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## Executive Summaries

### **NAFTA's Impact on the North American Agriculture—a Logistician's Perspective**

BY RICHARD YOUNG

NAFTA is improving the field of agriculture in Canada, the United States, and Mexico. It is not doing so by enacting measures intended to improve the agricultural sector directly. Rather, the improvement is the indirect result of agriculture's dependence on transportation, telecommunications, intellectual property rights, and investment capital—all of which have been substantially improved by NAFTA. Improvement of these four areas has improved agriculture and will continue to improve it in the future.

The late twentieth century has seen an increasing trend for nations throughout the world to create and participate in trading blocs. The North American Free Trade Agreement (NAFTA) of 1992 was designed to enable the nations of North America to compete more effectively in an increasingly global market, one increasingly dominated by trading blocs, which may prove to be the most powerful economic systems yet devised.

One very effective way to lower the cost of these factors and linkages is the creation and use of trading blocs. By understanding how trading blocs function, the special status of agriculture in North America, the U. S.'s trade relations with Canada and Mexico, and NAFTA's contributions to four sectors of vital importance to agriculture, we will be able to appreciate how NAFTA has improved agriculture outlooks in North America. Further, we will be able to determine more accurately what NAFTA will improve next.

Agriculture has clearly benefitted from the initiatives taken thus far, but agriculture's supply chains throughout North America should be expected to benefit even more as NAFTA's provisions continue to be implemented, thereby further reducing and eventually removes the bureaucratic complexities of doing business. The bottom line: look for NAFTA's improvements to continue to foster the rapid growth of supply chains throughout the three NAFTA members. Because improv-

ing the efficiency at any point in the supply chain affects the overall productivity of that chain we can conclude that while NAFTA's liberalizations do not affect agriculture directly, they clearly will affect manner in which agriculture, as an industry, works in general within North America.

## **Information Strategies for Agricultural Exporters**

BY DEBORAH STREETER AND NELSON BILLS

Focus groups were held to explore issues raised by a recent survey of agricultural exporters conducted by the USDA. Focus groups involving a total of 28 participants were convened to investigate the information-seeking behaviors of export firms and businesses that are considering entry in off-shore markets. Strategies for addressing information gaps and knowledge of and attitude toward new (Internet-based) technologies to deliver information on exporting were also explored.

The study revealed some important divergences between new entrants and those more experienced at selling overseas. While experienced exporters have well-developed informal networks of information and focus their search strategies on better long term and short term supply/demand information, would-be exporters tend to be more concerned with locating a qualified buyers list, and getting information on export procedures, and trade logistics. In addition, would-be exporters expressed frustration with two types of obstacles where information is least likely to solve the problem: Time lags when shipping perishable goods and exogenous factors (such as precipitous changes in a foreign government).

There was a cautious attitude among participants on new information technologies due to the confusing nature of the Internet and the lack of security for transactions. For those interested in export promotion, the results of the study suggest two strategies: (1) support efforts which speed the widespread adoption of information technologies throughout the export marketing channels, and (2) explore the most effective and efficient ways to provide information using newer technologies, focusing on good filters, useable interfaces and appropriate content.

## **Consumer Characteristics Associated with Low Fat, Low Cholesterol Foods**

BY RODOLFO M. NAYGA, JR.

Due to increasing evidence linking diet and health, consumers are now more aware of the importance of healthful diets. In fact, the overall level of concern about nutrition and more specifically, about fat and cholesterol content of foods has

increased significantly. Also, a large majority of food shoppers, as reported by the Food Marketing Institute, have changed their diets to more healthful ones. Consequently, sales of nutritionally improved foods such as low fat and low cholesterol food products have significantly increased in the last decade. Supermarket sales of nutritionally improved foods grew faster than sales of their regular counterparts in the last decade.

This study identifies several characteristics and factors of individuals who are more likely to try low-fat, low-cholesterol foods. The analysis was performed using logit analysis. The results imply that the following individuals are more likely to try low-fat, low-cholesterol foods: those with high incomes, whites compared to blacks, females, those with smaller households, those with high body mass index, those who have a better perception of their own health, those who are aware of the link between diet and disease, nonsmokers, and those who do not agree that people are born fat or thin and that there is nothing one can do about it.

Knowledge of these characteristics and factors can be used as a guide in developing marketing programs for products claiming low-fat or low-cholesterol contents. Since consumer preferences in most of the civilized world are moving in parallel directions, the findings in this study might be of interest to market analysts not only in the US but elsewhere as well. These results may also have some important implications for government education and public nutrition programs. The findings in this study could be used as a guide in directing government education programs dealing with the intake of fats and cholesterol toward certain population groups.

