



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

**Proceedings of the Fourth Agricultural and  
Food Policy Systems Information  
Workshop**



**Economic Harmonization in  
the Canadian/U.S./Mexican  
Grain-Livestock Subsector**

**Edited by**

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

Proceedings of the Fourth Agricultural and Food Policy  
Systems Information Workshop

**Economic Harmonization in the  
Canadian/U.S./Mexican Grain-Livestock  
Subsector**



**UNIVERSITY  
of GUELPH**

Edited by

R.M.A. Loyns  
Ronald D. Knutson  
Karl Meilke

December 1998

Edited by:

*Dr. R.M.A. Loyns*  
*Dr. Ronald D. Knutson*  
*Dr. Karl Meilke*

Page layout and design by:

*Donna Moore Walton and Lucie Beaulne*  
Agriculture and Agri-Food Canada

Cover clipart by:

Corel Draw™ 7.0

Published by:

Texas A&M University  
University of Guelph

Printed by:

Friesen Printers  
Winnipeg, Manitoba

Includes bibliographical references.

1. Agriculture and Food Policy 2. Harmonization 3. Canada/United States/Mexico

I. Loyns, R.M.A.

II. Knutson, Ronald D. (Texas A&M)

III. Meilke, Karl (University of Guelph)

IV. Friesen Printers (Winnipeg)

All rights reserved. The authors and editors encourage readers to use this material liberally, directly or indirectly. We do retain our right for full and complete attribution of source and referencing.

Printed in Canada.

Copyright © 1998

ISBN 0-662-27471-7

Catalogue A82-4/1999E

December 1998

---

## **EXECUTIVE SUMMARY**

### **ECONOMIC HARMONIZATION IN THE CANADIAN/U.S./MEXICAN GRAIN-LIVESTOCK SUBSECTOR**

This is the fourth publication from a series of workshops which bring together agricultural economists, government officials and business people from the United States, Canada and Mexico for the purpose of enhancing communication on policy and trade issues. The objective of the workshop series is to develop and communicate objective economic information on trade and policy issues as a means to heading off wasteful tension and disputes among the three partners in the NAFTA agreement. The first two workshops focused on grain (1995) and dairy disputes (1996). The third workshop (1997) looked at disputes from the "other side" i.e., policy harmonization. The 1998 workshop and publication take the harmonization theme to the next level and examine the status of policy and trade harmonization issues in grain and livestock among Mexico, Canada and the United States.

This book focuses on trade issues and competitiveness within the grain-livestock subsector in North America. This topic is timely because:

- The grain-livestock subsector, by its size and position, is the foundation of agriculture and the food industry in Canada, Mexico and the United States.
- Major structural changes are occurring within this subsector. The origins of structural changes are primarily technological and product uniformity-driven, but the impacts on trade are and will be substantial.

- Structural change and the policies embodied in NAFTA and WTO hold the potential for increasing trade tensions among the three North American partners to NAFTA. Trade tensions are already apparent in the beef, pork and grain sectors.

The workshop was designed to provide analysis of four major issues:

- What is meant by “competitiveness” as applied to the grain-livestock subsector? The term is used in economic, trade, business and policy discussions, but it is elusive in terms of both meaning and measurement.
- Can we compare competitiveness of the grain-livestock subsectors in Mexico, Canada and the United States; if we do, what are the results?
- What are the factors influencing competitiveness; how are these likely to influence geographic shifts in production and trade?
- How are these, and other factors, likely to influence policy and trade tensions among the three partners to NAFTA?

The workshop was held April 21-22, 1998 in Lake Louise, Alberta, Canada. It was attended by policy economists from universities and governments, and business/interest group representatives from each of the three signatories to the NAFTA.

## **CONTENTS OF THE PUBLICATION**

The book contains eleven papers in four thematic sections, with discussion comments. The papers were all prepared for this workshop by economists working directly on the target subject matter from among universities, governments and research organizations. Most discussants are from business settings including banks, grain and livestock processors, marketing agencies and interest groups. There is a significant component of the publication, three papers and two sets of discussion comments, provided by our Mexican contributors. Readers with an interest in the grain, livestock and small farm sectors in Mexico will find this material particularly useful.

