between three types of grain. *Board grains* include all wheat and barley grown in the designated region and exported by the CWB plus all food wheat and food barley marketed domestically. Board grains typically account for over 60 percent of the total moving through the GHTS, mainly for export with a small amount for eastern domestic consumption. *Off-Board* grains include feed wheat and feed barley grown in the region and marketed through the open market system to the domestic livestock sector. *Non-Board* are all other types of grains grown on the Prairies, including oats, rye, canola, flax and special crops (pulses, mustard seed, canary seed, etc.). These crops are marketed by private and cooperative (producer-owned) grain companies and individual producers on the open market.

### **Storage/Elevation**

It is difficult to separate storage and elevator facilities in Canada's grain handling and transportation system (GHTS). As such, storage and elevator facilities are dealt with as one component in this section.

***On-Farm Storage*** There are no reliable statistics on the actual storage capacity available on Canadian farms. The difficulty of capturing these data is a function of the various types of storage facilities found on farms which can range from steel bins to simply storing grain in barns, etc. One proxy of the storage capacity on farms is the stocks of grain on farms reported by Statistics Canada. As of December 31, 1994 there were 47.5 million tonnes of grain on Canadian farms and 42.1 Mt in Western Canada.

***Grain Elevators (Primary)*** These elevators receive grain from farmers, establish a grade for the grain, give financial settlement to the farmers, store the grain, blend grain grades and load grain onto rail cars.

Over the past ten years, the primary elevator system has rationalized considerably and improved its throughput capability. Based on statistics from the Canadian Grain Commission, the number of operating units has declined from 1967 in 1984 to 1409 in 1994, or about 28 percent. Total storage capacity has decreased from 8.0 Mt in 1984 to 6.7 Mt in 1994. All primary elevators are located in western Canada.

While the number and capacity of primary elevators has been decreasing, total throughput and average turnover have been increasing. For example, between 1984/85 and 1993/94 total throughput increased by almost 30 percent and the turnover ratio increased by 50 percent.

***Grain Elevators (Transfer and Process)*** The main use of transfer elevators is to transfer grain that has already been officially inspected and weighed at another elevator. In eastern Canada, they also receive, clean and store eastern or foreign grain. Process elevators, on the other hand, are used to receive and store grain for direct manufacture or processing into other products.

**Grain Elevators (Terminal)** Terminal elevators unload grain arriving in rail cars from primary elevators, clean and grade the grain to Canadian Grain Commission standards, store it and subsequently load it for shipments to domestic and export markets.

As of August 1, 1994 there were 18 terminal elevators across Canada with a total capacity of 3.3 Mt. Most export grain in Canada passes through the ports of Vancouver and Prince Rupert on the Pacific Coast or Thunder Bay via the Great lakes to the Atlantic.

Utilization of the Pacific coast terminals has increased considerably over the period from 1983/84 and 1993/94 while throughput through Thunder Bay and Churchill has actually declined. This shift has mainly occurred because of the changes in markets for Canadian grain with more emphasis being placed on Pacific Rim destinations. This trend is expected to continue.

## **Cleaning**

Generally, grain is cleaned to improve the grade before or after purchase from the producer, to clean seed for the producers or to meet the specifications for domestic customers. In the Canadian grain industry all grain to be exported has to be cleaned to export standards. While some of the larger primary elevators have machinery for cleaning grain, most of Canada's grain is cleaned at terminal elevators. The result of the cleaning, usually described as dockage or screenings, are processed and used for animal feed, often shipped back to the prairies.

## **Transportation**

**Trucking** Truck transportation is used for several components of the Canadian grain handling and transportation system. First, trucks are used to move grain from the farm gate to the primary elevator. This typically involves a haul of 10-20 miles using a farmer-owned straight truck.

A small but growing portion of shipments to primary elevators (5%) are handled by commercial trucking operations where the payload capacity is higher, typically in the 23-27 tonne range. Trucking also fills other (longer-haul) roles in the grain handling and transportation system. Typical hauls are 50-200 miles for transportation of CWB grains to inland terminal elevators, feedlots and processing plants. Distances are somewhat higher for transportation of canola and specialty crops, often in the 300-400 mile range.

Overall the Canadian trucking industry is a deregulated industry with no provincial or federal controls on extra-provincial trucking. Beginning in 1976, the federal government committed itself to the deregulation of the trucking industry that was eventually expressed in the 1987 Motor Vehicle Transport Act that was tabled alongside the National Transportation Act. This Act deregulated inter-provincial and international trucking with respect to market entry/exit and tariffs.

The provinces however, have power over intra-provincial trucking. While the trucking industry faces no federal regulation, the industry is very concerned over the

excessive operational regulations they face in each province. In particular, through the Motor Vehicle Transport Board in each province, some provinces continue to have a highly regulated trucking system.

**Rail** Rail transportation is used throughout the Canadian grain handling system. Specifically, rail transportation is used to transport grain:

- From the primary elevator system to terminal elevators in Vancouver, Prince Rupert, Churchill and Thunder Bay. The average distance for these shipments is approximately 1,050 miles;
- Direct from the farmer to terminal elevators in producer cars. Average distances are in the 1,050 mile range;
- From Thunder Bay to transfer elevators along the Great Lakes/St. Lawrence Seaway System. Shipment distances for transfer moves fall in the range of 1,050-1,875 miles;
- From Thunder Bay to domestic customers in eastern Canada with distances typically falling in the range of 1,000-2,000 miles;
- From primary elevators to domestic customers in eastern and western Canada. Distances for these shipments vary widely, but generally fall in the range of 500-2,000 miles; and
- From primary elevators to export markets in the United States. Distances for these moves vary widely, but generally fall in the range of 500-2000 miles.

The basic prairie rail network consists of 15,200 miles of rail line, virtually all of which is currently protected from abandonment to the year 2000 under Prohibition Orders. Approximately 55 per cent of this track is owned by CN North America (CN) and 45 percent by CP Rail System (CP). In addition, the British Columbia Railway (BCR) hauls grain from the Peace River district. There are also two shortline railways (Central Western Railway and Southern Rail Cooperative) that operate a total of 287 miles of track.

About one-third of prairie rail lines are classified as main lines or secondary main lines, while the remainder are branch lines. Of the branch lines, 6,102 miles are designated as grain dependent for crop year 1994/95 (2,880 miles for CN and 3,222 miles for CP). These lines are determined annually by the NTA and the primary factor that establishes grain dependency is that the grain tonnage originating or terminating on the line is at least 60 per cent of all tonnage based on an average of the three preceding years.

Grain dependent branch lines account for about 40 percent of the total rail network. The operating capacity on approximately 800 miles of grain dependent lines is a limiting factor which has implications for cost efficiency. Lines with low operating capacity require that cars be only partially loaded, or be operated at slower speeds.

Currently, there are approximately 29,000 rail cars in grain service. A large component of the fleet is comprised of hopper cars purchased by the federal government, the provincial governments of Alberta and Saskatchewan and the Canadian Wheat Board (CWB). During the 1972-85 period, the federal government purchased 13,120 hopper cars at a purchase price of \$560 million and acquired another 2,000 cars under a long term lease. The governments of Alberta and Saskatchewan purchased 1,000 cars each in 1981 and the CWB acquired 2,000 cars in 1979. These cars are dedicated to the movement of grain and are provided free to CN and CP, with the railways being responsible for all

maintenance costs, which are included in the WGTA cost base (i.e., the railways recover maintenance costs through the freight rates).

To meet peak movement demand, both railways supplement the government and CWB fleet with their own hopper cars. These cars consist of railway-owned equipment and/or short and long term leases, primarily from the United States. CP Rail operates boxcars for grain service on light density rail lines, while CN only uses boxcars to Churchill and to Thunder Bay and only when they are short of rail capacity.

***Great Lakes/St. Lawrence Seaway System*** Approximately 85 percent of the grain passing through Thunder Bay is carried by lake vessel to transfer elevators on the lower St. Lawrence and then shipped on ocean-going vessels. There are 15 transfer elevators along the St. Lawrence with a combined storage capacity of 2.5 million tonnes. For the most part their function is limited to the transfer of grain and therefore cleaning to export standards must occur at Thunder Bay. The only exception is the Quebec City transfer elevator that has recently been upgraded to clean grain to export standards. When the navigation season on the seaway is closed from January to March, there are some winter rail movements either from Thunder Bay or direct from the prairies to Quebec City.

## APPENDIX B

**SCHEDULE OF GRAINS AND GRAIN PRODUCTS  
ELIGIBLE FOR WGTA SUPPORT**

**Schedule 1 (Sections 2 and 64) Grains, Crops and Products**

Alfalfa Meal, Pellets or Cubes, dehydrated	Meal, Rapeseed or Canola
Barley	Meal, Oil Cake, Linseed
Barley, Crushed	Meal, Oil Cake, Rapeseed or Canola
Barley, Pearl	Meal, Oil Cake, Sunflower Seed
Barley, Pot	Meal, Rye
Barley Sprouts	Meal, Wheat
Beans (except soybeans) including faba beans, splits and screenings	Middlings
Bean (except soybean) derivatives (flour, protein, isolates, fibre)	Millfeed
Bran	Mustard Seed
Breakfast Foods or Cereals (uncooked) in bags, barrels or cases. Manufactured from commodities only as listed in this Schedule.	Oats
Buckwheat	Oats, Crushed
Canary Seed	Oats, Rolled
Corn, Cracked	Oil Cake, Linseed
Corn (not popcorn)	Oil Cake, Rapeseed or Canola
Feed, Animal or Poultry (not medicated or condimental), containing not more than thirty-five per cent of ingredients other than commodities as specified in this Schedule, in bags or barrels or in bulk	Oil Cake, Sunflower Seed
Flaxseed	Oil, Linseed
Flour, made from grain or malt in bags or barrels or in bulk	Oil, Rapeseed or Canola
Grain, Feed, in sacks	Oil, Sunflower Seed
Groats	Peas, including splits and screenings
Hulls, Oat	Pea derivatives (flour, protein, isolates, fibre)
Lentils, including splits and screenings	Rapeseed or Canola
Malt (made from grain only)	Rye
Meal, Barley	Screenings or Screenings pellets (applicable only on Screenings from grains specified herein)
Meal, Corn	Seed Grain in Sacks
Meal, Linseed	Shorts
Meal, Oat	Sunflower Seed
	Triticale
	Wheat
	Wheat Germ
	Wheat, Rolled
	1980-81-82-83, c. 168, Sch. 1.

Source: Canada, Western Grain Transportation Act. Chap. W-8, 1984.



## UNDERSTANDING THE CANADA/UNITED STATES GRAINS DISPUTE: BACKGROUND AND DESCRIPTION

*William W. Wilson and Demcey Johnson*

### INTRODUCTION

Grain trade has been an area of escalating friction between the United States and Canada. Similar problems exist in both the wheat and barley sectors. In large part, these stem from divergent marketing systems and policy mechanisms. Each country evolved with an autonomous set of agricultural and marketing policies, as well as regulations governing marketing and trade. Changes in world market conditions and competitive pressures within North America have given rise to increased trade (particularly United States imports from Canada). As a result, underlying trade policy and market mechanisms, as conventionally applied, are being challenged. Trade disputes have complicated—and threatened to derail—a movement toward market integration occasioned by lower tariff barriers.

There are numerous reasons for increased United States imports of wheat and barley. Some are transient, reflecting the unique circumstances of an individual crop year, while others are symptomatic of policies and institutional factors. Spatial price differentials are affected by a number of factors, including quality premiums, EEP subsidies and transport and handling costs. In addition, because of fundamental differences in marketing institutions and philosophies, Canadian initial payments (and therefore *street prices*) can differ drastically from U.S. spot prices. These price spreads are particularly apparent at interior shipping points. Fundamentally, the U.S. spot price mechanism is incompatible with Canada's price pooling mechanism, as conventionally administered. Restrictive delivery quotas and the demand for cash may also induce prairie-border-crossing shipments by Canadian shippers or producers.

The purpose of this paper is to discuss these problems from the perspective of the United States, and to suggest issues related to reconciliation. The paper is organized around marketing system differences and differences in policy mechanisms. The next section discusses in detail the effects of differences in grain handling costs and transport policies. In addition, the issue of price transparency is discussed. Briefly, the price transparency problem concerns the absence of reliable information about Canadian selling prices, which

(it is alleged) confers an advantage to the Canadian Wheat Board vis-a-vis competing U.S. merchandisers. In the next section, issues related to conflicting agricultural and trade policies are discussed. These include the effects of EEP, WGTA, CRP and the CWB sales monopoly. Simulation results are used to quantify the effects of these policies in the barley sector. In the fourth section, we discuss opportunities for resolving ongoing conflicts over North American grain trade. The paper concludes with a summary and discussion.

Empirical results presented in the paper are from several studies we have conducted on barley. These are from a detailed spatial equilibrium analysis of the North American barley and malt sector. The problems confronting barley are very similar to those in wheat. Differences may exist between them in terms of demand elasticities, spatial dimensions of supply and demand, and relative transport costs. However, many of our conclusions have broad relevance for both wheat and barley.

## **CRITICAL MARKETING SYSTEM DIFFERENCES**

Major differences exist between the United States and Canada in terms of grain handling and transportation costs. These reflect important structural differences, as well as differences in regulatory environments. Differences in handling costs are a subtle, but significant factor in the pattern of cross-border trade. More obvious is the Western Grain Transportation Act (WGTA) and related subsidy mechanism, which lowers rail rates for Canadian shippers. These features of the current marketing environment are briefly reviewed. In addition, price transparency, another point of contention between the United States and Canada, is interpreted in the context of asymmetric information.<sup>1</sup>

### **Grain Handling**

Commercial differences in grain handling contribute to some of the cross-border flows.<sup>2</sup> Handling tariffs are significantly higher in Canada than in the United States, due to different structural and regulatory environments. This has the effect of encouraging cross-border movements (from Canada to the United States) to circumvent the Canadian handling system.

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<sup>1</sup> In addition to marketing system differences discussed in this paper, others exist. Of particular importance are those related to quality regulations, as well as market structure issues. Quality differences are attributable in part to the different regulatory regimes and trade practices in each country. Differences in quality requirements between domestic end-users and the export market have important effects on the spatial distribution of trade flows. See Wilson and Johnson for a discussion of these issues in the case of barley, and Wilson et al. for a comparison of the application of grade factors in barley.

<sup>2</sup> See Wakefield and Agriculture Canada for a discussion of these differences.

**Cost Differences** Comparisons are made in Figures 1 and 2 using selected shipping origins and destinations.<sup>3</sup> For each shipping point, two Canadian comparisons are made. One depicts the total shipping and handling costs including the shipper portion. The other shows the total, including the government portion. The implicit assumption is that if/when rail rates change, they could change up to the total cost of shipping depicted in this bar. Handling costs are shown for both country and export elevation. Export elevation costs would not apply for domestic movements within North America.

Handling costs at Canadian country and export elevators are 19¢/bu. (U.S.) and 14¢/bu. (U.S.), respectively. These compare to costs of 8¢/bu. for United States country and export elevators.<sup>4</sup> The comparisons illustrate the total handling and shipping costs to two common destinations from comparable origins. Excluding the government portion, the total cost of shipping to Minneapolis is greater than from Winnipeg to Thunder Bay (Figure 1). However, the effect of the implicit rail subsidy of 19¢/bu. is partially offset by the handling cost differential of 11¢/bu. Similar conclusions are shown in comparison of total costs of shipping from Shelby, Montana, and Lethbridge to Portland and Vancouver, respectively; excluding the government portion, Canadian shipping costs are less, but the impact of the subsidy (30¢/bu.) is offset to some extent by the higher handling costs (33¢/bu. including export elevation, versus 16¢/bu. in the United States).

Figure 2 shows similar comparisons for shipments to selected U.S. destinations. Results illustrate the advantage given Canadian origins via the government transportation subsidy. However, this effect is dissipated due to higher handling costs and the United States rail share of the total movement. Two movements are shown from Lethbridge to Shelby and indicate that a "prairie-border crossing" movement by truck costs less than a direct rail movement.

**Reasons for the Differences** There are numerous reasons for these differences. Besides those resulting from differences in input costs and taxes, there are three important distinctions between these industries.

First is that the Canadian Grain Commission establishes handling regulations for licensed elevators and maximum tariffs for each function (e.g., storage, country handling, cleaning, fobbing).<sup>5</sup> In contrast, a multitude of competitive forces determine handling costs in the United States. The second reason is that these countries are at different phases of the rationalization process. Though the grain handling and transport systems developed similarly, the process of change in the past decade has differed drastically. The United States

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<sup>3</sup> Data sources for these figures are contained in Johnson and Wilson (1994) and are discussed in greater detail.

<sup>4</sup> In addition, an administrative charge of 9¢/bu. (U.S.) was assessed on direct cross-border shipments from Canadian farms (applied under the ex-farm-truck program). The status of this policy is not clear at this point.

<sup>5</sup> See Agriculture Canada (*Regulatory Review*) for a discussion of these issues.