## **Analysis of Quick-serve, Mid-scale, and Up-scale Food Away from Home Expenditures**

BY PATRICK J. BYRNE, ORAL CAPPS, JR., AND ATANU SAHA

While analyses for aggregate food away from home (FAFH) expenditures have been recorded in the literature, there has been little focus on disaggregate FAFH expenditures. THE The only previous empirical work done for disaggregate FAFH expenditures found the value of household time was found to be a key determinant for increased consumption at limited-menu facilities, while full-menu expenditures were less affected by the value of household time (McCracken and Brandt, 1987). Estimates of income elasticities were 0.34 for full-menu expenditures and 0.04 for limited-menu expenditures, meaning that an increase in income would raise expenditures at full-menu restaurants eight times more than at limited-menu restaurants. Household size and composition were found to be more important determinants for limited-menu expenditures than for full-menu expenditures. Estimates of household size elasticities were 0.26 for limited-menu expenditures and

0.02 for full-menu expenditures. Because the information for the McCracken and Brandt (1987) study was from the 1977-1978 USDA Nationwide Food Consumption Survey, these results have become somewhat dated.

The main objective of this paper is to investigate the effects of socioeconomic and demographic variables, both on the decision to consume FAFH by facility and on the decision of how much to spend on FAFH by facility. In this analysis, we consider three types of commercial food-service facilities: (1) quick-serve; (2) mid-scale; and (3) up-scale.

Certainly, evaluating FAFH participation and consumption is a complex procedure. Marketers and analysts must consider an extensive combination of factors in order to understand household behavior patterns. The NPD data set is large and detailed, but it still leaves some gaps in our understanding. Additional research that would include information on prices and quality differences within categories would enhance our knowledge for household behavior with regard to FAFH.

## **Value Based Marketing for Fed Cattle: A Discussion of the Issues**

BY SCOTT W. FAUSTI, DILLON M. FEUZ, AND J. J. WAGNER

Demand for beef in the United States began to weaken relative to the demand for pork and poultry in the 1970s. The issue of improving beef's competitive position against other domestic meat products and foreign imports has been discussed widely by groups associated with the beef industry. One possible strategy that has been seriously considered is a Value Based Marketing System (VBMS) for fed cattle.

According to a 1996 Packers and Stockyards Administration report, 55% of all slaughter cattle marketed were sold live weight in 1994. The practice of selling slaughter cattle on an average price basis has been cited as being partially responsible for the decline in the competitive position of beef. The industry response to the perceived problems associated with average pricing is the development of individual carcass based pricing systems, which expand the use of premiums and discounts beyond the traditional dressed weight & grade pricing system. All major packing companies currently offer producers the opportunity to sell their cattle on an individual carcass basis.

The literature discussing the concept of value based marketing for fed cattle is divided on why selling fed cattle on an individual carcass basis (e.g., grid or formula pricing system) has not dominated the cash market and supplanted average pricing. The price discovery literature argues that informational disparities over carcass quality combined with risk averse behavior on the part of both the packer and the producer explains the continued use of average pricing in the cash market for slaughter cattle. The value based marketing literature, primarily written from

an industry or animal science perspective, asserts that producer distrust of the USDA grading system and packing industry explains the continued use of average pricing in the cash market for slaughter cattle.

A discussion of the issues associated with this debate is provided; along with a comparative empirical study of the revenue effects of selling fed cattle dressed weight, relative to selling on an individual carcass basis. The results of the empirical study indicate that selling cattle on a grid system increases revenue variability, with or without carcass quality estimation error, relative to the dressed weight pricing system.

Our empirical results demonstrate that average pricing, with estimation error, favors producers who sell below-average cattle and penalizes producers who sell above-average cattle. While our results are tied to a specific market day, the implications of the results suggest that risk aversion and producer bias toward VBM are potential long-run barriers to producer acceptance of the VBM concept. If our supposition is correct, then average pricing will continue to dominate the cash market. If average pricing continues to dominate the cash market, then the supply response predicted by supporters of VBM, through changing genetics and management strategies, will be limited in scope.

## **Macroeconomic Conditions and Agribusiness Profitability: An Analysis Using Pooled Data**

BY J. SHANNON NEIBERGS

Theoretical and empirical insights into the linkages between firm profitability and macroeconomic conditions are developed for nineteen agribusinesses. Linkages between profitability and macroeconomic conditions depends upon which factors in the macro-economy are most strongly linked to the business and how these linkages function. Determining how macroeconomic linkages differentially affect firm profitability, would allow agribusinesses and policy makers to develop efficient management strategies and policy recommendations. The objective of this paper is to investigate linkages between macroeconomic conditions and the financial performance of individual agribusinesses.