The lead paper which addresses the basic issues of economic meaning and significance of “competitiveness” in trade agreements was prepared by Tom Sporleder and Larry Martin. The paper adopts the 1991 Office of Technology Assessment (OTA) definition of competitiveness... “the degree to which a nation can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously maintaining or expanding the real incomes of its citizens”. The paper includes a thorough review of the evolution of recent trade agreements along with analysis of their impacts. The section on evolution and impacts on the agri-food industry is reinforced with three examples of induced technological and structural adjustment in Canada. The authors argue that harmonization and competitiveness in the next WTO round of multilateral trade negotiations will focus on genetically modified organisms (GMO’s), state trading enterprises (STE’s), and market access in agricultural and food markets. Murray Fulton’s review comments extended the paper into the areas of innovation/intellectual property rights, and the role of competition policy in a world where competitiveness is a concern.

The second section contains four papers on developments in the grain and the livestock industries in each of Canada and the United States, two counterpart papers on the commercial grain and livestock industries in Mexico, and a paper on non-commercial small farms in Mexico. These papers are an exceptionally strong compendium of statistics, policy summary, evolution and structural change in the grain and livestock components of Canadian, U.S. and Mexican agriculture. The papers include analysis by Linda Young and Gary Adams; Kurt Klein and Gary Storey; David Anderson, James Mintert, and Gary Brester; Jill Hobbs and Bill Kerr; Beatriz Avalos-Sartorio; Roberto Aceves Ávila and Enrique López López; and Antonio Yunez-Naude. This section also includes discussant comments from seven industry representatives from all three countries. This section is an up-to-date, well-presented and well-documented analysis of the grain/livestock subsector in North America.

The third section presents a paper on issues in truck and rail transportation within NAFTA. Certainly freer trade within a geographically dispersed region like North America brings out the strengths and weaknesses of transportation capability. Barry Prentice and Bill Wilson provide a comprehensive review of structural and regulatory impediments to the smooth flow of products within the NAFTA region. In

particular, they illustrate areas where evolution of transportation regulation has not kept pace with other deregulation, suggesting that transportation remains a weak link in the North American marketing chain.

Section four reviews institutional forces affecting trade and policy tensions. Don McClatchy and David Schweikhardt ask the question...is policy harmonization necessary or desirable to structural adjustment under trade liberalization? Their answer is that it is both, and proceed to discuss institutional and regulatory considerations that would encourage achievement of that objective. The paper by Dave Ervin and Glenn Fox deals with the literature and issues surrounding trade liberalization and the environment. They challenge some of the conventional wisdom regarding greater environmental damage and increased consumer risks from increased trade... "there is reason to believe that an environmental dividend is at least possible from the pursuit of trade liberalization in agriculture...the realization of that dividend is contingent on an appropriate integration of trade and agricultural policies, and environmental policies and institutions".

The final section summarizes panel member comments made in relation to "what have we learned" in terms of implications, research needs and future directions. Panel members included Terry Francl, American Farm Bureau Federation; Shelley Thompson, Saskatchewan Wheat Pool; Roberto Áceves Avila, SAGAR; Ken Ash, Agriculture and Agri-Food Canada; and Chuck Lambert, National Cattlemen's Beef Association.

The coordinators for this workshop included:

- *Ron Knutson*, Food and Agricultural Policy Center, Texas A&M University
- *Karl Meilke*, University of Guelph
- *Fred Woods*, CSREES/USDA, Washington D.C.
- *Jack Gellner*, Agriculture and Agri-Food Canada, Ottawa
- *Al Loyns*, Prairie Horizons Ltd., Winnipeg



---

## ORDERING THE PUBLICATION

This book is available at the nominal cost of \$15.00 (which includes shipping and handling) in Canada and the United States. Prices on multiple copy orders, and in Mexico, are negotiable.

Please contact:

Dr. Ron D. Knutson  
Texas A&M University  
Phone: 409.845.5913  
Fax: 409.845.3140  
E-mail: rknutson@tamu.edu

Dr. Antonio Yunez-Naude  
El Colegio de Mexico  
Phone: 525.645.5955  
Fax: 525.645.0464  
E-mail: ayunez@colmex.mx

Dr. R.M.A. Loyns  
Prairie Horizons Ltd.  
Winnipeg, MB R3T 2X6  
Phone: 204.261.7869  
Fax: 204.269.7774  
E-mail: a\_loyns@mb.sympatico.ca

---

## FOREWORD

Economists usually herald the signing and existence of agreements which liberalize trading conditions among nations. Economic theory predicts increased collective benefits from production and distribution of goods and services when trade barriers are reduced. Resource allocation determined by competitive forces, resource endowments, comparative advantage and trade instead of "economically artificial" borders or rules improves economic performance. Certainly most agricultural economists supported the trade liberalization accomplished between Canada and the United States in the CUSTA, and later extended to Mexico in the NAFTA. These trade agreements are in their first full decade of operation and, along with the international counterpart (the Uruguay Round of GATT), many of the positive effects of these agreements are now apparent and accepted.