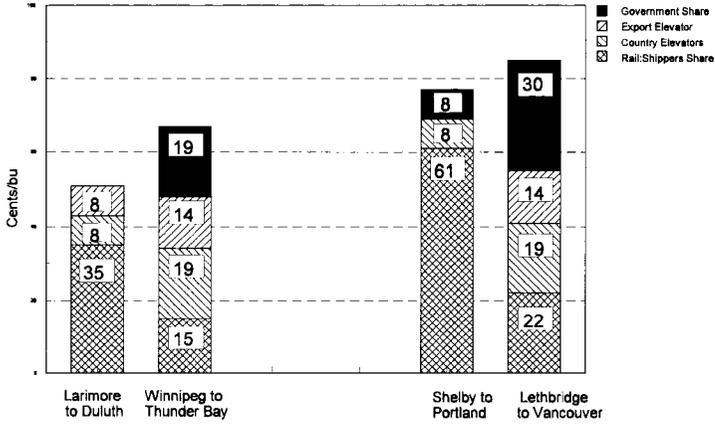


Figure 1. Grain Handling and Transport Cost Comparison for Third Country Export (US cents/bu)

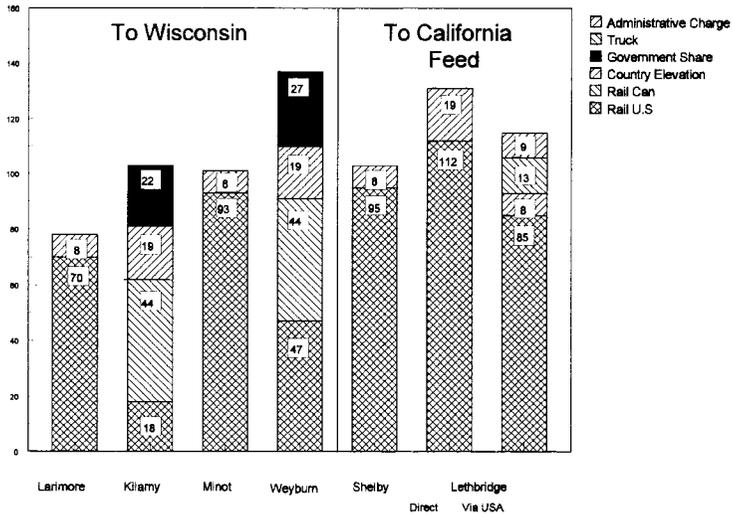


Figure 2. Grain Handling and Transport Cost Comparisons To U.S. Destination.

rationalization process began in the late 1970s in response to three sets of pressures: i) railroad initiatives; ii) competitive pressures within the grain industry; and iii) changes in the role and function of grain handling firms.<sup>6</sup> Though the Canadian industry has begun this process, it is likely at least a decade behind the changes that have occurred in the United States.

***Implications of Cost Differences on Trade Flows*** These differences have an impact on cross-border flows. The volume impact ultimately depends on the spatial distribution of production, and relative costs of alternative market channels. However, most important is whether Canadian grain is allowed to by-pass the first-handler, i.e., be shipped directly by truck from farms to end-users. Schmitz et al. (1993) discounted this as impractical, due to logistical and other commercial considerations; many U.S. end-users prefer to deal with commercial dealers capable of procuring larger volumes and providing a steady supply. Carter (1993a) assumed that elevator handling costs would be avoided completely by trucking directly to end-users; this was criticized as highly unrealistic.

Another possibility is to require commercial handling some place in the marketing system, either the United States or Canada, whichever is most efficient. We analyzed this effect in the case of North American barley flows using a spatial equilibrium model.<sup>7</sup> Our results suggest that the effect of handling cost differentials is fairly important. Specifically, equating handling costs in Canada to those in the United States would have the effect of increasing equilibrium exports to the United States from 1.39 mmt to 1.53 mmt. The logic is that, as a result of lowering marketing costs, it becomes more attractive for barley to enter the commercial marketing system. In so doing, exports from Canada to both the U.S. and off-shore markets expand, and prices increase. As a result of the higher prices associated with commercial marketing, domestic feed use in the Prairies is reduced (i.e., a movement occurs along provincial feed demand schedules).

## Transport Policies

***Institutional Setting*** An important policy mechanism in Canada for income support has been the WGTA rail rates and related subsidy mechanisms. This was also a highly contentious issue in the evolving North American grain dispute and would have to be reduced to comply with GATT. Briefly, this results in a pricing regime whereby the shipper pays a portion of the total rail shipment cost, referred to as the *Shipper's Portion*. The balance, the *Government's Cost* is paid directly to the railroads in the form of a subsidy. These levels and proportions are adjusted on an annual basis. Figures 1 and 2 provide an illustration of the relative impacts of the subsidy.

These rates apply to all grain and product movements from the Prairies to Vancouver and Thunder Bay. The CUSTA continued to allow these rates to Vancouver for third country

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<sup>6</sup> See Wilson and Tolliver (forthcoming) for a discussion of this process.

<sup>7</sup> These results are from Johnson and Wilson (1995b).

exports, and to Thunder Bay *including* for export to the United States. However, they would not apply for exports to the western United States via Vancouver.

**Proposed Changes** Several proposals have been made to change these rates over the years. In 1993 a proposal was made to change the rates beginning in the 1994/95 crop year resulting in a change in the method of payment (MOP). Over a 4-year period the payment would be made directly to producers, though the form of the payment was not determined. In late 1994 another more specific proposal was made to increase these rates beginning August 1, 1995 and to the full WGTA rate scale. These rates would remain in effect through 1999 at which time the WGTA would be replaced by the National Transportation Act.<sup>8</sup> As conditions have evolved in Canada, this subsidy will be eliminated effective August 1, 1995.

**Impacts on Trade Flows** With fully compensatory rates, shippers will pay the total cost of shipping, including the portion previously paid by the Canadian Government. Changes in the subsidy regime will effectively raise the shipping rate to Vancouver (for off-shore exports) and Thunder Bay for eastern North American as well as off-shore destinations. The effect of this change will be to make prairie border crossing movements relatively more attractive and no longer artificially force shipments through conventional channels.

However, the impact of this change depends on the spatial distribution of supply and demand relative to costs of alternative logistical channels. In the case of North American barley, Johnson and Wilson (1995b) show that compensatory rates would widen the gap between United States and Canadian producer prices. With unrestricted access to the United States market, equilibrium Canadian exports to the United States would increase from 1.4 mmt to 2.7 mmt. About 29 percent of total Canadian production would be exported to the United States, primarily to the western states.

## Pricing and Transparency

**Problem** One of the major problems identified by U.S. interests—both grower groups and traders—is referred to as the "transparency" problem. As an example, Peterson (1995, p. 4) claimed that "as long as the Wheat Board pricing policies remain secretive, this will be a sore point ... it is a bit of a stretch to compare a government sponsored monopoly with a private company." In an earlier investigation the General Accounting Office (GAO) (United States GAO, pp. 23-24) in discussing the concept of transparency pointed out that "the board does not reveal selling prices but says it sells its commodities at competitive rates ... and the board treats proprietary information no differently from large grain exporting companies in the United States."

The issue of transparency is often confused (or discussed concurrently) with the ability of the CWB to practice discriminatory pricing. As the GAO points out, "The board has unlimited authority to offer differentiated prices—relatively high prices for some markets

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<sup>8</sup> Other important provisions regarding branch line abandonment and car allocation were included in the proposal.

and lower-than-posted prices in other key markets—either in order to initiate new business or expand its market." The distinction and relationship between price transparency and discriminatory pricing is crucial from an analytical perspective.

Basically, transparency concerns an informational asymmetry, giving an apparent advantage to single selling agencies relative to U.S. trading firms. That advantage is manifested in the ability of such agencies to under-bid United States offers. The transparency problem is discussed in this section in the context of competitive bidding; an economic interpretation is developed in terms of bidding games. We discuss the mechanisms which facilitate and exacerbate transparency as a *bona fide* issue. The effects are then distinguished from those of price discrimination.

**Economic Interpretation** Much of the North American and world grain trade uses some form of competitive bidding as a means to conduct trade. Information is a crucial element in determining bids among competitors in bidding games.<sup>9</sup> Those firms with more refined information have a competitive advantage in these games. Thus, information is a crucial source of competitive advantage in commodity-based business such as the grain trade (Caves, 1979).

Using game theory concepts of bidding games, the transparency problem—or, more properly, the *opaqueness* problem—can be interpreted as a problem of asymmetric information. Rasmussen (1989, p. 53) defines asymmetric information as a situation in which some player has useful "private information". Incomplete information is when nature moves first, and that move is unobserved by at least one of the players. Thus, competitive bidding games where one player has more refined information than others is one of incomplete and asymmetric information. Philips (1988, p. 94) defines these games as incomplete in that other bidder's reservation values are not known. In these games the bidder with the more refined information set has a strategic advantage.

The effects of uncertainty about "reservation values" can be used to provide a tentative explanation of the transparency problem.<sup>10</sup> The problem is cast as a bidding game with asymmetric information. For simplicity, our analysis is static, applying to a one-shot bidding game. Strategies are limited to sellers' bids, and the winner is the seller with lowest bid—i.e., as in an export wheat tender. We do not consider longer term sales strategies, quality control, or other instruments of competition in this analysis.<sup>11</sup>

In developing their bids, each player takes into account the expected bids of their opponents—and the uncertainty about those bids. In other words, players base their bids on probability distributions (about their opponents' bids, or reservation values). The

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<sup>9</sup> We recognize that the formality of a public tender may not be as great for trades within North America, but the concepts presented here are applicable.

<sup>10</sup> See Preszler, Wilson, and Johnson (1992) for development and explanation of the model used to describe the results presented in this section.

<sup>11</sup> We recognize this is highly simplistic, but the results are suggestive of the impacts likely associated with the transparency problem.

transparency problem arises when uncertainty about one player's reservation price is much larger than for other players. Arguably, that is the case when one bidder represents a country with a single seller agency, whose transaction prices are not released (or are released selectively). Information about sales and commitments to alternative markets (representing opportunity values) are masked. One competitor possesses these characteristics; other competitors are represented by bidders with a narrower distribution (standard deviation) of reservation prices.

This type of competitive situation has important consequences for bidding behavior. In particular, the single seller agency has a strategic advantage due to the information asymmetry. This is manifested in: i) a higher probability of winning bidding games, and ii) a greater expected value of profit, relative to bidders with narrower distributions of reservation prices. These effects are attributable to the greater uncertainty (as seen by opponents) in reservation prices of the single seller agency.

***Factors Contributing to the Transparency Problem*** There are several aspects of the North American and world market place which give rise to the transparency problem and consequences described above. These are discussed briefly.

First, a crucial aspect of these results is that under asymmetric information, reservation prices for U.S. trading firms have a lower standard deviation than do those the single seller agency. The vast majority of transactions for U.S. domestic and off-shore sales are made through either formal or informal bidding processes. United States market prices and marketing costs are highly transparent. (The one caveat may be the lack of price reporting of premiums and discounts for quality characteristics.) In addition, results of all sales made under export assistance, including PL480 and EEP, are reported publicly. These mechanisms lower the standard deviation about trading firms' reservation prices.

The second factor concerns the time dimension of transactions. As is well recognized, EEP has created a two-tier price system in North America, one for domestic and one for world values. One of the effects of the administration of the EEP is that (generally) transactions are concentrated more in near-term shipping months than in deferred months. As a result, the time dimension of transactions has become distorted. This has had the effect of making domestic processors seek to increase the proportion of their purchases in more deferred shipping months, relative to what would be the case under normal carrying charge markets. U.S. trading firms and producers have become focused on capturing premiums associated with inverted markets. Concurrently, there is likely less competition in transactions for more deferred shipping positions.<sup>12</sup> In fact, this is one area in which the CWB has an advantage (see below).

The transparency problem is particularly acute for the types of grains that are contentious in North America, barley and durum wheat. Neither of these have a futures market (facilitating price discovery) and the cash markets have become highly decentralized, inhibiting accurate price reporting using conventional methods. In addition, these are grains

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<sup>12</sup> This phenomenon really makes price comparisons as a regulatory mechanism somewhat futile.

in which the possibility of large premiums and discounts for quality deviations is substantial. Taken together, this has created a high degree of uncertainty about reservation values (or procurement costs) for all market participants.

Third, there are some important characteristics of the Canadian marketing system that exacerbate the transparency problem. These include price pooling (with mandatory sales to the CWB) system, and the initial payment guarantee—both of which are legislated strategic advantages of the CWB. Because of the price pooling system and initial payment guarantee, the CWB does not have to compete in procurement against other traders. The combined effect is to give the CWB a strategic advantage in competitive bidding relative to United States trading firms.

Finally, it is important to recognize that *price opaqueness* is a growing problem throughout the North American and world market. This is being driven by at least two important industry trends. One is that changes in the marketing system has resulted in cost differentials among industry participants which are greater than previously experienced. Most notable is the effect of alternative car allocation mechanisms (COTS, PERX, ACOS, etc.) for rail shipments which produce different rated structures and performance criteria. In addition, there are several technologies for handling today that previously did not exist. The trend toward vertical integration has the effect of making it more difficult to observe components of marketing costs. Thus, there is a growing trend within the North American marketing system toward less price transparency.

**Price Discrimination** An alternative characterization of the problem concerns price discrimination. The single seller agency offers different terms of trade (e.g., prices) to different markets and buyers. This is obviously not the same as the transparency problem, although the ability to price discriminate is related to the lack of public information about transaction prices.

This form of competition is facilitated by three important factors. One is that there are inherent differences in price elasticities across markets. This provides an incentive to discriminate. Second, U.S. export policies, which are themselves discriminatory, exacerbate the differences in prospective returns from different markets. This practically forces price discrimination by a single seller agency. Finally, the fact that the CWB has a monopsony on procurement makes it easier to exercise discriminatory pricing than U.S. trading firms. Competition among trading firms, both on selling and in procurement, tends to prevent discriminatory pricing.<sup>13</sup>

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<sup>13</sup> Editors note: A reviewer points that, in an imperfectly competitive market, there are many factors that determine capability to price discriminate.

## **POLICY INCOMPATIBILITY**

Agricultural policies have evolved independently in the United States and Canada, with policy makers giving little thought to the (potentially) disruptive effects of cross-border trade.<sup>14</sup> That situation has changed in recent years, as larger United States grain imports have forced a recognition of basic policy conflicts.

From the Canadian side, much attention has focussed on the effects of United States export subsidies. The United States Export Enhancement Program (EEP) has had the effect of displacing Canadian wheat and barley from offshore markets while raising U.S. domestic prices. On this view, the United States policies are partially responsible for inducing an inflow of Canadian grain into the United States. In contrast, United States grain producers and policy makers have focussed on other aspects of the competitive environment—pricing policies of the Canadian Wheat Board, and Canadian rail subsidies—as possible causes of surging grain inflows. There is also growing skepticism about the wisdom of United States acreage controls in view of Canada's ready access to the United States market.

On both sides of the border, discussions have also revolved around trade restrictions, current or potential. In 1993-94, United States wheat and barley producers sought import curbs under Section 22 of the Agricultural Adjustment Act. Canada's agreement to voluntary limits on wheat exports (announced in August, 1994) helped to defuse this issue, and United States ratification of the GATT Agreement appears to have eliminated Section 22 as a basis for future United States trade action. However, Article 28 of the GATT allows import restrictions if adequate compensation is offered to injured trading partners, and the United States may also pursue other avenues (e.g., requiring end-use certificates) to restrain grain imports from Canada.

Canadian grain producers are affected not just by negotiated limits on grain exports, but by the Wheat Board's administration of export licenses. These licenses (and associated fees paid by producers) are integral to Canada's price pooling system, and to the Board's ability to sell selectively to the U.S. market. By restricting direct cross-border flows from Canadian producers to U.S. buyers, this system allows the emergence of large gaps between initial payments and U.S. spot prices--to the frustration of many Canadian producers. This has been a major factor behind the push within Canada for removal of Wheat Board control, a movement which led to the short-lived liberalization of barley trading in 1993. The effects of Wheat Board control (or its removal) on producer interests remains an extremely contentious issue in Canada. Arguably, the implications for U.S. producers (especially those situated near the border) are also significant.

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<sup>14</sup> Editors note: A reviewer indicates that CUSTA and NAFTA did consider trade disruptive effects, but problems still exist.

## Effects of Individual Policies: Simulation Results

To gain some insight into these policy questions, simulations were performed with a detailed spatial equilibrium model of the North American barley market. The Appendix gives a general description and Johnson and Wilson (1994) provide greater detail (Johnson and Wilson, 1995a, forthcoming). The base case is broadly representative of demand conditions in the 1993/94 marketing year. Demand parameters were calibrated so that model "predictions" of cross-border flows matched actual levels observed. This provides a comparison for alternative policy simulations, which are shown in Table 1 and briefly described below relative to the Base Case.

***Impact of United States Trade Restrictions*** With implementation of the GATT Agreement, the United States cannot unilaterally invoke Section 22 to restrict grain imports. Restrictions could still be imposed under Article 28 of the GATT, and recent experience in wheat suggests the possibility (at least in the near term) of negotiated limits on Canadian access to the United States market. This prompts the question: what is the value to Canadian producers of U.S. market access?

A rough answer is found by constraining U.S. barley imports to zero. In that case, Canadian producer prices (on average) are 7¢/bu. lower than in the base case, and U.S. producer prices are 4 cents higher. Thus, complete elimination of U.S. barley imports would widen the cross-border gap in average producer prices by 11¢/bu. If 0.5 million mt of Canadian barley were allowed into the U.S. market, Canadian producer prices would be 4¢/bu. lower than in the base case.

***Compensatory Rail Rates in Canada*** The Canadian Government has removed the WGTA benefit. This will have the effect of raising the cost of rail movements (i.e., from the Prairies to Thunder Bay and Vancouver) deducted from initial payments. For purposes of a model simulation, rates for applicable rail movements were adjusted by the full amount of the WGTA benefit.

Results indicate that fully compensatory rail rates in Canada would induce a larger flow of barley into the United States market. Canadian exports to offshore markets are reduced (relative to the base case) because of higher shipping costs to Vancouver. Without a significant supply shift, the elimination of Canadian rail subsidies seems unlikely to advance the interests of U.S. producers—contrary to the expectation of some U.S. policy makers.

***United States EEP Subsidies*** In the base-case scenario, an EEP bonus level of \$32/ton applies to subsidized export shipments. To evaluate the impact of EEP on continental barley flows and producer prices, alternative simulations were run with different bonus levels. Results indicate that if the EEP bonus were reduced to zero, Canada would still export .5 mmt of barley to the United States. (These exports consist largely of two-rowed malting barley.) With higher EEP bonus levels, Canadian exports to the United States increase, as expected.

