FARE Talk

FARE Talk is a series of podcasts available on the FARE website. They are conversations about contemporary topics relevant to food, agricultural, and resource economics.

For instance, in the “Dutch Disease” podcast, FARE Professor, Dr. B. James Deaton, interviews Jeremy Leonard on a recent paper he published, “Dutch Disease or Failure to Compete? A Diagnosis of Canada’s Manufacturing Woes.” Their discussion provides an overview of the empirical approach Jeremy and his colleagues used to examine whether the recent resource boom negatively influenced manufacturing output in Canada. Jeremy concludes that Canada suffers a mild case of Dutch disease and that the Dutch Disease effect does not likely explain Canada’s manufacturing woes.

Find FARE Talk at http://fare.uoguelph.ca/FARE-talk/index.html

Introducing FARE Share

Welcome to the first issue of FARE Share, a newsletter we are quite pleased to be publishing from the Institute for the Advanced Study of Food and Agricultural Policy in the Department of Food, Agricultural and Resource Economics (FARE) at the Ontario Agricultural College (OAC), University of Guelph. Our faculty and students continually address key issues and develop insights in Canadian food and agriculture and we want to communicate these through FARE Share.

For readers who aren’t familiar with our newly formed Institute, its mission is to provide independent, credible, and timely policy analysis with respect to socially significant food and agricultural issues. On April 5, 2012, the Institute hosted a conference in Ottawa called “Growing Our Future: Making Sense of National Food strategies” which brought together leading agricultural economists to discuss the strengths and weaknesses of various strategies. In addition, USDA’s Chief Economist Dr. Joe Glauber was brought in to discuss the upcoming US farm bill.

The department of FARE is a research-intensive department that emphasizes our undergraduate majors in the Bachelor of Commerce program (Food and Agribusiness) and Bachelor of Arts program (Agricultural Economics). Additionally, our department has an exceptionally strong graduate program at both the Masters and PhD levels. The department is very pleased by the numerous opportunities that await our Bachelor’s, Masters, and PhD graduates.

In this bi-yearly newsletter, you’ll find out facts and trends in Ontario agriculture. You’ll also gain a keen understanding of the economic realities that affect Canadian agriculture. In this issue, Professor Getu Hailu discusses food prices and how producers can improve corn and soybean marketing decisions using basis analysis. Occasionally, we’ll offer leaders in the industry an opportunity to voice their views. In this issue, Farm Credit Canada has contributed on the growing bioeconomy and related opportunities. In each issue, we’ll also highlight some facts and statistics and let you know which of our FARE Talk podcasts are new and relevant.

We hope you enjoy this inaugural issue.
Growing the bioeconomy

In today’s world, consumers, producers, industry and government all grapple with tough questions about food security, energy consumption, economic volatility and resource use. While it may not provide all the answers, the bioeconomy does offer some viable solutions.

A number of complex macroeconomic drivers impact the pace at which the bioeconomy grows, including global population growth,
Producers make complicated financial, production and marketing decisions every year. The success of these decisions directly depends on many economic factors, especially commodity prices.

The prices of commodities are determined by the interaction of demand and supply forces at both the global and local market levels. For many agricultural commodities, world prices — the futures contract prices — are established in key markets such as the Chicago Mercantile Exchange Group (CMEG). The futures contract prices are used by local grain producers, grain traders and processors as a benchmark in determining the price of grain at the local level.

The actual local cash price received for a commodity traded on these markets takes the world price and adjusts it for local factors such as storage availability and costs, transportation availability and costs, interest rates, and exchange rates. The adjustment, or local basis, is the difference between the local cash price and a corresponding price of futures contract after adjusting for exchange rate.

Basically, the basis localizes the world price. Local basis varies over time, over space, by quality and by agents. The basis provide signals to farmers whether to sell now or later; and whether to accept a supplier’s offers or a buyer’s bid; which buyer or seller to use; when to purchase, sell, or store a crop; when to close a hedge; whether, when, in what delivery month to hedge. Thus, knowing the historical distribution of local basis and factors affecting local basis is valuable in evaluating current cash prices offers and local price discovery, and ultimately is a key to improving profitability.

While there are many private and public assessments of current and predicted movements in global markets such as the CMEG, there are ongoing questions surrounding what causes fluctuations in crop basis in Ontario, and there has been very limited analysis to explain changes in the basis.

Some of factors causing basis to fluctuate are: local supply and demand, transportation availability and cost, storage availability and cost, seasonality of harvest and quality. In economic theory, the basis is assumed to depend on the interest cost of capital tied up in inventory, the costs of storage, and a convenience yield to holders of the physical commodity. An econometric study conducted by Hailu, Maynard and Weersink (2012) provides some insights into the causes of variations in the basis for corn and soybeans in Ontario.

In recent years, fluctuations in economic variables such as exchange rates and commodity prices have had destabilizing effects on the net income of many farms. After years of decline in real prices,
CMEG prices jumped considerably in the fall of 2006. Average prices are now double their values earlier in the decade and this increase has been accompanied by a significant increase in volatility. The empirical methods used to explain basis must account for structural changes in the market that may have occurred over the last several years, such as corn being used for ethanol production. In much of the previous decade’s relatively constant basis, there wasn’t a need to examine the factors affecting the basis. Since 2007, however, the basis has dropped and become more variable since the general commodity price rise.

For example, an Ontario farmer wishing to sell soybeans harvested in the fall of 2010 would have received a basis price of approximately -2.50 in mid-November, which when added to the nearby CME Group of approximately US$11.00, would have resulted in an offer price of CDN$8.50. If the 2010 crop was stored until mid-April 2011, the basis rose to -0.50 and the nearby futures price also increased to US$13.50 resulting in a cash price offer of CDN$13.00. The basis quoted to farmers reflects a conversion in currency so one of the reasons for the decline in the Ontario basis for corn and soybeans is the appreciation of the Canadian dollar. However, a decline is evident even after adjusting the basis for the exchange rate (see Figure 1).

Hailu, Maynard and Weersink (2012) conducted an empirical analysis for the basis of corn and soybeans in Ontario. The purpose of their paper is to examine the factors affecting the basis for Canadian corn and soybeans with time-series econometric techniques that accommodate potential structural breaks. Hailu, Maynard and Weersink considered a number of econometric specifications to examine whether and to what extent the interest rate, inventory levels and transportation costs have influenced the basis for corn and soybeans in Ontario.

Here are some of their results:

- **Strong evidence of an interest rate effect for both corn and soybean**, higher interest rates increase the opportunity cost of storage and thus decreases the basis.

- **Transportation cost has a negative effect but only for soybeans**, which is more likely to be imported to or exported from Ontario than corn that tends to stay within local regions of Ontario. Rise in transportation rates, weakens basis for producers in the local market.

- **Inventory levels have a negative effect but only for corn basis**, which is more likely to be affected by local supply issues given its greater use within production regions.

- **Supplies within a season had the expected effect**, as the basis for both corn and soybeans was lowest at harvest time.

The study concludes that higher interest rates – forgone benefits that could be earned on the stored grain or interest paid on working capital tied up in grain storage – weakens basis and discourages grain storage and encourages grain sales on the local market. For local farmers, a shortage of transportation and an increase in transportation cost from, for example, higher fuel costs, may weaken the basis. Storage, transportation, and local supply and demand situations are all key variables to consider when forecasting local basis movements and deciding whether to sell or store.