Trade, including agricultural and food trade, are increasing among the three partners to the NAFTA. Production and distribution patterns are shifting in relation to economic criteria. Investment and business linkages (some call them "vertical supply chains") are extending across borders and across sectors at unprecedented rates. All of these economic impacts are related to trade liberalization initiatives begun a decade ago among the three signatories to the NAFTA.

However, there is another side to trade and policy relationships in agriculture and food among the United States, Mexico and Canada. This past decade has also been highlighted by intense bickering, tension and outright disputes in a number of commodity/product areas. Trade agreements automatically generate some trade tension because new policies and rules will be tested. Trade policy and trade disputes

have been among the signatories to the NAFTA and some of those do not seem close to resolution...Canadian wheat, barley, cattle and hogs into the United States; tomatoes and Mexican trucks into the United States; some U.S. grain, poultry and dairy products not allowed into Canada; U.S. beef disrupting Mexican cattle markets; and Canadian malting barley exports limited into Mexico. The list goes on. Each point of stress or dispute costs scarce political, bureaucratic, interest group, and economic resources.

Economists may appear to have little to contribute to the resolution of these problems. Since trade liberalization is supposed to improve resource allocation and we have trade agreements which say they liberalize trading relations, then economists have made their contribution and the problems must be political or administrative. Our job is done.

It may be true, as many seem to believe, that economists have little to contribute to much of the political debate that conditions behavior of decision makers. It may also be true, as the cliché goes, that all economists laid end to end could not reach a conclusion, but that (laying all economists end to end) might be a good thing! Whatever the truth on these matters, a small group of U.S. and Canadian policy-oriented agricultural economists decided in 1995 that they, indeed, had a role to play in the disputes and stress that were accompanying the introduction of North American free trade. That role was seen to be the *creation and distribution of timely, relevant and objective economic information on the sectors that seem to generate most of the conflict*. Our objective is not to solve matters directly; that is well beyond the capability of any particular group. Rather *the objective is to influence decision makers, and possibly the individuals involved in conflict, by providing an economic information base related to conflict situations*.

In search of this goal, we established a series of workshops for the generation of policy and trade related material, and a commitment to quick and broad dissemination of the results through books like this one. Four workshops have been held and each of the publications has been released within nine months of the workshop. In 1997, we extended our organization and coverage to include Mexico. Originally we were only a group of economists. We have extended that to include business and interest group participation. Originally we targeted only twenty-five participants; the next workshop in Mexico in March 1999 will have sixty participants. We have established a solid network among several agricultural economists in

academia, government, and business in each of our three countries which is influencing projects well beyond this one. Importantly, business connections are beginning to be formed as a consequence of these associations. Have we contributed to reducing policy and trade tensions within the agricultural and food industry? Perhaps, but it remains an elusive goal.

Copies of this publication are distributed at a nominal charge. We encourage readers to use and quote the material. We would like to hear back from you on whether and how these papers are useful.

For information on other workshops, see *The Farm Foundation* website at [www.farmfoundation.org](http://www.farmfoundation.org).

*R.M.A. Loyns, Prairie Horizons Ltd.*

*Ronald D. Knutson, Texas A&M*

*Karl Meilke, University of Guelph*

*Jack Gellner, Agriculture and Agri-Food Canada*

*Fred Woods, CSREES, USDA, Washington*

---

## ACKNOWLEDGMENTS

Conducting the workshops and publishing the results takes a great deal of effort, cooperation, and contributed funds. The Coordinating Committee extends thanks to those who participate, write and discuss papers, and revise them under unrealistic time constraints, and to the group of agencies and organizations that provide the financing for this project. David Ernstes at Texas A & M produced the summary of the discussion from Lake Louise. The job of editing and producing this book according to relatively tight time lines was accomplished this year by Donna Moore Walton and Lucie Beaulne of Agriculture and Agri-Food Canada in Ottawa, and Lenore Loyns in Winnipeg. Without all of you giving substantially more than you get, this project would not function. Funding from the following contributors is another essential piece of the project:

***The Farm Foundation***

Oak Brook, Illinois

***The Royal Bank of Canada***

Agricultural Banking Services  
Winnipeg, Manitoba

***Cargill Ltd.***

Winnipeg, Manitoba

***Saskatchewan Wheat Pool***

Regina, Saskatchewan

***United States Department of Agriculture***

Washington, D.C.