**Table 1: Results from Alternative Simulations**

Variable	United States Import Quota		Compensator		United States EEP Bonus			Return of CRP Acres
	Base Case	0 mmt	.5 mmt	Y	0	40	60	
				Rail Rates		(\$/mt)		
Canadian barley exports (mmt)	4.28	3.02	3.46	4.33	4.07	4.39	4.64	4.14
to United States	1.39	0	.50	2.70	.52	1.50	1.78	1.23
to offshore markets	2.89	3.02	2.96	1.63	3.55	2.89	2.86	2.91
United States offshore exports (mmt)	1.95	1.66	1.72	2.53	0.05	2.35	3.58	2.08
Domestic Feed Use (mmt)								
Canada	5.54	6.71	6.28	5.51	5.75	5.49	5.21	5.68
United States	5.36	4.36	4.76	6.07	6.39	5.02	4.09	6.63
Average Producer Prices								
Canada (U.S. \$/mt)	73.81	70.53	72.04	68.61	73.08	74.05	74.78	73.33
(\$/bu.)	1.61	1.54	1.57	1.49	1.54	1.61	1.63	1.60
United States (U.S. \$/mt)	83.46	85.58	84.83	83.36	81.69	84.70	87.12	80.90
(\$/bu.)	1.82	1.86	1.85	1.81	1.78	1.84	1.90	1.76

Source: Authors own analysis.

More surprising is the apparent effect of EEP on Canadian producer revenue: with higher EEP, Canadian producers earn higher average returns--despite the price-depressing effect of United States exports in subsidized offshore markets. This stems from the model's division of offshore markets into EEP and non-EEP markets, and its allowance that prices in these markets can be "disconnected."<sup>15</sup> In model simulations reported here, Canada retains its dominant position in non-subsidized (non-EEP) offshore markets, where prices are unchanged, and exports nothing to EEP markets. Thus, Canada gains from higher returns on its U.S. sales (due to higher EEP) without loss of offshore revenue. Of course, higher U.S. prices can only benefit Canada if there is free access to the United States market. When Canada is prevented from exporting to the United States (i.e., by hypothetical trade restriction), Canadian barley goes to both EEP and non-EEP markets; higher EEP bonuses are then detrimental to Canadian interests.

***The United States CRP Program*** Under the Conservation Reserve Program (CRP), highly erodible United States cropland is removed from production for a period of 10 years. Conceived as an environmental policy, CRP has had important supply effects for United States barley, particularly in the Midwestern states and Montana. To evaluate the significance of CRP, simulations were conducted in which CRP acres were restored to barley production in North Dakota, South Dakota, Minnesota and Montana. This leads to a 19 percent increase in United States barley supply, relative to the base case. Results indicate that United States barley imports from Canada would be only slightly reduced, because the rise in U.S. supply is accompanied by a large increase in domestic feed use. While the return of CRP acres to production would have little impact on aggregate trade flows, Canadian producers gain a "free-rider" from United States acreage reductions.

***Wheat Board Control Over Canadian Exports*** The Canadian Wheat Board plays a pivotal role in the Canadian marketing system. As a single-desk seller, the Board can price grain differently to U.S. and offshore markets and so (in principle) maximize returns to Canadian producers. Price discrimination is not a feature of the barley spatial equilibrium model. However, by varying the quantity of barley exported from Canada to the United States, model simulations can be used to study "optimal" allocations from a Canadian perspective.

Results of simulations (Johnson and Wilson, 1995a) suggest that Canadian producer revenue would be maximized with exports to the United States of about 4 mmt—far in excess of the competitive equilibrium identified in the base case. This reflects demand elasticities embedded in the spatial model: U.S. regional markets for feed barley (particularly on the west coast) are highly price elastic, and it "pays" for the Board to absorb a price discount in selling to these markets. This lends credence to claims that the Board has

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<sup>15</sup> The price difference between the non-subsidized (non-EEP) market and the subsidized (EEP) market is constrained to be less than or equal to the EEP bonus.

undersold (in volume) barley to the United States, possibly because of the political sensitivity of these trade flows.<sup>16</sup>

## OPPORTUNITIES FOR RESOLUTION

Disputes over grain trade have numerous commercial policy dimensions. However, in several areas, there seems to be little opportunity for maneuvering or meaningful negotiations. The changes in Canada's WGTA will have major significance for the North American grain market, but are driven by budgetary considerations and the need to comply with GATT restrictions. Similarly, the future of the United States CRP, and other supply control programs, are largely determined by political and budgetary factors that have little to do with this bilateral trade issues.

In evaluating the opportunities for resolving ongoing bilateral disputes, it is important to identify and focus on those policies that are *controllable* (or capable of modification) on each side. The United States controls the size of its EEP program, within budgetary and GATT-imposed limits; given Canadian complaints about the offshore effects of U.S. subsidies, this appears to be one of the most important U.S. policy levers. Canada can control the volume of its grain exports to the United States; indeed, that is central to the August, 1994 agreement on wheat.

We used our spatial equilibrium model to evaluate the extent that room exists for a "cooperative" (negotiated) solution in the case of barley. Could Canada be compensated for reduced United States market access, i.e., by reductions in United States EEP subsidies? Results from several policy simulations within the realm of the controllable policies defined above are shown in Table 2. Specifically, U.S. strategies are limited to the discrete choice of having EEP equal to \$32/mt (the average used for barley), or not (i.e., EEP=0). Canadian export strategies to the United States are either limited to 0, or not limited. These would be executed through use of the export licensing procedures currently used by the CWB. We recognize that this discrete choice is limiting, but our purpose here is to illustrate the difficulties in trying to achieve a cooperative solution.

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<sup>16</sup> There is an important caveat. The Canadian Wheat Board does not control barley sales to domestic feeders in Canada. If prices from domestic, non-Board sales exceed the pooled return from U.S. and offshore sales, then Canadian producers will sell independently. The Board can offer "discounts" to U.S. buyers only if the average price (net of transportation) for U.S. and offshore sales is higher than prices bid by Canadian feeders.

**Table 2. Producer Payoffs<sup>a</sup> under Alternative Policy Scenarios**

	Canadian Exports to the United States	
	<i>Constrained to zero</i>	<i>No limit</i>
EEP = \$0/mt	82.5, 72.2	81.7, 73.2
EEP = \$32/mt	85.6, 70.5	83.4, 73.9

<sup>a</sup> Values in each cell are United States and Canadian average price ( $P^{US}$ ,  $P^C$ ), each in US\$/metric ton under the alternative simulations.

These results can be viewed as strategic choices confronting trade policy negotiators.<sup>17</sup> Of the two strategic choices confronting the United States, the producer payoff is highest when EEP bonuses are \$32. Of the two strategic choices confronting Canada, *No Limit* on exports to the United States is clearly preferred. This is a *dominant* strategy for Canada. The Canadian payoff is highest with \$32 EEP and no U.S. limits on barley imports. In fact, even if EEP were eliminated (EEP=0), there would not be sufficient inducement for Canada to curtail its exports to the United States (i.e., \$73.2 > \$72.2).

These results illustrate why it will likely be difficult to achieve easy reconciliation within the terms of these policy alternatives. Regardless of the value of EEP, it is still optimal (in the sense of raising average prices) for Canada to want to pursue a policy of no limit on sales to the United States.

It should be emphasized that these results are highly dependent on the major factors affecting spatial equilibrium. Most important are the demand elasticities (domestic and off-shore), and the spatial distribution of supply and demand relative to transport costs.

## SUMMARY AND DISCUSSION

This paper discussed effects of differences in marketing and policy mechanisms in the United States and Canada. The discussion distinguished between the effects of differences in marketing policies, and more aggregate policies. General observations are offered in this section on the long-term prospects for North American grain trade.

<sup>17</sup> Of course, elements of the matrix would change under different underlying conditions. Most important would be changes in the WGTA subsidy. The general conclusion would not change in that case, but the differences would be more drastic.

Although the marketing systems in these two countries (including mechanisms related to pricing, transport, handling, and quality control) differ drastically, some convergence should be expected in the long run as a result of movement toward a more open trade environment. Specific observations and concerns about the longer term include:

**Marketing cost differentials.** A natural transition is likely underway which should have the effect of causing marketing costs in the two countries to converge. The rate of convergence largely depends upon marketing policies adopted within Canada. Competition from prairie-border-crossing trade will provide added impetus to reduce marketing costs within Canada.

**Changes in the WGTA.** WGTA reform is underway and will provide apparent relief to some of the trade friction. It is critical for U.S. interests to recognize that changes in the WGTA ultimately will induce a greater flow of grain into the United States. These proposed changes will create a new set of problems as trade shifts to North/South.

In addition, although the WGTA may appear to be removing some of the apparent inequities, there are fundamental differences that will persist. Two important issues which will continue to plague these systems. One is that even at the full WGTA level, rates from the Prairies will still be less than comparable movements from the northern great plains . If everything else were the same, (which, of course, they are not) this would confer a continued advantage to Canadian producers, while institutional restrictions prevent United States producers from shipping in the Canadian marketing system.

The second fundamental issue is the relative flexibility of United States railroads for pricing and car allocation, compared to the proposed changes in Canada. This would not be important except in times of capacity constraints in the Canadian marketing system. United States railroads stand to benefit (in terms of increased movements) from the inflexibility of the Canadian system.

**Price Transparency and Discrimination.** These are innate problems associated with single seller agencies, and in fact are frequently used as a means to legitimize their existence. Problems related to transparency will likely persist so long as the CWB has a monopoly on procurement.

Though it is not our role to suggest means of resolving this apparent Canadian problem, simple solutions could be proposed. One would be for the CWB to regularly offer via a sealed bid auction for sale within North America specified qualities of grain for forward delivery positions. These would only have to be for a small proportion of sales. Reporting of results would not completely eliminate the transparency problem, but would certainly reduce the informational uncertainties that confront participants in this industry.<sup>18</sup>

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<sup>18</sup> It is instructive that the South African Maize Board, which has powers similar to the CWB, has not been burdened with issues related to transparency. The reason for this is likely that as part of their sales regime they hold weekly tenders for forward cargoes for both white and yellow maize. Results are

There are also numerous agricultural and trade policies that exacerbate trade problems and tensions. Trade policy makers, and negotiators on both sides of the border must recognize the effects of these policies. EEP, WGTA, CRP and CWB all have an impact on this problem in unique ways. United States interests must recognize that EEP contributes to the problem, and Canadian interests must recognize that EEP is not the sole source of the problem. In the case of barley, even if EEP were removed, Canadian barley would replace U.S. barley in some markets, and both the EEP and supply control programs as conventionally administered provide Canadians with "free-rider" benefits. Canadians must also admit that features of the CWB system provide them with legislated advantages not shared by U.S. trading firms. Ultimately this yields competitive advantages relative to firms operating in more transparent environment.

These problems will likely persist unless some effort is made to coordinate policies. The United States should not unilaterally pursue policies (i.e., acreage controls or export subsidies) without greater coordination and consultation with Canada. Without this coordination, use of such policies by the United States should be reevaluated.

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**APPENDIX. OVERVIEW OF THE SPATIAL EQUILIBRIUM MODEL**

A spatial equilibrium model was developed using mathematical programming to analyze potential impacts of marketing system issues on North American barley trade. In the simulation model we seek to analyze impacts of changes in these selected parameters on spatial equilibrium in the North American market for barley, malting barley and malt. The model is described in detail in Johnson and Wilson (1994), and is summarized here only briefly.

The United States and Canada are divided into different producing and consuming regions; export markets for barley and malt are also included. The objective is to maximize the sum of producer and consumer surplus in feed barley markets less the cost of satisfying fixed regional demands for malt. Thus, malt demand is completely inelastic, while feed barley prices and quantities fed (by region) are determined endogenously. Specifically, feed demand equations were developed using least cost feed formulations. Separate equations were developed for each region, state or province representative of their composition of livestock inventories, and price of alternative feeds. These demands are fairly elastic, and were generally more elastic than demands for offshore shipments.

The model does not include storage activities; all barley demand is for current use, either for feed or malt production. By design, conditions of competitive spatial equilibrium are satisfied in the model solution.

Transport and handling costs are based on 1993 truck and rail rates, and handling margins at American and Canadian elevators. For individual origins and destinations, movements by truck, rail, or truck/rail combinations were allowed. Least-cost movements were identified and incorporated in the analysis. In particular, the model allows prairie-border-crossing trade, an alternative to traditional Canadian movements. Inclusion of handling costs in each country, as well as direct shipment to United States shipping stations (implicitly, transshipment points) provides a realistic depiction of the spatial competitive environment that has emerged.

The model is static and treats supplies as fixed (by region), based on recent production history. Although this limits its usefulness for long-range policy analysis, the model does incorporate many essential features of the current competitive situation: detailed information on transportation and handling costs, feed market values in different regions, and United States export subsidies.

## UNDERSTANDING THE CANADA/UNITED STATES GRAINS DISPUTE: FACTORS AND IMPACTS

*Colin A. Carter*

### INTRODUCTION

*Issues of economic policy are necessarily issues of politics. Even in theory it is difficult to distinguish between the economic and political aspects of the problem. ... Even if the economist tries to distinguish between the economic and political elements in his argument, the public is unlikely to recognize the distinction. To the public an economist is an economist, and most people are not usually able, even if they were willing, to distinguish the political from the economic. ... The need to distinguish between the economic and political element in any prescription is emphasized in academic economics, but when economists debate in public they frequently ignore this distinction (E. Devons, 1961, p.34, p.43).*

Recent trade agreements involving Canada and the United States have led to greater north-south trade flows of agricultural products and increased competition in the North American grain markets. The Canada-United States free trade agreement (CUSTA) was an important step towards a more integrated North American market for agricultural products and the multilateral Uruguay agreement was a move in the same direction. However, with this expanded trade has come additional North American agricultural policy conflicts and many of these conflicts have been with respect to grains, mainly barley and wheat. In Canada, the government and the grains industry (farmers, handlers, and processors), cannot agree on whether more or less grain should be sold into the United States. On the other hand, in the United States, farmers, processors, and the government, have argued over whether or not more Canadian grain imports are preferred to less. Economists have also been actively involved in these public policy debates and they cannot agree either. They have (unavoidably) mixed in economic and political aspects of the problem.

Special interest groups in agriculture are politically very powerful in both countries, influencing all aspects of grains policy. Although some subsidies are difficult to measure

with precision<sup>1</sup>, it appears that in general, grain farmers and agribusiness are more successful at lobbying in the United States, compared to their counterparts in Canada. Grain farmers in the United States have stronger political support than do Canadian farmers. One possible explanation is that the private sector in the United States is more efficient at lobbying, than are the cooperatives and state trading agency in Canada. This view is supported by the observation that the Australian grain marketing system has many similarities to Canada's and farmers in Australia do not enjoy strong political support, less than in either the United States or Canada. However, the lobbying process with respect to grains policy is not very well understood and thus it is difficult to say which groups are more successful at lobbying and why.

To better understand the grains policy process, it is necessary to understand the role of special interest groups, the dynamics of the coalitions they form, and why they are influential. It is also worth considering why economists are so unsuccessful in the policy process. Perhaps academic economists have little incentive to get involved in debates over grains policy and thus their influence is minimal because they are disinterested in the politics of grains policy. Alternatively, the rhetorical gap between economists and policy makers may be too large, rendering economists ineffective. Of course, this is also true outside of agriculture as economists involved in non-agricultural policy issues are no more successful than agricultural economists in terms of influencing policy makers. Galbraith provides an interesting anecdote on the ineffectiveness of academic economists:

*Council of Economic Advisors Chairman Murray Weidenbaum, when asked directly what weight of influence, on a scale of one to ten, economists had enjoyed in drafting the original tax program of the [Reagan] administration, replied, "Zero" (quoted in Cordes, et al., 1994, p.224).*

Both the Canadian and United States governments have endorsed freer trade in grains with the signing of CUSTA and then, subsequently, the Uruguay Round agreement. Implicitly, these two agreements introduce more uniform international laws implicitly designed to limit the political power of domestic lobby groups. The agreements can essentially be viewed as an international pact not to "give in" to domestic special interests (Esty, 1993). Unfortunately, both the United States and Canadian governments have broken this pact by resorting to unilateral policy choices in response to domestic political pressure in grains. For instance, the credibility and good faith of the United States government's commitment to free trade has been questioned by recent unilateral actions taken with respect to placing a limit on imports of Canadian wheat, and by threats to impose permanent import barriers against Canadian grains.

In the United States the expanded north-south trade has been interpreted as the consequence of two "unfair" trade practices which are pursued by Canada, namely, transportation subsidies on grain shipments and the so-called "secretive" pricing policies

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<sup>1</sup> Canadian grain subsidies are slightly less than in the U.S., on average, according to PSEs published by the OECD. However, the PSEs overstate the level of subsidy to western Canadian grain farmers because they do not account for the negative effects of excessive regulation in the Canadian grain handling and transport system. For example, in the province of Alberta, the combination of exorbitant (regulated) elevation fees and the cost of pooling transportation across the prairies, has negated any benefit due to rail freight subsidies under the Western Grain Transportation Act.

of the CWB. Ironically, removal of the transportation subsidies and elimination of the CWB's monopoly over exports, would probably lead to additional imports of grain from Canada (Carter, 1993a). The United States has claimed that Canada is an "unfair" trader because it grants a state trading organization (the Canadian Wheat Board—CWB) exclusive rights to export wheat and barley. In fact, the standard approach of the United States government has been to view any state trading agency, in any country, as having an inequitable trading advantage due to "secretive" pricing. For instance, the United States government's objection to China's entry into the World Trade Organization (WTO) is partially based on the fact that China imports grain through a state trading agency (Hafemeister, 1994). In contrast, economic theory would predict that state trading agencies are inefficient, and thus would be inferior traders, unless they had sufficient market power to make up for the inherent inefficiencies due to lack of competitive discipline within the organization. The reasons for the United States government's blanket opposition to any state trader in grains are not immediately obvious, as it is doubtful that all the state traders in all grains have market power. In fact, state trading agencies like the CWB or the Australian Wheat Board (AWB) sell a large percentage of their grain for export to private trading companies and thus do not deal directly with the final importer, suggesting an absence of market power. As part of the 1994 United States International Trade Commission (USITC) hearings on Canadian wheat exports to the United States, the CWB argued that it typically sells wheat to the United States through accredited agents (e.g., private trading companies) and therefore the CWB may not know the final landed price of a shipment. The same is true for CWB sales of barley to the United States. If the final landed price or final customer is unknown to the state trader, then market power is most likely absent.