To be included in the study, a firm had to exist at the start of the study, which was 1960, and have agribusiness as its primary focus. Nineteen firms meeting these criteria under two industry classifications were included in the study, four machinery-equipment and fifteen food manufacturers. Annual financial data was collected for these firms from 1960 or until the last year they operated. An extension of traditional pooled data was applied to account for both firm financial failure and current observations, through application of seemingly unrelated regression with unequal number of observations.

Empirical results indicate the relative importance of fiscal and monetary policies influencing firm profitability, and the differential impacts between machinery-equipment and food manufacturing agribusiness groups. The differential impacts between agribusiness groups stem from differences in product demand elasticity in the market segments in which they operate, differences in financial structure and differences in response to macroeconomic conditions. Macroeconomic linkages are critical for machinery-equipment manufacturers and statistically insignificant for food manufacturers.

Results indicate that managers of capital intensive industries are limited in their ability to improve profitability relative to macroeconomic conditions, because of the high capital intensity associated with these firms, and the relatively elastic demand for their product. In comparison, food manufactures have stable profitability, have a relatively low capital investment, and face an inelastic demand for their product. Knowing their profitability is relatively stable, food manufacturers can make strategic decisions regarding equity structure and competitive strategies.

## **Hedonic Prices of Malawi Burley Tobacco**

BY B. WADE BRORSEN, DUNCAN D. SAMIKWA, AND LARRY D. SANDERS

Tobacco is notorious for being one of the most difficult commodities to grade. Here, we determine the implicit prices of various tobacco characteristics using a hedonic price model. The factors affecting the price received for burley tobacco include reputation of the producer, month of auction and lot size in addition to variables representing quality characteristics. Many of these characteristics can be controlled by producers through production, harvesting, and curing practices. The implicit prices should help farmers evaluate whether they should adopt processes to increase quality.

A hedonic regression is estimated using data from an auction market in Malawi. The method consists of regressing the price received for a given lot against characteristics of the lot. The grade characteristics affecting price, in order of importance, are group (the part of the plant from which the tobacco was taken), color, and a quality measurement. The company selling the tobacco was also important, which means reputation selling was present. Reputation should be important only when the grading system is inadequate.

Tobacco producers have some ability to control quality and color through the production and curing methods used. The estimates of the discounts/premiums for quality and color could be used as part of an extension program to encourage producers to adopt methods which would increase the quality of their tobacco.

In spite of the large number of factors included, only about half of the price variation across lots could be explained. Thus, the difficulty of grading tobacco is con-

firmed. Since a universally acceptable grading system is unlikely, and attempts to develop an electronic market will need to include pictures of the tobacco and may need more precise measurements of characteristics such as texture, aroma, and uniformity.

## **Case Writing: An Art and a Science**

BY KENNETH HARLING AND EMMY MISSEK

The study of management in the food system is undergoing a fundamental change as case studies become an increasingly popular approach. They are attractive because they explore managerial challenges in their real world context. Unfortunately few case studies have been written which deal with management in the food system. Part of the problem is that many studying it are unfamiliar with case studies and how to write them.

This paper examines the case writing process. Its three sections describe how to go about writing case studies, which can be used to train managers. The first section sets the context within which case writing occurs. The second section presents ten characteristics of effective cases. And the final section describes a process for writing a case and an accompanying teaching note.

A case, which describes a situation or problem facing practicing managers, is a way of simulating real world situations which managers must deal with. The case is prepared by a writer who works with managers who were exposed to the situation.

The characteristics of effective case are: it tells a story, it arouses the readers' interest, it is accessible to readers, it teaches a managerial skill, it requires that a managerial problem be solved, the problem in it has a history, it includes quotations, the reader can empathize with the central character in it, it is set within the past five years, and the it is short and simple.

The process for writing a case starts with preliminaries including deciding them to write a case. Once this has been decided the case writer does prewriting—collecting data and organizing it. Then comes the process of writing the case and its accompanying teaching note. Finally the process is wrapped up by test teaching the case and revising it based on the teaching experience.

Case writing has benefits both for managers in the situation written about and managers who study the case afterward. Those managers involved in the case writing experience find it helps crystallize their experiences, allowing them to learn more from the situation and gain a fresh perspective on what happened. Those managers who study a written case find themselves in a situation that colleagues faced and have an opportunity to develop their managerial skills so that they could deal with such a situation in future.