



# Cooperative Program in Agricultural Marketing and Business

Department of Rural Economy  
University of Alberta



## Symposium 2003

### 'Branding, Labelling and Identity Preservation: What's in it for Agribusiness?'

**8:30 – 8:45**      **Welcome and Symposium Overview**

**8:45 – 9:30**      **Meat Traceability and Consumer Willingness to Pay**

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Traceable food systems have the potential of allowing one to track the inputs used to produce a food product backward and forward throughout the marketing chain. Such systems could potentially provide valuable information to consumers about verifiable characteristics of the food product, can improve the speed of product recall, and can help identify areas of inefficiency in the product marketing chain. This presentation reports results from a case study on traceability using auction experiments to develop willingness to pay (WTP) data for traceability and related product characteristics in red meat (beef and pork). An examination of WTP for meat is a timely topic given that major competitors and customers in the multi-billion dollar world red-meat market are implementing traceable red-meat systems at different rates and intensities. Results for auctions conducted in the US, Canada, the UK, and Japan are reported. Some of the findings are that subjects participating in the auctions were willing to pay a nontrivial premium for traceability, but the same subjects showed an even higher WTP for traceability-provided characteristics like additional assurances about meat safety and humane animal treatment guarantees. The implication is that producers can likely implement traceable red-meat systems profitably by tailoring the verifiable characteristics of red-meat products to consumer preferences.

**9:30 – 10:15**      **The Impact of Food Scares on Canadian Meat Consumption:  
Could Identity Preservation Help?**

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Food safety concerns in the world have dramatically increased in the past decade with regard to incidences of various animal diseases. Meat product contaminants such as *Listeria monocytogenes*, *Escherichia coli*, *Salmonella*, Bovine Spongiform Encephalopathy (BSE), dioxins, hormones and antibiotics affect the health of consumers. It is practically impossible to completely eradicate the meat product contaminants from the supply chain. Unanswered questions are: Do food safety issues in foreign countries have spill over effect on the domestic demand for meat and vice versa? How long do the effect of food safety incidences/recalls last? Can information such as advertising ameliorate the impacts of food safety issues on demand for meat? Are consumers willing to pay for the costs of traceability and identity preservation to reduce food safety issues?

In this study, the potential impacts of media food safety coverage on consumer's demand for meat products in the Canada are investigated. Canadian food safety indices are constructed separately for beef (coverage of BSE in U.K., France, Germany, Japan, Brazil, and coverage of E. coli in the U.S. and Canada) and chicken (coverage of Salmonella and E. coli in Canada and U.S.) allowing for the investigation of separate own- and cross-commodity impacts from food safety concerns. Evidence is found for the existence of cross-effects of beef food safety media coverage on pork and chicken. Beef food safety media coverage has spill over and substitute effects on pork and chicken consumption, respectively.

**10:15 – 10:45 Coffee**

**10:45 – 11:30 Impact of Nutritional Labelling in the U.S.**

Rudy Nayga, Texas A&M University

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In an effort to make nutrition information available to consumers, nutritional labeling regulations, mandated by the Nutritional Labeling and Education Act (NLEA), went into effect in the United States in May 1994. The regulations require disclosure of information on the nutritional content of foods, nutrient content claims, and health claims. Our work focused on the effect of nutritional labels on Americans' overall diet and their intake of specific nutrients. The findings suggest that, albeit small, nutritional labels affect consumer choice and provide some improvement in dietary quality of U.S. consumers.

**11:30- 12:15 Labelling Policy for GM Foods: Pragmatism in Action or Policy Failure?**

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Increasing consumer and public wariness of genetically modified [GM] foods has led to the development and application of labelling policies for foods derived from modern biotechnology. In many cases, a mandatory labelling approach has been chosen for this purpose. In the U.S. and Canada, voluntary labelling has been identified as the chosen approach. However, detailed regulations that would allow a voluntary labelling policy to become effective have not yet been achieved, despite lengthy processes of public and stakeholder consultations. This paper explores factors that may explain the lag in policy development for the labelling of GM food. These include the economics of information associated with labelling, the dichotomy in stakeholders' interests associated with different policy approaches to labelling, and the approach and definitions currently in place in Canada's Novel Foods Act. The question of whether the lag in development of a regulatory structure for the labelling of GM foods is a policy failure, or merely an expression of a pragmatic approach to a contentious issue, is assessed.

**12:15- 1:30 Lunch and short research poster presentations**

**1:30-2:15 Identity Preservation in Canadian Grain and Oilseed Markets**

Pat Van Osch, Canbra Foods

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**2:15-3:00pm Cooperative Marketing in Specialty Grains and Identity Preserved Grain Markets**

Bill Wilson, North Dakota State University

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Marketing of specialty and identity preserved grains has become an important strategy in the grain marketing industry and is being driven, in part, by consumer and processor demand and an interest in non-GM products. This study provides background and practices of numerous organizations involved in marketing of specialty/identity preserved grains. Supporting marketing activities are reviewed. Key factors in the success (or failure) of their efforts are identified. Major challenges facing the participants in the specialty/IP grain marketing industry are discussed. The primary focus is on the role of agricultural cooperatives and producer owned alliances.