The United States sense of injury due to "unfair" Canadian grain policies is heightened by the unwillingness of Canada to reduce by any appreciable degree the protectionist effects of its supply management programs and, thereby, permit the expansion of United States exports to that market for dairy and poultry products. Perhaps grain disputes should not be viewed in isolation from these other commodity disputes in dairy, chickens, or sugar.

Canada has responded to the United States criticisms by pointing out that the CWB is infrequently subsidized by the government<sup>2</sup>, that United States grain subsidies have historically been higher than in Canada, and that United States export subsidies raise the domestic United States price above world levels and natural arbitrage pressures result in more Canadian grains flowing into the United States. The recent debates over wheat have been summarized by Alston, Gray and Sumner (1994), while those in barley have been discussed by Veeman (1993), and by Johnson and Wilson (1994). The purpose of this

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<sup>2</sup> The CWB pools all sales within a crop year (August to July) and advances to farmers an initial payment when farmers deliver their grain. Government budgetary transfers to the CWB are infrequent, and only occur when final returns amount to less than the initial payment. In the case of barley, the "pool losses" have been insignificant, except in 1985/86 when they were \$35 (\$C) per mt. and in 1986/87 when losses were \$17 per mt. In the case of wheat, losses have been less common, with a small loss of \$1.05 per mt in 1985/86. In 1990/91, wheat losses were rather large, however, with a \$20 per mt. loss on the durum wheat pool and a \$30 per mt. loss in the wheat pool. These large pool deficits occurred at a time when significant changes occurred in U.S. exports as a consequence of the Farm Bill.

paper is to outline some of the forces and factors that have produced the disputes between Canada and the United States, and to discuss the role of economists in the debate, with the overall aim of better understanding the policy process.

## DESCRIPTION OF THE DISPUTES

### Durum Wheat

The recent grain disagreements center primarily around additional southbound Canadian exports to the U.S and it all began with durum wheat (Alston, Carter, Gray and Sumner, 1994) after the signing of CUSTA. The CWB was never precluded from selling grain into the United States market but CUSTA provided a more formal means of legitimizing sales. With CUSTA, there was less threat of imposition of Section 22 of the Agricultural Adjustment Act of 1933, which allowed the United States government to impose quotas on imports if it was determined that such imports were threatening United States price support programs. Prior to CUSTA, Canadian import barriers were high for grain, while those in the United States were relatively small. As a result of CUSTA, Canadian import licenses were to be removed and the United States tariff was to be lowered, and this has happened in the case of wheat. CUSTA also eliminated Canadian subsidized freight rates on grains exported to the United States through the west coast of Canada.

In the late 1980s, the United States began importing significant amounts of durum wheat from Canada and these shipments soon became a major trade irritant to the United States. The United States government position was that increased Canadian durum sales were inconsistent with the 1989 CUSTA and the Canadian government strongly disagreed. In response to the imports, in December 1989, the United States Congress instructed the United States International Trade Commission (USITC) to examine the "conditions of competition" between the United States and Canadian durum industries<sup>3</sup>. The USITC report in 1990 concluded that the drought of 1987-89 was the main reason for increased durum imports from Canada and price differences were not found to be a factor.

However, the issue was not put to rest by the USITC ruling and the case of Canadian durum wheat sales was then heard before the CUSTA binational panel in 1992. The United States alleged that the growth in Canadian exports was due to the CWB selling into the United States at less than acquisition cost and that, in addition, the Canadian transportation subsidy led directly to increased Canadian exports to the United States. Under CUSTA, public entities cannot export agricultural goods to the other country at less than the acquisition price:

*Neither party, including any public entity that it establishes or maintains, shall sell agricultural goods for export to the territory of the other Party at*

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<sup>3</sup> This was USITC Investigation No. 332-285 "Durum Wheat: Conditions of Competition Between the U.S. and Canadian Industries".

*a price below the acquisition price of the goods plus any storage, handling or other costs incurred by it with respect to those goods.* (CUSTA Article 701.3)

The charge that the CWB was selling into the United States below acquisition price was akin to the notion that the CWB was "dumping" into the United States market. The binational panel did not agree with the United States claim and the panel made its final ruling in favor of Canada in January 1993. The panel found there was no compelling evidence that the CWB was selling below its acquisition cost. In arriving at its decision on acquisition costs, the panel noted that Ms. Ann Veneman, Deputy Secretary of the USDA, and United States Trade Representative Clayton Yeutter, on separate occasions, had both defined the term "acquisition cost" to be the CWB's initial payment<sup>4</sup>. In the final report, the panel stated that the United States government had tried to avoid the Veneman and Yeutter statements, however the binational panel viewed the Veneman and Yeutter statements as being important. Unfamiliarity with the Canadian system could have led to these statements by Veneman and Yeutter on CWB acquisition costs and, ironically, these official government statements helped Canada win the case in front of the binational panel.

The accuracy of the statements by Veneman and Yeutter may be debatable but if the statements are inaccurate, this does not mean the CWB was dumping into the United States market. The CWB initial payment is a type of "down-payment" and is not the full acquisition price. The initial price is established each year by the CWB, based on expected market prices over the course of the crop-year, and the initial payment is set low enough to avoid a deficit in the pool. Thus, the initial CWB price is always set below the expected average price for the year. The CWB's true acquisition price is the crop-year average price paid for grain purchased in the pool and thus about one-half of the sales during the year are typically below the acquisition price. The very nature of price pooling is designed to smooth price fluctuations over the crop-year by returning the average price. All sales cannot be made above the average, and thus it may be impossible for the CWB to meet the terms of CUSTA's section 701.3, strictly interpreted.

## **Milling Wheat**

The dispute in durum then spread into regular milling wheat shortly after the binational panel ruled against the United States on durum. In response to political pressure in the northern wheat-growing regions of the United States, President Clinton requested the International Trade Commission (ITC) investigate the effects of wheat imports from Canada in 1994. In July 1994, the ITC reported with a split decision. Three Commissioners found that imports from Canada had materially affected the costs of the wheat program through lowering prices and increasing the value of deficiency payments, thereby potentially triggering the use of import quotas to protect the program.

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<sup>4</sup> See the Final Report of CUSTA's binational panel in the matter of "The Interpretation of and Canada's Compliance With Article 701.3 With Respect to Durum Wheat Sales" CDA-92-1807-01, February 8, 1993, pp. 39-41.

The other three Commissioners found these imports had not materially affected the cost of the wheat program but that they did have some effects on particular regions and classes of wheat. All six supported the recommendation that higher import barriers should be introduced.

However, even before the ITC had reported, in April of 1994 the United States government notified the GATT under Article XXVIII that it intended to amend its tariff rates on wheat and barley imports from Canada (Simone, 1994). It can be inferred from this preemptive action that the United States was not seeking temporary protection from perceived injury, otherwise alternative measures could have been used, such as Section 22 legislation. It may be concluded that in the absence of a negotiated settlement with Canada, Article XXVIII offered the best alternative for the United States, despite the risk that Canada would use the provisions of the Article to seek compensation or to retaliate (Carter and MacLaren, 1995).

In August 1994 after protracted negotiations, an agreement between the two countries was reached. There are three elements to this agreement which include: schedules of tariff rate quotas on durum and non-durum wheat imports by the United States from Canada; the establishment of a Joint Commission to examine each country's price support systems for grains and their effects on third country trade; and a peace clause which limits for one year actions on grains and grain products which are not consistent with either the NAFTA or the GATT. While the United States withdrew its proposed actions under GATT's Article XXVIII, Canada maintained the right to challenge United States actions under both the NAFTA and the GATT, although agreeing for one year from September 1994 not to use the dispute settlements procedures of either Agreement.

Why did Canada agree to this outcome which, at the export levels prevailing during 1993/94, would lead to a loss of export earnings? Could Canada have forced the United States to use Article XXVIII of the GATT and then, legitimately, have imposed its own import restrictions on, or sought compensation from, the United States? As Canada had maintained that GATT obligations took precedence over obligations under the NAFTA, it was infeasible to claim as a negotiating ploy that the United States was violating Article 401 of the CUSTA by raising tariffs. At the same time, it can hardly be claimed that Canada had entered into the spirit of the Uruguay Round Agreement on Agriculture with respect to the tariffication process of non-tariff barriers for the supply managed products; these out-of-quota rates being established at prohibitive levels.

Carter and MacLaren (1995) evaluated the 1994 wheat trade Agreement between the United States and Canada in the context of a potential trade war that could have erupted given the determination of both sides. Using a CGE (Computable General Equilibrium) model, we concluded that the 1994 Agreement appears to have been a success, from the viewpoint of the Canadian government and its desire for an outcome that minimized losses in the face of United States threats to impose permanent import barriers on Canadian grains. Even though the Agreement resulted in economic costs for both countries, it was successful in the sense that it averted a potentially damaging agricultural trade war.

## Barley

The dispute in barley has not reached either the USITC or the binational panel, because the CWB has not aggressively marketed barley in the United States, partly for fear of retaliation on the part of the United States (Brooks, 1993). However, within the Canadian public policy arena, the barley debate has been vigorous (Veeman, 1993; Johnson and Wilson, 1993). The CWB (1992) has argued that in the case of barley it has market power in the United States, and thus it is optimal to restrict sales into that market. Accordingly, the CWB has argued the United States barley market is not highly important for Canadian farmers. This claim has been challenged by Carter (Carter, 1994), and by Johnson and Wilson (Johnson and Wilson, 1994), who find no evidence of CWB market power and, instead, argue there is good potential for additional feed and malting barley sales from Canada to the United States. The feed grain demand would be in the western part of the United States, the Pacific North West (PNW) (including Oregon, Idaho, and Washington) and California.

Farm groups in Canada are split over this issue of whether or not to aggressively pursue the United States barley market, as is the Canadian grain handling and processing industry. For instance, the brewing industry in Canada would prefer free trade in North American malting barley and malt, whereas the Canadian maltsters prefer the status quo whereby the CWB controls sales. It might seem paradoxical that the Canadian maltsters prefer to buy from a monopoly but they are obviously willing to trade-off any cost of doing so against returns through other disguised forms of beneficial government regulation and beneficial treatment by the CWB with regard to availability and pricing of malting barley processed for export.

Historically, the Canadian and United States barley markets were essentially two separate markets until the CUSTA agreement. There was relatively little north-south trade, and price differentials across the border frequently exceeded transport and handling costs. There were two primary reasons for this market separation. First, the Canadian rail freight subsidy encouraged east-west movement of grain within Canada, and second, the CWB controlled export permits for barley and limited export to the United States.

It has been argued earlier by the author (Carter, 1993a; 1993b; 1994) that a single desk seller is unwarranted in the case of Canadian barley sales to the United States because Canada is a price taker in the United States market. The inefficiencies associated with having a government single desk seller in barley far outweigh the relatively small benefit from domestic price discrimination in malting barley within Canada.

Alternatively, Brooks (1993) claims the CWB has market power in the United States market and that single desk selling is important from an economic efficiency standpoint, because he reasons the system is most efficient when Canadian farmers do not know the United States price of barley. He argues that inefficient resource allocation will take place if prairie farmers are in a position to compare the spot United States price with the CWB pooled price. Theory would predict that inefficiencies arising from a lack of market signals under the status quo adversely affect the allocation of resources in Canada and distorts the amount of feed and malting barley produced.

On August 1, 1993 the Canadian government implemented a continental barley market by removing the CWB's control over exports to the United States. However, on September 10th, 1993, a federal court judge ruled the government decision to introduce a continental barley market was illegal. Thus the continental market was only effective for forty days, but during this relatively short time period it was estimated that between 0.5 and 1.0 mmt of barley was sold to the United States (Johnson and Wilson, 1994). Prior to the 40-day record level of exports, the most the CWB ever previously sold in one entire year was 0.47 mmt. and Johnson and Wilson have estimated that a continental barley market could result in Canadian exports to the United States reaching 3.5 mmt per year. This reinforces the point that reform of the CWB's control over exports would most likely lead to a higher level of Canadian sales into the United States market. The future role of the CWB in the barley market remains an unsettled issue in Canada.

## ECONOMIC ANALYSIS VERSUS POLICY REALITY

In describing the role of economists in influencing policy, Paul Krugman (Krugman, 1994) divided economists into two groups: *policy entrepreneurs* and *professors*. The former describes economists who play up to the preconceptions of politicians and special interest groups, while the latter describes academic economists who stick to academic arguments. Krugman's rule is that if you see an economic expert on television quite often, then he or she probably is not much of an expert, but rather, a *policy entrepreneur*. Robert Nelson (Nelson, 1987) would describe Krugman's group of professors as *neutral experts*.

Many economists have an idealized view of their role in policy making and are often puzzled as to why their ideas are typically crowded out by political considerations. Economists are constantly frustrated with policy makers who do not place much weight on economic efficiency. Rivlin has explained that there exists a large rhetorical gap between economists and policy makers and largely for this reason, economists have limited influence over policy. Economists do not speak the same language as politicians. There is good reason to believe these generalizations by Rivlin apply in the case of North American grains policy. In describing why politicians and economists rarely understand one another, Alice Rivlin noted that "economists and political leaders not only miscommunicate, but each accuses the other of incompetence, obfuscation, self-serving motives, and anti-social behavior" (Rivlin, 1987, p.1).

However, it is also possible that even if economists are ineffective in the short run, their ideas may slowly percolate into the future shaping of policies. John Maynard Keynes argued that the *professors* do have an influence:

*The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slave of some defunct economist. Madmen in authority, who hear voices*

*in the air, are distilling their frenzy from some academic scribbler of a few years back. I am sure that the power of the vested interests is vastly exaggerated compared with the gradual encroachment of ideas* (Keynes, 1936, pp. 383-384).

Economists have been partly involved in these recent grain disputes but to what extent have they had any influence over the policy process? Most policy makers would probably say that economists have had very little influence. Is the problem due to the fact that economists and policy makers do not understand one another, as Rivlin suggests? Economists working as advocates for special interest groups have perhaps played a larger role than that of the so-called *neutral* economists. Academic economists have a tendency to implicitly support established agricultural policies by remaining silent on the issue and not challenging the social desirability of policies. Challenges on economic efficiency grounds run the risk of offending funding agencies (such as the ERS or Agriculture Canada) or other politically powerful institutions (such as grower organizations, the Canadian Wheat Board or private grain companies). Agricultural economists are often careful not to condemn established policies for fear of getting involved in a political debate, as there is a fine line between economic policy analysis and politics.

It is unavoidable that any comprehensive economic analysis of policy issues in grains involves an investigation of the role of established institutions. Several years ago, Hendrik Houthakker observed that "the economic analysis of institutions is not highly regarded or widely practiced among contemporary economists" (Houthakker, 1959, p.133). Houthakker's observation remains valid today in North American grains policy and it partially explains why economists have been less than effective.

Alternatively, some of the in-house economists working for institutions such as the CWB, or the United States Department of Agriculture's Economic Research Service often have to take partisan positions and stand clearly on one side of the line between academic policy analysis and politics. These institutions have a certain demand for economists who are willing to argue a partisan position, much like a lawyer who tries to get the most for his or her client. This is not to say these institutions do not employ both types of economists, including those who are expected to be *neutral* analysts and provide policy advice based on economic criteria alone.

The economic arguments put forth during the 1994 USITC hearings on Canadian wheat imports brought out both the *policy entrepreneurs* and the *professors*. The arguments made during the hearings are summarized by Alston, Gray and Sumner (Alston, et al, 1994). Three groups of economists presented results to the hearings, representing the United States Department of Agriculture, the CWB, and the USITC staff economists. The USDA testimony (Collins, 1994) argued that Canadian imports of wheat had a significant impact on the United States wheat program because the imports lowered United States domestic prices by about 9¢ per bushel. An import quota on Canadian imports set at 22.4 percent of 1993/94 imports would have "saved" the United States government about \$230 million, according to the USDA economists. Alston, Gray and Sumner found a much smaller impact on the cost of the United States wheat program and they estimated program costs would only fall by about \$16 million if Canadian imports were limited to 22.4 percent of the 1993/94 level. There is a tremendous gap between the two sets of estimates. The USITC commissioners were not impressed with the intellectual depth of

the USDA testimony and suggested the USDA analysis was "essentially political statements, devoid of any analysis" and this opinion was widely circulated in the press. Ironically, after the USITC hearings, another USDA economist (Haley, 1995) contradicted the USDA analysis that was prepared for the USITC hearings. Haley concludes that an import quota on Canadian wheat imports would increase the cost of the United States wheat program, rather than lower it, as argued by Collins. The Haley result is confusing however, as he essentially argues that an import quota will lower domestic prices, which is at odds with economic theory. Elsewhere in the Haley paper there are serious gaps in the depth of understanding of the Canadian grain marketing system, which suggests there are also significant rhetorical gaps amongst economists. For example, he writes that "the CWB goal is to price the grain sufficiently low so that proceeds from CWB sales will cover the sum of the initial payments to producers" (Haley, 1995, p.4). Haley also assumes the CWB would respond to a United States import quota by using "export subsidies more aggressively" (Haley, 1995, p.10). What export subsidies?