***Agriculture and Agri-Food Canada***

Ottawa, Ontario

---

## WORKSHOP AUTHORS, DISCUSSANTS AND ORGANIZERS

**Gary Adams** is the Crops Program Director for the Food and Agricultural Policy Research Institute, University of Missouri. His responsibilities include outlook and policy analysis of the crops sector, and maintaining models for farm income, government programs and crop analysis.

**David Anderson** is an Assistant Research Scientist in the Agriculture and Food Policy Center at Texas A&M University. He conducts research on the impacts of policy and programs on the livestock and dairy sectors of U.S. agriculture. Recent work has focused on the competitiveness in the world dairy industry.

**Walter Armbruster** is Managing Director of the Farm Foundation, Chicago and Past President of the American Agricultural Economics Association. The Foundation participates in projects related to rural education, extension and information dissemination. Workshop papers and information are posted on the Farm Foundation website [www.farmfoundation.org](http://www.farmfoundation.org).

**Ken Ash** is Director General of the Economic and Policy Analysis Directorate, Policy Branch, Agriculture and Agri-Food Canada, Ottawa. He is responsible for managing economic and policy research and analysis services on the agri-food sector in Canada, and for providing related information and advice to government.

**Roberto Aceves Ávila** is the Chief of Staff for the Undersecretary of Planning, Ministry of Agriculture, Mexico. He is a policy analyst and advisor to the Secretary of Agriculture.

**Beatriz Avalos-Sartorio** is a professor/researcher at the Universidad del Mar located on the Mexican Coast of Oaxaca. She has worked in the Mexican Ministry of Agriculture as part of the NAFTA negotiating team, and served as Mexico's Agricultural Counselor for Europe during the last stages of the GATT Uruguay Round.

**Gary Brester** is an Associate Professor in the Department of Agricultural Economics and Economics at Montana State University. He conducts research on livestock and grain issues, international trade, agribusiness management, and food safety. He teaches courses in farm and ranch management, agribusiness management, and demand analysis.

**Dave Ervin** directs policy studies for the Henry A. Wallace Institute, a non-profit research and education organization established in 1983 in Greenbelt, Maryland to encourage profitable and environmentally sound farming and ranching systems.

**Glenn Fox** is a Professor of agricultural and natural resource economics in the Department of Agricultural Economics and Business at the University of Guelph. His teaching and research interests include the economics of property rights and the philosophy of science.

**Terry Francl** is a Senior Economist, Public Policy Division of the American Farm Bureau Federation (AFBF). He is in charge of analysis of all farm-related policy proposals for AFBF.

**Murray Fulton** is a Professor in the Department of Agricultural Economics, and Director of the Centre for the Study of Co-operatives at the University of Saskatchewan. Besides cooperatives, his research includes competition, agricultural innovation and grain marketing.

**Jack Gellner** is Director of the Economic and Industry Analysis Division, Policy Branch, Agriculture and Agri-Food Canada, Ottawa and a member of the Workshop Coordinating Committee. His responsibilities include research, analysis and development on most aspects of federal agricultural and food policy.

**Ron Gibson** is a Vice President with Sparks Commodities Inc., located in Winnipeg. He has experience in business consulting in South-East Asia, and was a commodity and financial trader at the Canadian Wheat Board.

**Jill Hobbs** is Associate Director, Research with the George Morris Centre in Calgary. Her research interests include the application of transaction cost economics to supply chain management issues in the agrifood sector, and the economics of food safety and quality assurance.

**Barb Isman** is an Assistant Vice-President, Corporate Affairs at Cargill Limited in Winnipeg. Her responsibilities include supervision of government and public relations, Cargill's beef division in Canada, and Durafibre, the flax fiber processing operation.

**Bill Kerr** is a Professor of Economics at the University of Calgary. His research interests include international trade, international commercial policy and agricultural policy. He has published and consulted widely on the meat industry.

**Kurt Klein** is a Professor in the Department of Economics, at the University of Lethbridge, Lethbridge, Alberta. His research interests have been in production economics, regional agricultural models, and the economics of technology in agriculture.