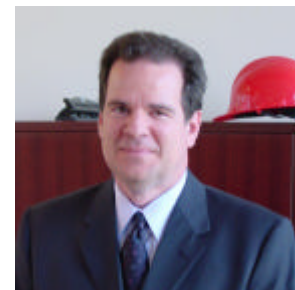
**3:00-3:15pm Coffee**

**3:15-4:00pm Branding in the Canadian Poultry Industry**

Rob Willmott, Lilydale Foods

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**4:00-4:45pm State Branding of Gift Shop and Restaurant Menu Items: Consumers' Willingness to Pay for Local Products.**

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The potential for effectively differentiating food products grown or made in Arizona and sold through restaurants and retail shops serving tourist was evaluated. Conjoint analysis was used to determine the value tourists place on information on product origin. It was found that origin is a product characteristic that Arizona tourists value. They were found to be willing to pay a \$4.66 premium for menu items made with Arizona products; if the Arizona Grown logo was also placed on the menu, they would pay an additional \$2.57. The use of this logo and the Pride of Arizona logo were also effective in differentiating Arizona packaged food products, resulting in significant price premiums.

**4:45-5:00pm What does it mean for agribusiness?**

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## Summary of Poster Presentations: Symposium 2003

### Poster: **Describing Recent Market Power Trends in the Canadian Poultry Processing Industry.**

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Past studies have found evidence of market power in the Canadian poultry processing industry. This study examines the poultry processing segment of the supply chain to see if the processors exert a significant amount of market power. The Canadian industry can be characterized by a number of firms which produce poultry meat. They have no influence over the input price since this has been negotiated as apart of the supply management system. However, if the firms have oligopoly power then they have influence over the output price. Over the 1990's the industry has been rationalizing where the number of firms is in decline yet the value of the shipments of the remaining firms is increasing. By using aggregate data to represent the poultry processing industry as a whole, conjectural elasticities are used to determine how closely the industry operates to perfect competition.

### Poster: **Cost Implications of Alternative GM Tolerance Levels: Non-Genetically Modified Wheat in Western Canada**

Author: [Izzy Huygen](mailto:ihuygen@ualberta.ca)

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As GM wheat becomes available, modifications in grain handling systems are inevitable. Changes will lead to increased costs for non-GM wheat since it is required to be Identity Preserved (IP). This process will guarantee product content to export customers that stipulate non-GM wheat in their purchase specifications.

This research involves the identification and estimation of differences in costs along the supply chain for wheat as the levels of tolerance for GM content are varied in contract specifications for non-GM wheat. The relationship between IP costs and tolerance levels is assessed. Currently, a wide range of tolerance levels is being proposed in regulatory standards in various countries. For the purpose of this study, the tolerance levels selected for evaluation are: 5%, 3%, 1%, 0.5% and 0.1%.

Three potential IP wheat-handling models are identified:

1. Segregation of non-GM and GM wheat within receiving/storing/shipping facilities;
2. Designation of specific facilities for non-GM wheat only; and
3. Containerization.

Structured questionnaires and interviews were conducted with industry experts throughout the supply chain including Plant Scientists, Agrologists, Seed Growers, Producers, Primary Elevator Operators, IP coordinators, Terminal Elevator Managers and Grain Testing professionals. From these results, the extent of the differences in costs of segregating non-GM wheat according to selected tolerance levels is being estimated. Based on these estimated differences in cost, assessment of the cost-effectiveness of the different grain handling models is also being carried out at the various tolerance levels for GM content.

### Poster: **Implications of Pricing Strategies at the Dairy Processing Level**

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Recently the Canadian Dairy processing industry has evolved into a highly concentrated marketplace. Explanation of the industry concentration is primarily due to firms striving to make best use of company objectives such as maximizing profits. Accompanying many of the Dairy acquisitions has been an economic structural shift from cooperative based processors to privately owned processors. In the tightly controlled Canadian Dairy market changes in economic structures to key industry players will result in different marketing approaches and strategies to milk pricing. This study will analyze producer and consumer consequences of differing pricing strategies at the processing level between firms such as privately owned processors (Saputo) purchasing a cooperative processors (Dairyworld).