Rivlin has noted that "economists tend to be uncomfortable in the role of partisans or advocates, preferring to be seen as neutral experts whether we are or not" (Rivlin, 1987, p.10). Her observation suggests that *policy entrepreneurs* might ideally prefer to be seen as *neutral experts* but sometimes the *policy entrepreneurs* have trouble hiding their stripes. This is an alternative way of saying that even though economists portray others as rent-seekers, they do not want to see themselves as rent seekers (Cordes et al., 1993).

## CONCLUSION

It appears as though the making of grains policy in Canada and the United States is ninety percent politics and ten percent economics, and this might be an optimistic view of the role of economics. Policy makers and economists do not seem to understand one another and this may explain why economists do not appear to be very effective when it comes to influencing policy makers. For instance, economists are constantly puzzled as to why the United States government wastes so much money subsidizing grain exports under the export enhancement program, or why the Canadian government believes farmers are better off not knowing the true price of their grain. Policy makers often have simple answers as to why these policies are popular, and the answers have nothing to do with economics. However, maybe all is not lost, as Keynes has argued that economist's ideas, whether they are good or bad ideas, gradually have an important influence on policy. Perhaps Keynes was not referring to grains policy, or even agricultural policy, or perhaps economists are just too impatient with the policy process and Keynes was right that economists are more influential than is commonly believed. It just takes time for their ideas to sink in.

Economists involved in the grains policy process have operated as both *policy entrepreneurs* and *neutral experts*. However, *neutral experts* have a tendency to avoid criticizing important institutions and established policies, partly because these institutions tend to be important funding agencies. The quote by Devons at the beginning of the paper highlights the fact that it is often difficult for even so-called *neutral experts* to

separate out the economic versus political aspects of the problem. Thus, there may be a tendency on behalf of the *neutral experts* to avoid working on issues that are potentially politically charged, such as North American grains policy. They are not only neutral, but smart enough to avoid researching issues that could become politically contentious.

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## EFFECTS OF EEP ON CANADIAN/UNITED STATES WHEAT TRADE

*Robert E. Young II, Gary Adams and Michael Helmar*

### INTRODUCTION

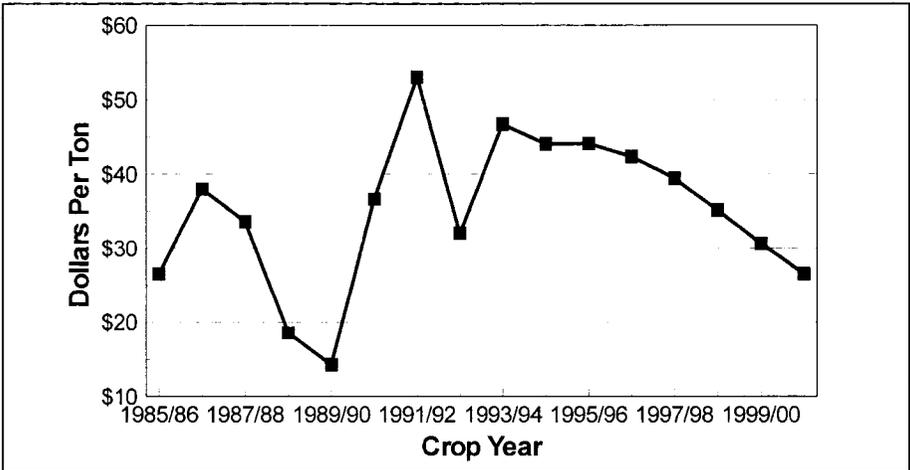
The Export Enhancement Program (EEP) was first operated in 1985. For legal authority, the Secretary of Agriculture at the time reverted to the Commodity Credit Corporation's Charter Act that allowed the United States Department of Agriculture to export product via the use of subsidies. Further clarification of the legal authority was provided in the Food Security Act of 1985 and most recently as part of the Food, Agriculture, Conservation and Trade Act of 1990. The 1990 Act also allowed the Secretary to provide cash bonuses to exporters of products.

Review of the legislation indicates that the intent was to "...discourage unfair trade practices by making United States agricultural commodities competitive." (Food, Agriculture Conservation and Trade Act of 1990, Section 1531). While the legislative authority does not single out any commodity—other than those that have been adversely affected by foreign trade practices—wheat has been the dominant beneficiary of the program. From the 1985 through 1993 marketing year, 147 million metric tons of wheat were exported utilizing various EEP bonuses. During the same period, an average of 47 percent of United States wheat exports have left the country under EEP. (Figure 1).

Several authors have examined the effects of EEP on the wheat market. Ackerman and Smith (1989) lay out much of the vocabulary regarding program, as well as providing a good history of the early operation of the EEP. Bailey (1988, 1989) looks at the effects of EEP on United States wheat exports and attempts to place the program in context with other factors affecting wheat trade. Haley (1989) also looks at a myriad of reasons for changes in wheat exports, including the EEP. Epstein and Carr (1991) looked specifically at the elimination of the EEP and its impact on the wheat markets utilizing an econometric modeling system. They also report on a similar effort conducted by the WEFA group.

The United States and the European Union are not the only two wheat exporters on Earth. Canada, Australia, Argentina all feel that they have product for sale as well. In more recent times, India and now some republics of the Former Soviet Union have also entered the

arena. There has been a major change in the relationship with Canada in particular, in the last few years that changes the implications of operating an EEP.



**Figure 1** EEP Bonus Levels—Historical and Projected

The North American Free Trade Agreement allowed Canada access to wheat markets in the United States when the levels of support for the two commodities came in balance between Canada and the United States. At that point, tariff barriers to Canadian wheat were removed, and product from Canada was allowed to move into the United States.

In 1993, the United States suffered severe flooding which disrupted production of a number of fall and spring planted crops for harvest in the summer and fall of 1993. The corn crop for the United States dropped to 6.33 billion bushels, off a third from the previous year. This reduction in available supplies of feed products in particular in the United States during the subsequent marketing year, made Canadian wheat attractive not only to the milling industry in the United States, but to the feeding sector as well. Imports of wheat from Canada showed a marked increase in the 1993/94 marketing year, raising concerns among a number of producers in the United States that Canadian wheat was taking over markets in the United States.

Several have indicated that the linkage between the EEP operated by the United States and Canadian shipments to the United States is very strong. As the United States takes action to raise domestic prices, while simultaneously lowering world prices, it makes sense for the Canadians to move product into the United States instead of shipping product to third countries.

This paper looks at the effects of eliminating the EEP on world trade by the United States, and the changes that would likely occur in Canadian production and export levels. The analysis is conducted utilizing a large scale econometric model of the agricultural sectors in the United States, Canada and other major importers and exporters of wheat and other agricultural products.

## **THE MODELING SYSTEM**

In total, the model consists of over 3,000 endogenous variables. The livestock models for the United States are described in Brown (1994), with the crops side discussed in Adams (1994). The international models are discussed in a number of publications. The wheat model was last discussed in CNFAP 10-94. The model is static in the sense that it models total trade, but does not discuss trade flows. In other words, total world wheat trade is endogenous to the system, with eight exporters and sixteen importers or importing regions. Total exports by the United States are endogenous, but the model does not indicate the destination of those shipments.

EEP enters the model through price wedges for Algeria, Brazil, China, Egypt, India, Mexico, Morocco, Tunisia, the Former Soviet Union as a block as well as Other Africa and Middle East, Other Latin America, Other Asia, Eastern Europe and Other Western Europe. The model closes in the United States, with the Gulf price for wheat serving as the basis for world wheat prices. Importing countries see this world price for wheat, less the EEP bonus levels specific for each importing country or region. For other exporting countries, such as Canada, the exporter sees a price, less the EEP bonus weighted for the quantity of wheat that they traditionally ship into markets that also receive EEP benefits. Consequently, Canada sees the Gulf price for wheat, adjusted downward by a portion of the world average EEP bonus levels. Either an increase in the Gulf price of wheat, or a reduction in the EEP bonus level is viewed as a positive price movement for Canadian producers.

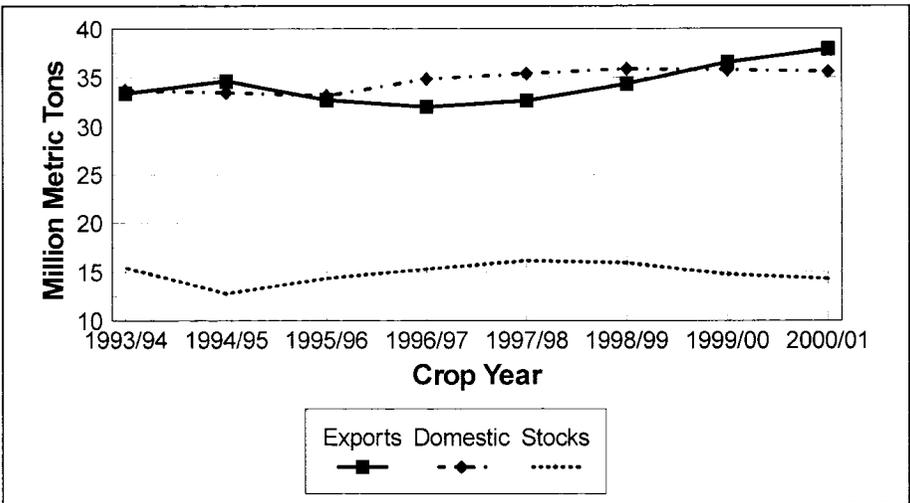
## **THE BASELINE**

In conducting the analysis, it is necessary to first establish a benchmark, or ruler against which the policy change can be measured. FAPRI develops a constant policy baseline each year that serves just such a purpose. Key to its generation is an assumption that policies currently in place remain in place, unless the legislation to change those policies through time has already been enacted. For example, the United States has policies in place that allow for the adjustment of Acreage Reduction Program (ARP), or set aside, levels. The baseline is put together allowing these set aside levels to adjust through time. The Uruguay Round of the GATT provides bounds on the quantity and expenditure level on EEP the United States is allowed to utilize in the coming years, just as it places constraints on the value and quantity of export subsidies allowed for the European Union. These constraints are included in the baseline. The baseline is developed for November through January. Thus the baseline does not include elimination of the Canadian Western Grain Transportation subsidy program, as it remained part of Canadian policy at the time the baseline was developed.

The baseline anticipates that the United States will, for the most part, take full advantage of the EEP levels allowed under GATT. The expenditure constraints bind for the

United States, not the quantity limits. Consequently, the average level of the EEP bonus falls as the constraints begin to bind. (Figure 1).

The baseline includes a fairly robust expectation of growth in world trade. While world net wheat exports were off somewhat in the 94/95 marketing year, exports are expected to increase in 95/96 by nearly 5 million metric tons (mmt). In the out years, trade should continue to grow with exports rising by an average of 1.6 mmt per year between 95/96 and 00/01, reaching 91.88 MMT in 00/01. (Figure 2).



**Figure 2** United States—Wheat Baseline Utilization

The United States is expected to lose trade share in the early years of the analysis, as the European Union remains a strong exporter. As GATT constraints bind European Union wheat export subsidies, Union wheat exports are expected to fall. The United States is expected to pick up a fair proportion of the markets the Union leaves behind. While trade share is expected to decline to less than 36 percent in 96/97, it is projected to recover to just less than 40 percent by 00/01. Plantings in the United States are expected to rise through this period as well, as the long-term land idlement program, the Conservation Reserve Program (CRP) begins to expire. A portion of acreage in that program remains out of production as some contracts are extended, but by 00/01, nearly 5.4 million acres of wheat base will be ready to come back into production. Overall plantings of wheat should be up by 5.3 million acres in 00/01, relative to 94/95 plantings in the United States (harvested area moving from 25.0 million hectares in 94/95 to 26.53 million hectares in 00/01). Domestic use increases should continue to grow at relatively moderate rates. Domestic use is expected to rise from 33.7 mmt in 93/94 to 35.6 mmt in 00/01.

Canadian plantings are also expected to recover from 94/95 lows. Area is expected to be up by 0.8 million hectares (mha) in 95/96, continuing to grow to 12.6 mha by 98/99. With yield improvements, production is anticipated to reach 28.4 mmt in 00/01. Domestic

use of wheat in Canada, as in the United States, should show modest growth as population increases. Domestic usage is anticipated to move from 6.7 mmt in 94/95 to 7.4 mmt in 95/96 and hold at that level through much of the remainder of the projection period. Canadian wheat exports should remain relatively flat. With somewhat depressed beginning stocks for the 95/96 marketing year, and increased pressure from the United States and other competitors, Canadian wheat exports are expected to fall to 18.5 mmt in 95/96. Recovery to the 20 mmt level is projected for 96/97, with exports holding in the 20 to 21 mmt range through the remainder of the decade. (Figure 3).

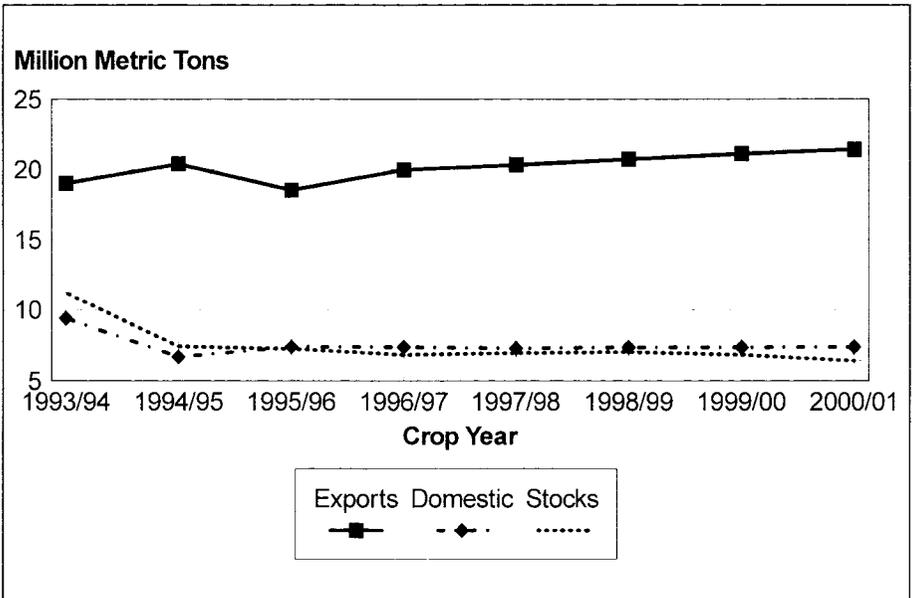


Figure 3 Canada—Baseline Wheat Utilization

Wheat prices should remain relatively low for much of the remainder of the decade. Prices should move down in 95/96 and again in 96/97. Recovery to levels anticipated in 95/96 should occur by the end of the decade. These are United States prices, f.o.b. Gulf. Prices less EEP bonuses should show even stronger increases. (Figure 4).

### ELIMINATION OF EEP SCENARIO

In analyzing the effects of eliminating EEP, a number of alternative assumptions could be made. The most important relates to the utilization of ARP's or set asides in managing the United States wheat sector. Eliminating EEP bonuses will obviously raise the price of United States wheat in world markets. Increase in prices will translate into reduced

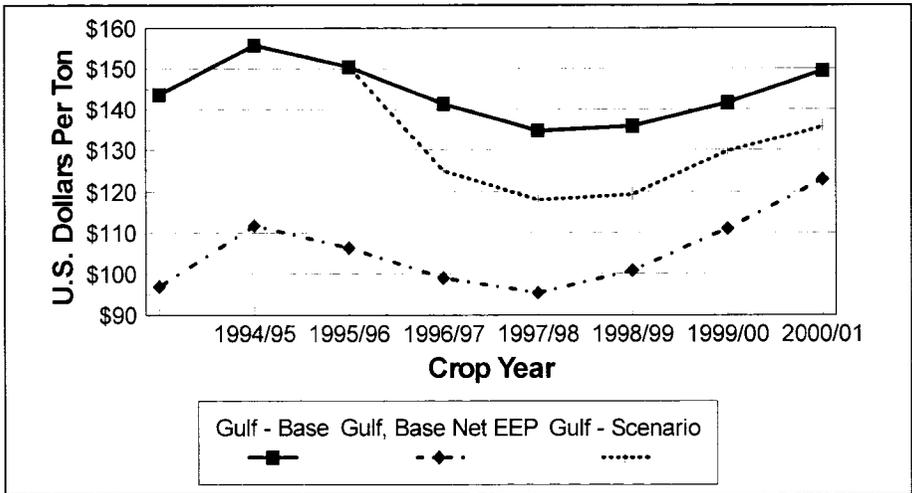


Figure 4 Wheat Prices—Baseline and EEP Elimination Scenario

demand for U.S. product, and reduced domestic prices. The reduction in demand could be offset by reducing wheat production in an effort to hold domestic wheat prices at baseline levels. Rather than complicating and confounding the analysis by making this type of domestic program operation changes, this analysis does not modify ARP levels from those contained in the baseline (baseline ARP rates were held at zero throughout the projection period). (Figure 5).