**Ron Knutson** is the Director, Agricultural and Food Policy Center at Texas A&M University. He holds many extension, teaching and research capacities in the policy arena. He is also a member of the Board of Trustees of the Farm Foundation and a member of the workshop Coordinating Committee. In 1997, he was awarded the AAEA Policy Excellence Award.

**Chuck Lambert** is the Chief Economist for the National Cattlemen's Beef Association. He works with legislative and regulatory staff on matters that influence the outcome of beef industry economics, trade and marketing, and he conducts economic analysis on proposed policy changes and market factors impacting the beef industry.

**Bill Leask** is Executive Vice President of the Canadian Seed Trade Association, located in Ottawa. He began his career in plant breeding and has served on several trade and government committees related to plant breeders rights, variety registration, plant safety and biotechnology. Bill was among the first to publicize significance and implications of supply chain linkages in the food industry.

**Enrique López López** is the Director General for the Mexican Cattle Feeders Association. He manages the activities of the association and is an analyst of the cattle industry in Mexico.

**Al Loyns** is an original member of the Workshop Coordinating Committee. He was Professor, Agricultural Economics at the University of Manitoba and is now President, Prairie Horizons Ltd., a consulting company located in Winnipeg.

**Larry Martin** is Director of the George Morris Institute, University of Guelph. Larry is well known as a policy analyst with particular interests in the meat sector. The Institute is the only independent policy analysis organization in Canadian agriculture. The Institute has focused on supply chain relationships in the food industry.

**Don McClatchy** was formerly with AAFC, Ottawa working in marketing system and trade analysis. He is now consulting in the area of trade and public policy.

**Marty McVey** is with Agri Industries in Des Moines, Iowa. He is responsible for transportation issues and advice for this large grain cooperative.

**Karl Meilke** is Professor of Agricultural Economics and Business, University of Guelph. He is active in the International Agricultural Trade Consortium and is a member of the Workshop Coordinating Committee.

**Steve Meyer** is the Director of Economics at the National Pork Producers Council in Des Moines, Iowa. He analyzes economic issues related to the U.S. pork industry.

**John Murphy** is Vice President of Agricultural and Agribusiness banking, Royal Bank of Canada in Winnipeg. He has had a long career with the Royal, but has worked for both the federal and Ontario governments. He is active in professional organizations within agriculture in Canada.



**Antonio Yunez-Naude** is Professor, Centro de Estudios Economicos, El Colegio de Mexico in Mexico City. He researches the social and economic assessment of smaller-scale agriculture in Mexico.

**Barry Prentice** is the Director, Transport Institute and Associate Professor, Agricultural Economics at the University of Manitoba. His major research and teaching interests include logistics, transportation, agribusiness marketing, and commercial trade policy.

**Martin Rice** is Executive Director of the Canadian Pork Council in Ottawa. His responsibilities include managing policy and government relations on behalf of hog farmers, and liaison with Canadian and international industry associations. He is a member of CAES executive council.

**Salomon Salcedo-Baca** is the Product Director of SERFIN, the third largest bank in Mexico. His responsibilities include designing strategies for new agricultural lending, problem loan collection and credit restructuring, and outlook analysis on Mexican agriculture.

**Dave Schweikhardt** is a Professor of Agricultural Economics at Michigan State University. In the past he has done work on the impact of NAFTA and GATT on U.S. and Michigan agriculture.

**Tom Sporleder** is Professor of Agricultural Economics at Ohio State University where he holds the Income Enhancement Endowed Chair. His research interests include value added marketing, vertical coordination in marketing channels, and agricultural cooperatives.

**Gary Storey** is Professor of Agricultural Economics at the University of Saskatchewan. His areas of specialization include marketing, trade and policy.

**Shelley Thompson** has held research positions with AAFC, the University of Saskatchewan and the Saskatchewan Wheat Pool (SWP). She is currently Manager, Planning and Development with SWP. She is also on the Executive Council of CAES.

**Bill Wilson** is Professor of Agricultural Economics at North Dakota State University. His primary research interests include international marketing and trade, competition and strategy, and transportation issues in grain. Bill has considerable consulting and research experience in the Canadian grain industry.

**W. Fred Woods** is the National Program Leader for Public Policy Research and Education at the Cooperative State Research Education and Extension Service (CSREES) of USDA. He coordinates extension public education for USDA. Fred is a member of the workshop coordinating committee.