Poster: **Determinants of Foreign Direct Investment and the Multinationals Choice of Entry Mode into the Canadian Agricultural Food Industry**

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The increasing presence of Multinational Enterprises or MNE's in national industries raises some concerns about their impact on the future of domestic enterprises. High expectations of MNE's drive economies to make significant efforts to attract foreign direct investment or FDI even though its' overall benefits are not known with certainty. In general, about 25% of the Canadian food, beverage and tobacco manufacturing industry is controlled by MNE's, however when looking at specific sectors such as dairy and grain manufacturing, the share of foreign control greatly exceeds 25%. Therefore it is important to analyse the factors that are driving MNE's to invest in these sectors, but also to look at the impact of FDI on trade and on productivity growth. Determinants of the choice of entry mode may potentially be important to the impact of FDI on domestic industries. For the analysis of the determinants of FDI, import tariffs, labour costs, cost of materials and lagged values of FDI were found to be statistically significant. Positive and significant evidence of import tariffs as an FDI determinant was found; labour and other input costs were found to have a statistically significant negative impact on FDI inflows. With regard to choice of entry mode; MNE's with higher international management experience, profitability, and with the parent company located geographically closer to Canada are more likely to enter a market by acquisition avoiding the dispersion of their competitive advantages.

Poster: **Market Power in the Canadian Red Meat Processing Industry and its Changes during the 1990's**

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A conjectural variations model is performed to obtain measures of the degree of market power in the Canadian red meat processing industry. Previous studies indicate that the red meat processing industry in Canada is not characterized as being perfectly competitive and that there is a certain degree of oligopoly power. Continuing consolidation of the industry during the 1990's suggests that the degree of market power might have increased giving the industry the ability to continue influencing price. Results indicate that the existence of oligopoly power characterizes this industry and that the Lerner index, which is a measure of the degree of market power, has stayed relatively constant from the mid 1980's to the mid 1990's.

Poster: **International Poultry Industry and Market Power**

Author: Xiaochao Qian

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This study examines the impacts of international market power on the Canadian poultry industry. Market power in Canada's, U.S. and EU 's chicken industry is examined along with retail chicken prices and consumption trends within these three countries. Results suggest that market power is present in all three countries chicken industry. The degree of market power within Canada's poultry industry is greater than both the United States and European Union.

Poster: **Modelling the Demand for Meat in Canada: Does the Functional Form Matter?**

Author: Cindy Wang

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This research project is focused on modeling the meat demand in Canada incorporating informational factors (such as advertising and food safety). There are a variety of informational factors that affect the demand for meat. These include things such as generic advertising, brand advertising, restaurant advertising and media coverage of food safety information. Using two-stage AIDS and Translog demand systems, our study assesses the Canadian demand for meat using time series data on meat advertising expenditure, food safety media coverage, prices of meat, and meat disappearance for the period 1977-2001. The importance of functional form in estimating meat demand is highlighted in the results.



Poster: **Principal-Agent Problems and Capital Constraints in Canadian Agribusiness Co-operatives**

Author: Getu Hailu

Supervisor: Scott Jeffrey and Ellen Goddard

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This is a current research project being undertaken by the Cooperative Program in Agricultural Marketing & Business. The project is focused on current capitalization challenges being faced by some co-operative agribusiness firms. These challenges include i) capital constraints on co-operative agribusiness firms arising from the changing business environment, ii) divergence in financial risk attitudes between managers and their boards of directors, and iii) inherent agency problems (e.g., horizon problem and portfolio problem) associated with debt financing. The agency problem, if it exists, may result in reduced efficiency in resource allocation because of the indirect costs of indebtedness. Divergence in risk attitudes, if present, may result in increased transaction costs of negotiating terms of the transaction. In any type of business, capital structure and cost of capital are co-determined through financial decision-making, and the total cost of capital to the co-operative will reflect costs related to agency problems, divergence in attitudes, and risks of financial exposure. Overall, these challenges make it increasingly difficult for co-operative agribusiness firms to adhere to traditional co-operative principles.

The objective of the study is to develop a risk management model for co-operative agribusiness firms in (Western) Canada. The outcomes of this study are expected to provide information that will be useful for co-operative members/managers and public policy makers concerned with the efficiency and sustainability of Canadian agribusiness co-operatives.

Poster: **Genetically Modified Food Labelling and Consumer Choices for Pre-packaged Sliced Bread**

Author: Wuyang Wu

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This poster summarises a study of Canadian consumers' potential responses to two labelling strategies for food with GM ingredients: mandatory labelling versus voluntary labelling. The data were generated in December 2002 from responses of 437 consumers across Canada to three sets of choice experiments that were applied in a computer-aided survey. The statistically-designed survey was applied to a representative panel of Canadian consumers with the assistance of a national market research firm. Using a split sample approach, consumers were automatically assigned to one of two labelling contexts: mandatory labelling, or voluntary labelling. For purpose of statistical analysis, a mixture of both approaches was applied to a third group of respondents. The results of initial assessment of the impact of labelling on consumers' choices applying a standard Logit model are reported. A more general Mixed Logit model is also applied to explore heterogeneity among respondents' choices. Key conclusions are that identification of the presence of GM ingredients in bread products, as in a mandatory labelling context, significantly decreases the likelihood of consumer purchases; appreciable price discounts are required for many consumers to choose to purchase GM-labelled bread. In contrast, label statements signifying absence of GM ingredients (which in a voluntary labelling context are the only identification of GM content) significantly increase stated purchasing intentions. The implicit price premium associated with label statements indicating absence of GM content is reported.