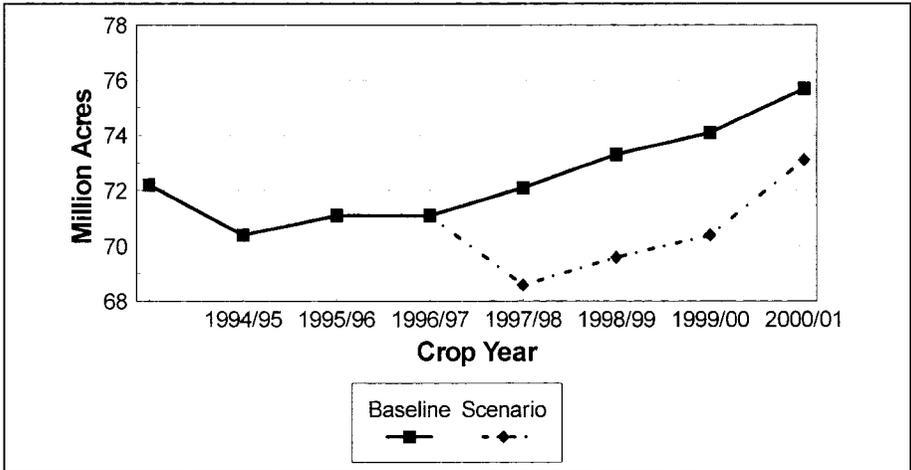


Figure 5 United States Wheat Planted Area—Base and EEP Elimination Scenario

Removing EEP bonuses raises the price of United States wheat in world markets. Because the United States plays such a large role in world wheat markets, world prices for wheat are expected to rise as well. The Gulf price of wheat falls relative to the scenario by more than \$16 per mmt. Yet when compared to the Gulf price of wheat net of EEP in the baseline, wheat prices rise by nearly \$26 per mmt in the first year. While the gap narrows between the scenario wheat prices and the baseline price net of EEP, United States wheat prices, net of EEP, remain well above levels observed in the baseline. In short, the market price of wheat in the United States moves down part of the way needed to offset the removal of EEP subsidies. (Figure 7).

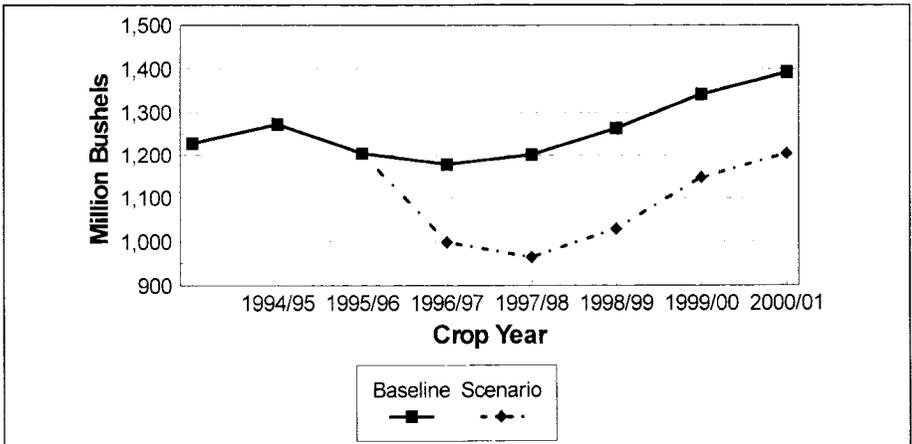


Figure 6 United States Wheat Exports—Baseline and EEP Elimination Scenario

Movement all the way to baseline price levels, net of EEP, is precluded from two directions. First, the lower price generates additional domestic demand for wheat supporting prices. Second, the lower price for wheat reduces production of wheat in the United States by 5 percent initially, and by 4 percent in the final year of the analysis. This reduction in supply also helps to support prices.

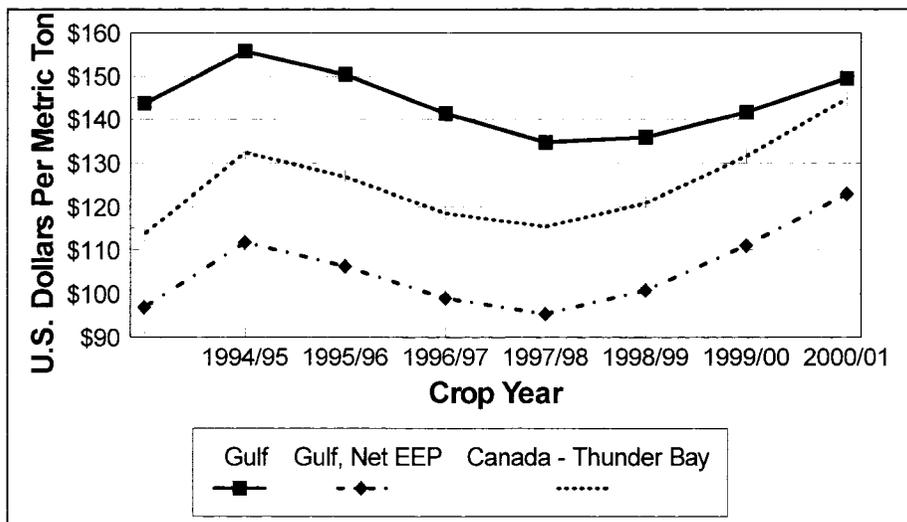


Figure 7 Wheat Prices—Baseline

United States wheat exports are off markedly, as would be expected with an initial 25 percent increase in the price of wheat. Exports decline by 15 percent in the first year and by more than 18 percent in the second and third years. As the baseline level of EEP bonuses work down, the change from the baseline price levels net of EEP are reduced, and the decline in exports is not quite as severe. In the fourth and fifth year of the analysis, exports are off less than 15 percent. (Figure 6).

Domestic use of wheat reacts to the lower prices. Given the price of wheat relative to the price of corn, feed utilization in particular is up sharply. The increase in domestic utilization offsets 25 to 50 percent of the decline in export markets.

Canadian markets also react to the change in the export prices for United States wheat. Again, only a portion of the change in United States wheat prices is passed through to Canadian producers and to markets for Canadian wheat. Canadian wheat exports rise only marginally. Area planted to wheat changes very little. In the last year of the analysis, wheat plantings are up 0.06 mha. (Figure 8).

The reduction in United States exports is not completely made up for by other exporters. The removal of the export subsidy by the United States translates directly into higher prices paid for wheat by a number of importing countries. Given these higher prices, demand falls and domestic production rises. Canada, Australia and Argentina pick up some

of the market demand given up by the United States, but a portion of the original demand simply goes away.

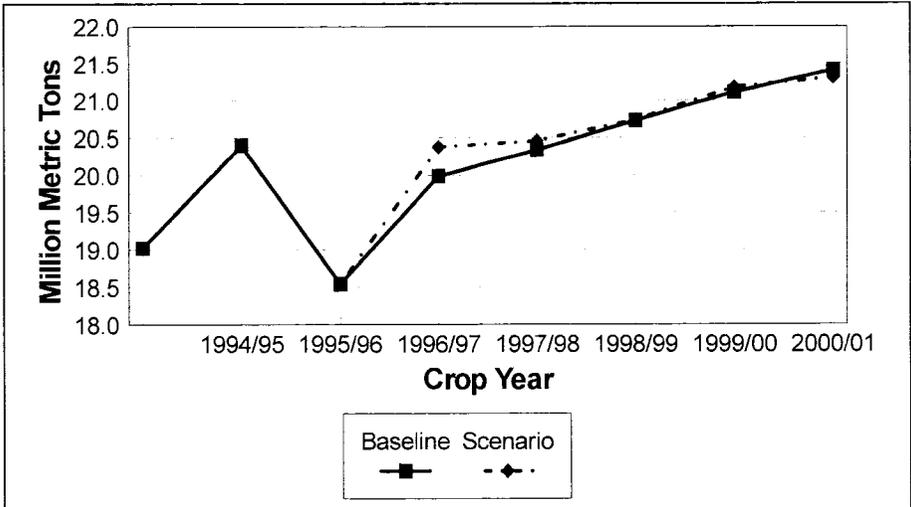


Figure 8 Canadian Wheat Exports—Baseline and EEP Elimination Scenario

### CONCLUSIONS

Removing the Export Enhancement Program from the United States wheat sector generates a major impact on wheat prices in the United States. Without the subsidy, wheat prices fall by more than \$0.30 per bushel (9 percent). The decline in domestic prices for wheat however, does not offset the rise in prices paid faced by importers of United States wheat after removal of the export subsidy. Consequently, export demand for United States wheat also falls considerably. Exports are off 15 to 20 percent under the scenario.

Canada is able to pick up some of the market demand abandoned by the United States, particularly in the short run. For the 95/96 season—the first year the subsidy was removed—Canadian exports rise by 14 million bushels (380,000 mt). This accounts for nearly 10 percent of the loss in United States exports.

What has not been covered by this analysis are the destinations of those wheat exports, the change in the pattern of shipments, in particular out of Canada. Shipments from Canada into the United States have attracted considerable attention in the past few years. As discussed earlier in this paper, the modeling system utilized here does not track or project trade flows. It deals in the overall demand and supply of the product in question. With the removal of EEP, the world price seen by Canadians for their wheat will increase, the relative price they would receive for wheat going into markets in the United States will fall. This will

make the United States a less attractive market for their products. It should be expected then that wheat shipments from Canada to the United States will decline. Again, this is a hypothesis, and is not a result that can be tested by the modeling system used in this analysis.

Reducing or eliminating EEP will substantially affect the United States markets. Dropping the domestic price of wheat by more than \$0.30 per bushel will have a direct impact on all wheat producers. While producers in the current federal program will receive higher deficiency payments to offset some of the decline in prices, they too will face a drop in revenues, at least on their Normal Flex Acres and on the difference between their actual yield and their program payment yields. The analysis conducted here suggests a \$3 to \$4 drop in net returns over variable costs for program participants. For producers outside the program, the revenue drop is in the \$10 to \$15 per acre level.

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**APPENDIX**

**Impacts of Eliminating EEP Program on U.S. Rice**

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>ARP Rate</b>											
Baseline	5.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Scenario	5.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Change	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Participation Rate</b>											
Baseline	96.3%	95.2%	96.3%	96.5%	96.6%	96.6%	96.4%	96.3%	96.1%	96.2%	96.0%
Scenario	96.3%	95.2%	96.3%	96.5%	96.7%	96.7%	96.7%	96.5%	96.2%	96.3%	96.1%
Change	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.2%	0.1%	0.1%	0.1%
<b>Planted Area (million acres)</b>											
Baseline	2.92	3.35	2.99	3.14	3.13	3.14	3.13	3.12	3.12	3.08	3.08
Scenario	2.92	3.35	2.99	3.14	3.10	3.11	3.10	3.10	3.10	3.08	3.07
Change	0.00	0.00	0.00	0.00	-0.02	-0.03	-0.03	-0.02	-0.02	-0.01	-0.01
% Change	0.0%	0.0%	0.0%	0.0%	-0.8%	-0.9%	-1.0%	-0.7%	-0.5%	-0.3%	-0.2%
<b>Production (million cwts)</b>											
Baseline	156.1	197.8	170.7	179.3	179.4	180.9	180.9	180.9	181.5	180.2	180.4
Scenario	156.1	197.8	170.7	179.3	178.2	179.4	179.2	179.8	180.7	179.7	179.9
Change	0.0	0.0	0.0	0.0	-1.3	-1.5	-1.7	-1.1	-0.9	-0.5	-0.4
% Change	0.0%	0.0%	0.0%	0.0%	-0.7%	-0.8%	-1.0%	-0.6%	-0.5%	-0.3%	-0.2%
<b>Domestic Use (million cwts)</b>											
Baseline	97.0	101.9	104.0	105.7	107.4	109.0	110.7	112.4	114.1	115.9	117.6
Scenario	97.0	101.9	104.0	105.8	107.4	109.0	110.7	112.4	114.1	115.9	117.6
Change	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Change	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Exports (million cwts)</b>											
Baseline	79.4	87.8	81.0	82.0	81.9	82.4	81.6	80.8	79.7	77.9	76.9
Scenario	79.4	87.8	81.0	81.4	80.8	81.1	80.1	79.6	78.8	77.2	76.4
Change	0.0	0.0	0.0	-0.6	-1.1	-1.3	-1.5	-1.2	-0.9	-0.7	-0.5
% Change	0.0%	0.0%	0.0%	-0.8%	-1.3%	-1.6%	-1.8%	-1.5%	-1.2%	-0.8%	-0.7%
<b>Ending Stocks (million cwts)</b>											
Baseline	26.0	42.0	36.3	37.0	36.8	36.5	35.9	34.9	34.5	33.3	32.2
Scenario	26.0	42.0	36.3	37.5	37.1	36.6	35.7	34.8	34.4	33.4	32.3
Change	0.0	0.0	0.0	0.6	0.4	0.1	-0.1	-0.1	-0.1	0.1	0.1
% Change	0.0%	0.0%	0.0%	1.6%	1.0%	0.3%	-0.4%	-0.3%	-0.2%	0.2%	0.3%

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>Farm Price (\$/cwt)</b>											
Baseline	8.09	6.31	6.55	6.52	6.55	6.68	6.78	6.96	7.00	7.15	7.39
Scenario	8.09	6.31	6.55	6.36	6.40	6.55	6.69	6.88	6.94	7.08	7.31
Change	0.00	0.00	0.00	-0.16	-0.15	-0.13	-0.09	-0.07	-0.06	-0.07	-0.07
% Change	0.0%	0.0%	0.0%	-2.5%	-2.4%	-2.0%	-1.3%	-1.0%	-0.8%	-1.0%	-1.0%
<b>Participant Returns (\$/acre)</b>											
Baseline	251.92	282.33	251.51	259.09	253.36	239.78	227.10	210.65	200.01	186.26	166.23
Scenario	251.92	282.33	251.51	256.95	253.18	239.39	227.38	211.72	202.01	188.26	168.08
Change	0.00	0.00	-0.00	-2.14	-0.18	-0.40	0.27	1.07	2.00	2.00	1.85
% Change	0.0%	0.0%	-0.0%	-0.8%	-0.1%	-0.2%	0.1%	0.5%	1.0%	1.1%	1.1%
<b>Nonparticipant Returns (\$/acre)</b>											
Baseline	114.47	35.62	31.94	25.37	24.11	24.99	22.56	23.92	17.40	17.58	21.23
Scenario	114.47	35.62	31.94	16.01	15.33	17.61	17.46	19.81	14.05	13.31	16.79
Change	0.00	0.00	0.00	-9.36	-8.78	-7.38	-5.11	-4.11	-3.35	-4.26	-4.45
% Change	0%	0%	0%	-37%	-36%	-30%	-23%	-17%	-19%	-24%	-21%

**Impacts of Eliminating EEP Program on U.S. Wheat**

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>ARP Rate</b>											
Baseline	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Scenario	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Change	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Participation Rate</b>											
Baseline	87.5%	87.0%	85.5%	86.0%	86.9%	87.4%	87.2%	86.7%	85.9%	85.6%	85.3%
Scenario	87.5%	87.0%	85.5%	86.0%	88.4%	88.9%	88.6%	87.7%	87.1%	87.0%	86.9%
Change	0.0%	0.0%	0.0%	0.0%	1.5%	1.5%	1.4%	1.1%	1.2%	1.4%	1.6%
<b>Planted Area (million acres)</b>											
Baseline	72.2	70.4	71.1	71.1	72.1	73.3	74.1	75.7	76.9	76.7	77.4
Scenario	72.2	70.4	71.1	71.1	68.6	69.6	70.4	73.1	74.2	73.6	73.9
Change	0.0	0.0	0.0	0.0	-3.6	-3.7	-3.7	-2.6	-2.8	-3.1	-3.5
% Change	0.0%	0.0%	0.0%	0.0%	-5.0%	-5.1%	-5.0%	-3.4%	-3.6%	-4.0%	-4.5%
<b>Production (million bus.)</b>											
Baseline	2,396	2,321	2,406	2,420	2,457	2,499	2,541	2,610	2,676	2,693	2,734
Scenario	2,396	2,321	2,406	2,420	2,342	2,379	2,421	2,527	2,585	2,590	2,616
Change	0	0	0	0	-115	-120	-119	-83	-91	-103	-118
% Change	0.0%	0.0%	0.0%	0.0%	-4.7%	-4.8%	-4.7%	-3.2%	-3.4%	-3.8%	-4.3%
<b>Domestic Use (million bus.)</b>											
Baseline	1,239	1,231	1,219	1,281	1,301	1,319	1,315	1,308	1,334	1,336	1,337
Scenario	1,239	1,231	1,219	1,374	1,389	1,400	1,365	1,365	1,396	1,405	1,408
Change	0	0	0	93	87	81	50	57	62	69	71
% Change	0.0%	0.0%	0.0%	7.2%	6.7%	6.2%	3.8%	4.4%	4.6%	5.2%	5.3%
<b>Exports (million bus.)</b>											
Baseline	1,228	1,273	1,204	1,178	1,201	1,263	1,343	1,393	1,409	1,438	1,477
Scenario	1,228	1,273	1,204	998	964	1,029	1,148	1,204	1,209	1,217	1,240
Change	0	0	0	-180	-237	-234	-195	-189	-201	-222	-237
% Change	0.0%	0.0%	0.0%	-15.3%	-19.7%	-18.5%	-14.5%	-13.6%	-14.2%	-15.4%	-16.1%
<b>Ending Stocks (million bus.)</b>											
Baseline	568	470	528	564	594	586	543	527	534	527	522
Scenario	568	470	528	607	626	607	545	533	543	540	539
Change	0	0	0	42	32	21	1	6	9	13	17
% Change	0.0%	0.0%	0.0%	7.5%	5.5%	3.5%	0.3%	1.1%	1.7%	2.5%	3.2%

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>Farm Price (\$/bu.)</b>											
Baseline	3.26	3.47	3.35	3.14	2.99	3.01	3.15	3.33	3.39	3.46	3.57
Scenario	3.26	3.47	3.35	2.76	2.60	2.63	2.87	3.01	3.02	3.03	3.08
Change	0.00	0.00	0.00	-0.38	-0.39	-0.38	-0.28	-0.32	-0.37	-0.43	-0.49
% Change	0.0%	0.0%	0.0%	-12.0%	-13.1%	-12.6%	-8.8%	-9.5%	-10.9%	-12.5%	-13.6%
<b>Participant Net Returns (\$/acre)</b>											
Baseline	95.01	89.30	89.22	88.17	87.22	86.51	86.84	87.30	87.16	87.39	87.37
Scenario	95.01	89.30	89.22	84.46	84.51	83.34	84.64	84.47	83.71	83.13	82.42
Change	0.00	0.00	0.00	-3.71	-2.72	-3.18	-2.20	-2.83	-3.45	-4.27	-4.95
% Change	0.0%	0.0%	0.0%	-4.2%	-3.1%	-3.7%	-2.5%	-3.2%	-4.0%	-4.9%	-5.7%
<b>Nonparticipant Net Returns (\$/acre)</b>											
Baseline	70.45	73.90	70.17	63.00	57.62	57.68	61.86	67.65	69.22	71.58	74.80
Scenario	70.45	73.90	70.17	48.29	42.91	43.41	51.56	55.59	55.00	54.68	55.61
Change	0.00	0.00	0.00	-14.70	-14.71	-14.27	-10.30	-12.06	-14.22	-16.90	-19.19
% Change	0.0%	0.0%	0.0%	-23.3%	-25.5%	-24.7%	-16.6%	-17.8%	-20.5%	-23.6%	-25.7%