**Linda Young** is Agricultural Policy Coordinator at the Trade Research Center at Montana State University, Bozeman. Her research has concentrated on trade and policy issues in the grains and livestock markets.

---

# Table of Contents

Executive Summary .....	iii
Foreword .....	ix
Acknowledgments .....	xiii
Workshop Authors, Discussants and Organizers .....	xv
Introduction and Objectives of Workshop <i>Ronald D. Knutson and R.M.A. Loyns</i> .....	1
<b>SECTION 1: ECONOMIC PERSPECTIVE ON COMPETITIVENESS .....</b>	<b>5</b>
Economic Perspective on Competitiveness Under WTO, NAFTA and FTAA <i>Thomas L. Sporleder and Larry J. Martin</i> .....	7
DISCUSSION Economic Perspectives on Competitiveness Under WTO, NAFTA, and FTAA <i>Murray Fulton</i> .....	33
<b>SECTION 2: STRUCTURAL DEVELOPMENTS IN THE GRAIN-LIVESTOCK SUBSECTOR.....</b>	<b>39</b>
Structural Developments in the U.S. Grains Subsector <i>Gary Adams and Linda M. Young</i> .....	41
Structural Developments in the Canadian Grains and Oilseeds Sector <i>Kurt Klein and Gary Storey</i> .....	65
DISCUSSION Canadian Seed Trade Association <i>Bill Leask</i> .....	93
DISCUSSION Sparks Companies Inc. <i>Ron Gibson</i> .....	97
The North American Livestock Industry: A U.S. Perspective <i>David P. Anderson, James Mintert, and Gary Brestler</i> .....	101

Structural Developments in the Canadian Livestock Subsector: Strategic Positioning Within the Continental Market <i>Jill E. Hobbs and William A. Kerr</i> .....	125
DISCUSSION	
National Cattlemen's Beef Association <i>Chuck Lambert</i> .....	145
DISCUSSION	
Cargill Limited <i>Barb Isman</i> .....	149
DISCUSSION	
National Pork Producers Council <i>Steve Meyer</i> .....	153
DISCUSSION	
Canadian Pork Council <i>Martin Rice</i> .....	157
AN OVERVIEW OF SOME OF THE COMMENTS FROM THE GENERAL DISCUSSION .....	160
Structural Developments in the Mexican Grain-Livestock Subsector: The Grain and Oilseed Subsector <i>Beatriz Avalos-Sartorio</i> .....	161
Structural Developments in the Mexican Livestock Subsector: The Case of Feeder Cattle and Beef Production <i>Roberto Aceves Ávila and Enrique López López</i> .....	187
Small-Scale Corn and Livestock Mexican Farmers <i>Antonio Yunez-Naude</i> .....	209
DISCUSSION	
SERFIN <i>Salomón Salcedo-Baca</i> .....	225
<b>SECTION 3: TRANSPORTATION</b> .....	<b>231</b>
Future Transportation Developments in the U.S./Canada/Mexico Grains-Livestock Subsector Under NAFTA and WTO <i>Barry E. Prentice and William W. Wilson</i> .....	233
DISCUSSION	
AGRI Industries <i>Marty J. McVey</i> .....	251

<b>SECTION 4: INSTITUTIONAL FACTORS INFLUENCING HARMONIZATION AND COMPETITIVENESS .....</b>	<b>255</b>
Agriculture, Trade and Structural Policy Under NAFTA and WTO <i>Don McClatchy and David Schweikhardt</i> .....	257
Environmental Policy Considerations in the Grain-Livestock Subsectors in Canada, Mexico and the United States <i>Dave Ervin and Glenn Fox</i> .....	275
<b>SECTION 5: IMPLICATIONS, RESEARCH NEEDS AND FUTURE DIRECTION .....</b>	<b>305</b>
American Farm Bureau Federation <i>Terry Francl</i> .....	307
Saskatchewan Wheat Pool <i>Shelley Thompson</i> .....	309
Secretariat of Agriculture, Livestock and Rural Development, Mexico <i>Roberto Aceves Ávila</i> .....	311
Agriculture and Agri-Food Canada <i>Ken Ash</i> .....	313
National Cattlemen’s Beef Association <i>Chuck Lambert</i> .....	317
AN OVERVIEW OF SOME OF THE COMMENTS FROM THE GENERAL DISCUSSION .....	318