**Impacts of Eliminating EEP Program on U.S. Corn**

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>ARP Rate</b>											
Baseline	10.0%	0.0%	7.5%	5.0%	5.0%	5.0%	5.0%	2.5%	2.5%	0.0%	0.0%
Scenario	10.0%	0.0%	7.5%	5.0%	5.0%	5.0%	5.0%	2.5%	2.5%	0.0%	0.0%
Change	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Participation Rate</b>											
Baseline	81.3%	81.6%	82.3%	80.9%	81.4%	82.6%	81.4%	81.7%	81.2%	80.8%	80.8%
Scenario	81.3%	81.6%	82.3%	80.9%	81.0%	82.3%	81.1%	81.6%	81.2%	80.9%	81.0%
Change	0.0%	0.0%	0.0%	0.0%	-0.3%	-0.4%	-0.4%	-0.2%	-0.0%	0.1%	0.3%
<b>Planted Area (million acres)</b>											
Baseline	73.2	79.2	75.8	79.1	79.1	78.2	79.4	80.9	80.9	82.9	82.4
Scenario	73.2	79.2	75.8	79.1	79.6	78.7	79.9	81.2	81.1	83.1	82.6
Change	0.0	0.0	0.0	0.0	0.5	0.5	0.6	0.3	0.2	0.2	0.2
% Change	0.0%	0.0%	0.0%	0.0%	0.6%	0.7%	0.7%	0.4%	0.3%	0.2%	0.2%
<b>Production (million bus.)</b>											
Baseline	6,336	10,103	8,661	9,068	9,180	9,211	9,431	9,689	9,803	10,101	10,163
Scenario	6,336	10,103	8,661	9,068	9,224	9,258	9,483	9,719	9,822	10,118	10,179
Change	0	0	0	0	44	47	51	30	19	17	16
% Change	0.0%	0.0%	0.0%	0.0%	0.5%	0.5%	0.5%	0.3%	0.2%	0.2%	0.2%
<b>Domestic Use (million bus.)</b>											
Baseline	6,292	7,300	7,027	7,180	7,343	7,342	7,446	7,627	7,726	7,859	7,909
Scenario	6,292	7,300	7,027	7,105	7,256	7,253	7,380	7,575	7,677	7,808	7,877
Change	0	-0	-0	-74	-88	-89	-66	-52	-49	-50	-32
% Change	0.0%	-0.0%	-0.0%	-1.0%	-1.2%	-1.2%	-0.9%	-0.7%	-0.6%	-0.6%	-0.4%
<b>Exports (million bus.)</b>											
Baseline	1,328	1,958	1,864	1,828	1,867	1,927	1,968	2,034	2,104	2,190	2,295
Scenario	1,328	1,958	1,864	1,913	1,993	2,061	2,077	2,114	2,169	2,254	2,331
Change	0	-0	0	85	126	134	109	79	64	64	35
% Change	0.0%	-0.0%	0.0%	4.6%	6.8%	7.0%	5.6%	3.9%	3.1%	2.9%	1.5%
<b>Ending Stocks (million bus.)</b>											
Baseline	850	1,700	1,475	1,541	1,516	1,464	1,487	1,520	1,498	1,555	1,519
Scenario	850	1,700	1,475	1,531	1,511	1,461	1,491	1,526	1,507	1,569	1,545
Change	0	0	0	-11	-5	-4	4	6	9	13	26
% Change	0.0%	0.0%	0.0%	-0.7%	-0.3%	-0.2%	0.3%	0.4%	0.6%	0.9%	1.7%

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>Farm Price (\$/bu.)</b>											
Baseline	2.50	2.15	2.31	2.24	2.11	2.21	2.22	2.25	2.32	2.29	2.38
Scenario	2.50	2.15	2.31	2.27	2.15	2.25	2.23	2.25	2.31	2.27	2.31
Change	0.00	0.00	0.00	0.03	0.03	0.03	0.02	0.00	-0.01	-0.02	-0.07
% Change	0.0%	0.0%	0.0%	1.2%	1.5%	1.5%	0.7%	0.1%	-0.5%	-1.0%	-2.9%
<b>Participant Net Returns (\$/acre)</b>											
Baseline	125.57	200.28	160.24	163.16	160.90	165.40	164.15	168.06	170.48	171.36	173.86
Scenario	125.57	200.28	160.24	164.16	161.67	166.25	164.35	167.85	169.74	170.13	170.49
Change	0.00	0.00	0.00	1.00	0.77	0.85	0.20	-0.22	-0.74	-1.23	-3.37
% Change	0.0%	0.0%	0.0%	0.6%	0.5%	0.5%	0.1%	-0.1%	-0.4%	-0.7%	-1.9%
<b>Nonparticipant Net Returns (\$/acre)</b>											
Baseline	111.35	146.86	134.19	126.64	112.90	126.38	125.46	127.54	136.69	130.52	140.25
Scenario	111.35	146.86	134.19	130.17	116.51	130.23	127.14	127.45	134.82	127.19	130.68
Change	0.00	0.00	0.00	3.52	3.61	3.85	1.68	-0.08	-1.88	-3.32	-9.56
% Change	0.0%	0.0%	0.0%	2.8%	3.2%	3.0%	1.3%	-0.1%	-1.4%	-2.5%	-6.8%

## Impacts of Eliminating EEP Program on U.S. Soybeans

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>Planted Area</b>											
Baseline	60.1	61.9	59.5	59.3	60.8	62.1	62.0	62.4	62.7	62.7	63.5
Scenario	60.1	61.9	59.5	59.3	60.8	62.2	62.0	62.5	62.9	62.9	63.6
Change	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.2
% Change	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.3%	0.2%	0.2%
<b>Net Flex Acreage In</b>											
Baseline	4.72	5.91	4.68	4.38	4.77	5.17	4.98	5.05	5.02	4.98	5.17
Scenario	4.72	5.91	4.68	4.38	4.87	5.29	5.07	5.14	5.14	5.12	5.34
Change	0.00	0.00	0.00	0.00	0.10	0.12	0.09	0.08	0.12	0.14	0.16
<b>Production (million bus.)</b>											
Baseline	1,871	2,558	2,084	2,109	2,180	2,244	2,273	2,316	2,354	2,385	2,437
Scenario	1,871	2,558	2,084	2,109	2,180	2,246	2,274	2,319	2,358	2,389	2,441
Change	0	0	0	0	0	2	1	2	5	4	4
% Change	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.2%	0.2%	0.2%
<b>Domestic Use (million bus.)</b>											
Baseline	1,370	1,473	1,419	1,439	1,466	1,498	1,524	1,550	1,574	1,595	1,622
Scenario	1,370	1,473	1,419	1,434	1,459	1,491	1,517	1,545	1,569	1,591	1,618
Change	0	-0	-0	-6	-7	-7	-7	-5	-5	-4	-4
% Change	0.0%	-0.0%	-0.0%	-0.4%	-0.5%	-0.5%	-0.5%	-0.3%	-0.3%	-0.3%	-0.2%
<b>Exports (million bus.)</b>											
Baseline	589	790	731	738	746	752	766	782	800	813	827
Scenario	589	790	731	746	755	759	773	790	805	819	833
Change	0	0	-0	8	10	7	8	7	6	6	5
% Change	0.0%	0.0%	-0.0%	1.1%	1.3%	0.9%	1.0%	0.9%	0.7%	0.8%	0.6%
<b>Ending Stocks (million bus.)</b>											
Baseline	209	509	448	385	358	357	346	335	321	303	295
Scenario	209	509	448	383	354	356	345	334	323	307	302
Change	0	0	0	-2	-4	-2	-1	-2	2	4	7
% Change	0.0%	0.0%	0.0%	-0.6%	-1.1%	-0.4%	-0.4%	-0.5%	0.7%	1.4%	2.3%
<b>Farm Price (\$/bu.)</b>											
Baseline	6.40	5.35	5.48	5.67	5.63	5.59	5.67	5.75	5.89	6.06	6.12
Scenario	6.40	5.35	5.48	5.70	5.68	5.61	5.68	5.77	5.85	5.99	6.01
Change	0.00	0.00	0.00	0.03	0.05	0.02	0.02	0.02	-0.03	-0.06	-0.11
% Change	0.0%	0.0%	0.0%	0.5%	0.8%	0.3%	0.3%	0.3%	-0.5%	-1.0%	-1.8%

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>Net Returns (\$/acre)</b>											
Baseline	131.00	144.14	113.75	122.75	121.71	120.66	125.21	129.16	135.61	143.43	146.34
Scenario	131.00	144.14	113.75	123.74	123.40	121.22	125.78	129.76	134.22	140.84	141.78
Change	0.00	0.00	0.00	1.00	1.69	0.56	0.57	0.60	-1.38	-2.59	-4.56
% Change	0.0%	0.0%	0.0%	0.8%	1.4%	0.5%	0.5%	0.5%	-1.0%	-1.8%	-3.1%
<b>Meal Price, 44% (\$/tn)</b>											
Baseline	180.53	150.80	160.98	166.95	166.00	167.93	171.80	178.95	185.01	189.41	194.66
Scenario	180.53	150.80	160.98	167.76	166.77	167.73	170.19	177.87	182.33	185.66	189.09
Change	0.00	0.00	0.00	0.81	0.77	-0.20	-1.61	-1.08	-2.68	-3.75	-5.58
% Change	0.0%	0.0%	0.0%	0.5%	0.5%	-0.1%	-0.9%	-0.6%	-1.5%	-2.0%	-2.9%
<b>Oil Price (¢/lb)</b>											
Baseline	27.10	25.55	23.19	23.63	23.68	23.55	23.59	23.00	22.98	23.34	23.21
Scenario	27.10	25.55	23.19	23.23	23.32	23.16	23.45	22.92	22.83	23.17	23.01
Change	0.00	0.00	0.00	-0.40	-0.36	-0.40	-0.14	-0.08	-0.15	-0.17	-0.20
% Change	0.0%	0.0%	0.0%	-1.7%	-1.5%	-1.7%	-0.6%	-0.4%	-0.6%	-0.7%	-0.9%

**Impacts of Eliminating EEP Program on U.S. Cotton**

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>ARP Rate</b>											
Baseline	7.5%	11.0%	0.0%	0.0%	5.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Scenario	7.5%	11.0%	0.0%	0.0%	5.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Change	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Participation Rate</b>											
Baseline	90.7%	89.1%	90.1%	89.9%	88.7%	87.8%	88.1%	88.1%	88.1%	87.1%	87.4%
Scenario	90.7%	89.1%	90.1%	89.9%	88.7%	87.8%	88.1%	88.1%	88.1%	87.2%	87.5%
Change	0.0%	0.0%	0.0%	0.0%	-0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
<b>Planted Area (million acres)</b>											
Baseline	13.25	13.56	15.67	14.98	14.48	13.92	13.70	13.62	13.47	13.68	13.51
Scenario	13.25	13.56	15.67	14.98	14.50	13.94	13.72	13.63	13.49	13.72	13.55
Change	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.01	0.02	0.04	0.04
% Change	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%	0.1%	0.1%	0.1%	0.3%	0.3%
<b>Production (billion lbs.)</b>											
Baseline	15.76	19.39	20.49	19.93	19.45	18.91	18.78	18.79	18.73	19.12	19.01
Scenario	15.76	19.39	20.49	19.93	19.48	18.93	18.80	18.80	18.76	19.16	19.06
Change	0.00	0.00	0.00	0.00	0.03	0.02	0.02	0.02	0.03	0.04	0.05
% Change	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%	0.1%	0.1%	0.1%	0.2%	0.3%
<b>Domestic Use (billion lbs.)</b>											
Baseline	10.34	10.83	11.00	11.26	11.51	11.82	12.15	12.28	12.44	12.69	12.88
Scenario	10.34	10.83	11.00	11.27	11.51	11.82	12.15	12.29	12.45	12.70	12.88
Change	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
% Change	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
<b>Exports (billion lbs.)</b>											
Baseline	6.61	9.38	8.49	7.98	7.31	7.03	6.80	6.65	6.57	6.49	6.36
Scenario	6.61	9.38	8.49	7.99	7.33	7.05	6.82	6.66	6.59	6.52	6.40
Change	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.02	0.02	0.03	0.04
% Change	0.0%	0.0%	0.0%	0.1%	0.2%	0.2%	0.3%	0.3%	0.3%	0.5%	0.6%
<b>Ending Stocks (billion lbs.)</b>											
Baseline	3.39	2.71	3.85	4.67	5.43	5.64	5.61	5.61	5.47	5.55	5.47
Scenario	3.39	2.71	3.85	4.66	5.44	5.65	5.62	5.62	5.48	5.57	5.48
Change	0.00	0.00	0.00	-0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02
% Change	0.0%	0.0%	0.0%	-0.1%	0.2%	0.2%	0.2%	0.1%	0.1%	0.3%	0.3%

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>Farm Price (\$/lb.)</b>											
Baseline	0.584	0.675	0.638	0.624	0.613	0.597	0.591	0.586	0.614	0.600	0.616
Scenario	0.584	0.675	0.638	0.624	0.612	0.596	0.590	0.585	0.612	0.597	0.612
Change	0.000	0.000	0.000	-0.000	-0.001	-0.001	-0.001	-0.001	-0.002	-0.003	-0.004
% Change	0.0%	0.0%	0.0%	-0.1%	-0.2%	-0.2%	-0.2%	-0.2%	-0.3%	-0.5%	-0.7%
<b>Participant Net Returns (\$/acre)</b>											
Baseline	195.97	240.19	218.63	221.91	211.84	197.50	189.50	182.67	184.28	173.57	172.76
Scenario	195.97	240.19	218.63	221.25	210.78	196.59	188.89	182.16	183.31	172.02	170.67
Change	0.00	0.00	0.00	-0.66	-1.06	-0.91	-0.61	-0.51	-0.96	-1.55	-2.09
% Change	0.0%	0.0%	0.0%	-0.3%	-0.5%	-0.5%	-0.3%	-0.3%	-0.5%	-0.9%	-1.2%
<b>Nonparticipant Net Returns (\$/acre)</b>											
Baseline	137.92	242.13	171.57	168.02	163.99	152.76	141.11	130.64	146.58	127.54	134.93
Scenario	137.92	242.13	171.57	167.12	162.35	151.21	139.89	129.46	144.52	124.31	130.51
Change	0.00	0.00	0.00	-0.90	-1.65	-1.55	-1.22	-1.18	-2.06	-3.23	-4.43
% Change	0.0%	0.0%	0.0%	-0.5%	-1.0%	-1.0%	-0.9%	-0.9%	-1.4%	-2.5%	-3.3%

**Impacts of Eliminating EEP Program on U.S. Sorghum**

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>ARP Rate</b>											
Baseline	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Scenario	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Change	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Participation Rate</b>											
Baseline	81.6%	81.1%	81.7%	77.3%	79.0%	81.8%	80.0%	79.7%	78.9%	77.4%	77.4%
Scenario	81.6%	81.1%	81.7%	77.3%	78.6%	81.3%	79.5%	79.4%	78.8%	77.5%	77.7%
Change	0.0%	0.0%	0.0%	0.0%	-0.4%	-0.5%	-0.5%	-0.3%	-0.1%	0.2%	0.4%
<b>Planted Area (million acres)</b>											
Baseline	9.9	9.8	9.9	10.5	10.9	10.9	11.3	11.3	11.3	11.4	11.4
Scenario	9.9	9.8	9.9	10.5	11.1	11.1	11.4	11.4	11.5	11.5	11.5
Change	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.1
% Change	0.0%	0.0%	0.0%	0.0%	1.5%	1.7%	1.6%	1.0%	1.1%	0.9%	0.9%
<b>Production (million bus.)</b>											
Baseline	534	655	597	638	664	666	689	695	698	705	708
Scenario	534	655	597	638	673	677	699	702	706	711	715
Change	0	0	0	0	10	11	10	7	7	7	7
% Change	0.0%	0.0%	0.0%	0.0%	1.4%	1.6%	1.5%	1.0%	1.0%	0.9%	0.9%
<b>Domestic Use (million bus.)</b>											
Baseline	460	410	386	415	441	450	463	464	462	461	460
Scenario	460	410	386	415	443	452	466	464	464	463	463
Change	0	-0	-0	0	2	2	2	0	2	2	3
% Change	0.0%	-0.0%	-0.0%	0.1%	0.4%	0.5%	0.5%	0.0%	0.4%	0.5%	0.6%
<b>Exports (million bus.)</b>											
Baseline	202	218	211	213	219	220	222	230	237	242	249
Scenario	202	218	211	214	225	227	230	237	242	246	252
Change	0	-0	0	0	6	8	8	7	5	4	3
% Change	0.0%	-0.0%	0.0%	0.2%	2.9%	3.6%	3.4%	3.1%	2.3%	1.7%	1.2%
<b>Ending Stocks (million bus.)</b>											
Baseline	48	75	76	86	90	87	89	91	89	91	91
Scenario	48	75	76	85	90	88	92	93	92	93	94
Change	0	0	0	-1	1	1	2	2	2	2	3
% Change	0.0%	0.0%	0.0%	-0.8%	0.9%	1.7%	2.5%	2.3%	2.6%	2.6%	3.3%

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>Farm Price (\$/bu.)</b>											
Baseline	2.31	2.02	2.23	2.14	1.98	2.07	2.09	2.12	2.21	2.21	2.29
Scenario	2.31	2.02	2.23	2.16	2.01	2.10	2.10	2.13	2.20	2.19	2.23
Change	0.00	0.00	0.00	0.02	0.03	0.03	0.01	0.01	-0.01	-0.02	-0.06
% Change	0.0%	0.0%	0.0%	1.0%	1.4%	1.3%	0.7%	0.4%	-0.4%	-1.0%	-2.7%
<b>Participant Net Returns (\$/acre)</b>											
Baseline	74.65	95.35	81.39	79.78	77.13	78.05	76.91	76.25	76.53	75.19	75.04
Scenario	74.65	95.35	81.39	80.13	77.50	78.43	77.06	76.33	76.33	74.80	73.93
Change	0.00	0.00	0.00	0.35	0.38	0.37	0.16	0.08	-0.20	-0.39	-1.11
% Change	0.0%	0.0%	0.0%	0.4%	0.5%	0.5%	0.2%	0.1%	-0.3%	-0.5%	-1.5%
<b>Nonparticipant Net Returns (\$/acre)</b>											
Baseline	60.07	65.62	61.95	55.92	45.43	50.98	50.52	51.65	56.32	54.90	58.76
Scenario	60.07	65.62	61.95	57.35	47.17	52.76	51.40	52.11	55.67	53.43	54.51
Change	0.00	0.00	0.00	1.43	1.73	1.78	0.87	0.47	-0.65	-1.47	-4.25
% Change	0.0%	0.0%	0.0%	2.6%	3.8%	3.5%	1.7%	0.9%	-1.1%	-2.7%	-7.2%

**Impacts of Eliminating EEP Program on U.S. Barley**

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>ARP Rate</b>											
Baseline	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Scenario	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Change	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Participation Rate</b>											
Baseline	82.5%	83.8%	82.5%	80.1%	80.4%	82.3%	82.3%	82.3%	82.1%	81.6%	81.4%
Scenario	82.5%	83.8%	82.5%	80.1%	82.3%	84.1%	83.5%	83.1%	82.8%	82.4%	82.2%
Change	0.0%	0.0%	0.0%	0.0%	1.9%	1.8%	1.2%	0.8%	0.6%	0.7%	0.8%
<b>Planted Area (million acres)</b>											
Baseline	7.8	7.2	7.4	8.2	8.7	8.5	8.5	8.5	8.4	8.4	8.4
Scenario	7.8	7.2	7.4	8.2	8.4	8.0	8.3	8.4	8.3	8.4	8.3
Change	0.0	0.0	0.0	0.0	-0.3	-0.4	-0.2	-0.1	-0.1	-0.1	-0.0
% Change	0.0%	0.0%	0.0%	0.0%	-4.0%	-5.3%	-2.8%	-1.6%	-0.8%	-0.8%	-0.5%
<b>Production (million bus.)</b>											
Baseline	398	375	392	435	464	453	459	461	455	461	460
Scenario	398	375	392	435	447	431	448	454	452	458	458
Change	0	0	0	0	-17	-23	-12	-7	-3	-3	-2
% Change	0.0%	0.0%	0.0%	0.0%	-3.7%	-5.0%	-2.6%	-1.5%	-0.6%	-0.7%	-0.4%
<b>Domestic Use (million bus.)</b>											
Baseline	416	402	381	407	426	429	435	438	439	444	447
Scenario	416	402	381	414	427	426	435	438	440	445	448
Change	0	0	0	7	1	-3	-1	-0	1	1	1
% Change	0.0%	0.0%	0.0%	1.7%	0.3%	-0.6%	-0.2%	-0.0%	0.3%	0.2%	0.1%
<b>Exports (million bus.)</b>											
Baseline	66	62	54	55	59	58	54	51	50	47	45
Scenario	66	62	54	40	43	44	44	44	44	43	42
Change	0	0	0	-15	-16	-14	-11	-7	-5	-4	-3
% Change	0.0%	0.0%	0.0%	-26.6%	-27.8%	-24.8%	-19.5%	-13.9%	-11.0%	-8.5%	-6.4%
<b>Ending Stocks (million bus.)</b>											
Baseline	139	111	98	102	110	107	107	109	106	107	105
Scenario	139	111	98	109	116	107	106	108	106	107	106
Change	0	0	0	7	5	-0	-1	-1	1	0	1
% Change	0.0%	0.0%	0.0%	7.3%	4.8%	-0.4%	-0.7%	-0.5%	0.7%	0.5%	0.8%

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>Farm Price (\$/bu.)</b>											
Baseline	1.99	2.02	2.21	2.19	2.03	2.03	2.04	2.06	2.11	2.13	2.20
Scenario	1.99	2.02	2.21	2.04	1.88	1.92	1.97	2.00	2.04	2.06	2.11
Change	0.00	0.00	0.00	-0.15	-0.16	-0.11	-0.07	-0.06	-0.07	-0.07	-0.09
% Change	0.0%	0.0%	0.0%	-6.9%	-7.7%	-5.4%	-3.5%	-2.9%	-3.3%	-3.4%	-3.9%
<b>Participant Net Returns (\$/acre)</b>											
Baseline	70.47	60.91	64.60	63.99	61.26	60.76	59.57	58.58	58.51	57.48	57.12
Scenario	70.47	60.91	64.60	61.34	58.87	59.29	58.58	57.68	57.33	56.23	55.60
Change	0.00	0.00	0.00	-2.65	-2.39	-1.47	-0.99	-0.90	-1.18	-1.25	-1.52
% Change	0.0%	0.0%	0.00%	-4.1%	-3.9%	-2.4%	-1.7%	-1.5%	-2.0%	-2.2%	-2.7%
<b>Nonparticipant Net Returns (\$/acre)</b>											
Baseline	52.95	47.48	58.62	57.04	48.24	47.69	46.75	46.39	48.47	48.43	50.56
Scenario	52.95	47.48	58.62	48.39	39.55	41.86	42.92	43.14	44.49	44.24	45.63
Change	0.00	0.00	0.00	-8.65	-8.69	-5.84	-3.82	-3.25	-3.98	-4.19	-4.94
% Change	0.0%	0.0%	0.0%	-15.2%	-18.0%	-12.2%	-8.2%	-7.0%	-8.2%	-8.6%	-9.8%

**Impacts of Eliminating EEP Program on U.S. Oats**

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>ARP Rate</b>											
Baseline	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Scenario	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Change	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Participation Rate</b>											
Baseline	45.7%	39.8%	46.3%	43.1%	40.2%	42.5%	42.8%	42.3%	41.4%	40.3%	40.2%
Scenario	45.7%	39.8%	46.3%	43.1%	40.1%	43.0%	43.5%	42.9%	41.9%	40.9%	41.0%
Change	0.0%	0.0%	0.0%	0.0%	-0.1%	0.5%	0.7%	0.7%	0.5%	0.6%	0.8%
<b>Planted Area (million acres)</b>											
Baseline	7.9	6.6	7.2	6.9	7.2	7.2	7.2	7.0	7.0	6.9	6.9
Scenario	7.9	6.6	7.2	6.9	7.3	7.2	7.2	7.0	7.1	6.9	6.9
Change	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
% Change	0.0%	0.0%	0.0%	0.0%	1.2%	0.7%	0.4%	0.1%	0.3%	0.6%	0.6%
<b>Production (million bus.)</b>											
Baseline	207	230	212	203	215	216	215	217	218	220	221
Scenario	207	230	212	203	220	219	216	218	219	222	223
Change	0	0	0	0	5	3	2	1	1	2	2
% Change	0.0%	0.0%	0.0%	0.0%	2.1%	1.4%	0.9%	0.3%	0.6%	1.0%	1.0%
<b>Imports (million bus.)</b>											
Baseline	107	101	94	95	94	93	92	92	91	90	89
Scenario	107	101	94	96	95	94	93	92	92	91	90
Change	0	0	0	1	1	1	0	1	1	1	1
% Change	0.0%	0.0%	0.0%	1.1%	1.1%	0.8%	0.5%	0.6%	0.8%	0.9%	0.9%
<b>Domestic Use (million bus.)</b>											
Baseline	318	328	311	296	300	305	305	306	306	306	307
Scenario	318	328	311	297	303	309	308	308	308	309	309
Change	0	0	0	1	3	4	3	2	2	2	3
% Change	0.0%	0.0%	0.0%	0.3%	1.1%	1.3%	1.0%	0.6%	0.6%	0.8%	0.9%
<b>Ending Stocks (million bus.)</b>											
Baseline	106	109	100	99	106	107	106	106	106	106	107
Scenario	106	109	100	99	108	109	107	107	107	108	108
Change	0	0	0	0	2	2	1	1	1	1	2
% Change	0.0%	0.0%	0.0%	0.1%	2.2%	1.9%	1.3%	0.7%	0.9%	1.3%	1.6%

	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04
<b>Farm Price (\$/bu.)</b>											
Baseline	1.36	1.23	1.29	1.37	1.32	1.31	1.33	1.36	1.40	1.40	1.42
Scenario	1.36	1.23	1.29	1.37	1.30	1.29	1.32	1.35	1.38	1.38	1.38
Change	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.02	-0.01	-0.02	-0.02	-0.04
% Change	0.0%	0.0%	0.0%	0.2%	-1.0%	-1.4%	-1.3%	-1.1%	-1.2%	-1.7%	-2.8%
<b>Participant Net Returns (\$/acre)</b>											
Baseline	46.80	46.67	44.97	45.68	43.86	42.07	40.36	39.03	38.21	36.40	34.65
Scenario	46.80	46.67	44.97	45.73	43.40	41.53	39.86	38.64	37.78	35.86	33.81
Change	0.00	0.00	0.00	0.04	-0.46	-0.54	-0.49	-0.38	-0.43	-0.54	-0.84
% Change	0.0%	0.0%	0.0%	0.1%	-1.1%	-1.3%	-1.2%	-1.0%	-1.1%	-1.5%	-2.4%
<b>Nonparticipant Net Returns (\$/acre)</b>											
Baseline	40.17	34.49	38.52	42.17	38.29	36.42	35.55	35.32	36.00	34.48	33.31
Scenario	40.17	34.49	38.52	42.32	37.29	35.11	34.33	34.32	34.85	32.98	30.86
Change	0.00	0.00	0.00	0.15	-1.00	-1.30	-1.22	-1.00	-1.14	-1.50	-2.46
% Change	0.0%	0.0%	0.0%	0.4%	-2.6%	-3.6%	-3.4%	-2.8%	-3.2%	-4.4%	-7.4%

## CONCLUDING SESSION ON WORKSHOP DIRECTIONS

*Karl Meilke and A. J. W. Pursaga*

At the conclusion of the Workshop, participants assembled to determine the value of the exercise to themselves and to the process of understanding the grains disputes. This discussion also addressed the issues of whether, and how, to continue this approach to generating and distributing policy relevant information. The consensus was that the exercise was worthwhile and should be continued but with a rather low profile in the public arena. Several vehicles of communicating information from this and subsequent workshops were identified including publication and distribution of this proceedings.

There was considerable interest in conducting a similar workshop on Canada/United States/Mexico trade and policy issues, including further exploration of issues related to continental grain trade. The group agreed that it would be productive to pursue similar analysis in some related commodity areas. The dairy industry and dairy policy were identified as a strong candidate for the next workshop. Following the Workshop, the coordinating committee drafted plans for a dairy policy workshop for early March 1996.

The following record identifies themes that were articulated during the open discussion which took place in the closing discussion of the Workshop. The discussion reflects the substance of what was offered without trying to fit these comments into a balanced framework.

### **Policy Conflicts**

The discussion began with a focus on the key elements of domestic grain policy in Canada and the United States. As is apparent in the papers presented at the Workshop, grain policy in Canada and in the United States have evolved over the past 100 years as these countries have changed from their agrarian roots into modern industrial economies. Grain policies in the two countries are designed to address similar problems: 1) periodic low returns to farmers; 2) instability of returns; and 3) technological change which has continuously reduced the number of people employed in agriculture. More recently, environmental concerns have been added to the policy agenda.

Although, the problems that agricultural policy was meant to address are similar in both countries, the institutional mechanisms and the policy instruments used to achieve

these objectives are quite different. These differences caused few conflicts between Canada and the United States, except for export competition in third country markets, until the mid-1980s. A number of events occurred during the last half of the 1980s which heightened trade tensions and strained trade relations between the two major grain exporters. The European Union emerged as a major exporter of wheat in international markets; in the 1980s Record setting supplies of grain led the United States to massive land retirement programs, government stockholding, support price (loan rate) declines and the reintroduction of explicit export subsidies. Canada followed in the late 1980s by sharply expanding its subsidies in the grain sector, primarily in the form of ad hoc payments. The end result was international, competitive subsidization of grain exports on a scale not previously witnessed. The realization that the level of support being provided to the grain industries in the United States, Canada and the European Union were not sustainable and counterproductive led to agricultural trade liberalization being placed at the top of the agenda during the Uruguay Round of multilateral trade negotiations.

The discussions which led up to the signing of the CUSTA and the NAFTA were emotional and heated, particularly north of the border for the CUSTA, and in the United States for NAFTA. Throughout these discussions Canadians were assured that the CUSTA and NAFTA did not compromise Canadian sovereignty, and its ability to follow "made-in Canada" economic policies. Even the border protection provided Canada's supply managed commodities was preserved. However, with the exception of ruling out export subsidies on Canada/United States trade, the CUSTA failed to identify acceptable and unacceptable agricultural policies. As a result, domestic farm policies were protected under both agreements. Although the GATT produced movement toward freer trade, it too failed to resolve many of the remaining conflicts.

It is, however, incorrect to state that the CUSTA negotiators did not anticipate that differential levels of support provided to the grain sectors in Canada and the United States could not lead to trade disputes. Article 705 of the CUSTA calls for the elimination of Canada's import licenses for wheat, barley and oats when United States grain support levels fall below Canadian support levels, and both countries retained the right to reimpose import restrictions on grain and grain products if imports increased significantly as a result of substantial changes in grain support programs. Annex 705.2 of the CUSTA sets out a formula (covering 18 pages) that is to be used to calculate grain support levels in the two countries. Essentially, the formula is a producer subsidy equivalent measure. What the formula failed to recognize is that certain policies are incompatible with a free trade area.

For a number of reasons, some related to United States agricultural policy, some related to Canadian agricultural policy, some reflecting comparative advantage and some reflecting weather, grain exports from Canada to the United States increased sharply in the early 1990s. These highly visible trade flows, concentrated in the Northern tier of the United States, resulted in mounting trade tensions. It was quickly recognized that the dispute settlement provisions of the CUSTA were not well designed to deal with cross border trade disputes arising, at least partly, from domestic agricultural policy differences. This led to the 1994 voluntary export restraint agreement in wheat, and the appointment of the Blue Ribbon panel to analyze the sources of cross border trade.

Conflicts over agricultural trade including trade in grain and grain products are unlikely to go away. While the GATT agreement on agriculture identifies "green" policies and support to the agricultural sector is ratcheting down in both countries, the visibility and political sensitivity of trade in agricultural products will keep agricultural issues high on the list of trade irritants. The inclusion of Mexico in the free trade area could intensify these tensions. The Workshop participants were unanimous in believing that educational programs could help to minimize trade tensions by dispelling myths and refuting inaccurate information.

### **Educational Issues**

Although neighbours, United States and Canadian producers know very little about the institutional setting of grain farming and marketing across the border. The initiative to provide facts and basic definitions is one step that can be taken to further understanding. As part of this policy system information initiative extension economists in the United States are planning to work with Canadian counterparts to develop educational leaflets on several issues. These will be disseminated and used for further enhancement of understanding. Basic information packages will be developed dealing with the trade agreements, the ways in which subsidy programs work in each country, factors that affect competitiveness, the impact of domestic and export policies on both domestic and international markets, and specific issues such as wheat quality and grading or inspection systems.

There is also a professional responsibility attached to this debate that must be addressed. Without a clear agreement on what the facts are, objective economic analysis conducted on both sides of the border may be based on incorrect assumptions. Given this, it is not surprising that the general public often reaches incorrect conclusions regarding the causes of cross border trade. The profession has a responsibility to understand the institutions in both countries, to develop appropriate theoretical frameworks and to provide defensible empirical analysis of international trading relations. This does not mean that every study will reach the same conclusion. However, the areas of professional disagreement should be sharply delimited so that further economic analysis can resolve these unanswered questions. Coordination of research and extension efforts through groups such as the one put together for this Workshop is seen as one method of reaching this level of clarity and consistency.

### **Conclusion**

Much remains to be done to produce a harmonious policy and trade balance between Canada and the United States. Some recent developments, while long sought by some interest groups, provide the potential to aggravate the situation. For example, termination of the grain transportation subsidy in Canada is likely to mean more pressure to trade into the United States. The Canadian Wheat Board, while only about the size of one of the top four U.S. private companies raises suspicions about government backed monopolies in the international grain trade. CWB monopoly trading practices continue

to draw fire in both the United States and Canada. Canada's grain grading and inspection services draw concern even though they operate on a fully cost recovered basis.

On the American side the spectre of the Export Enhancement Program depressing off-shore wheat markets such that other suppliers are unable to remain competitive still rankles the image of fair and free trade in export markets. The activities of the U.S. government in administering target prices, set asides, the Conservation Reserve Program and the intricacies of "flex acres" cause some to view these activities as a direct intrusion in to the day to day activities of the market. All await development of the 1995 Farm Bill which is expected to be more trade oriented with lower subsidies.

There is much to be done before trade irritants can be handled rationally. These irritants must be analyzed with care and objectivity on both sides of the border if greater understanding is to be achieved and fears are to be alleviated.

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