COLUMN

Big data and agriculture markets: Part 1

We're awash in market information and using modern approaches can help manage and understand it all

DAVID DERWIN
Hedging your bets

Big data has got a lot of attention: from online shopping patterns that encourage you to buy, to life insurance to lower premiums and, of course, to the financial markets to increase returns and reduce risk.

The agriculture industry has seen plenty of number crunching focusing on production and operations information technology, crop sciences advancements and high-precision equipment. In this world of big data, farmers gain an advantage by comparing field data, fine tuning fertilizer application rates or studying combine and harvest efficiencies.

Farm marketing and hedging strategies must stay ahead of the curve as well. However, the marketing and risk management side of farming has not received enough scientific analysis and attention to detail.

Over the past 20 years, I've read numerous studies, reports and surveys that have shown that only between five and 10 per cent of Canadian farmers use market-based options and futures hedging tools to manage their farm revenues. This compares with around a third of farmers in the U.S.

It's a bit surprising to see that difference, but there are reasons for it. The two countries have very different grain storage, handling and delivery systems. There's the lingering decades-long influence of the Canadian Wheat Board's now-defunct single desk. While the two countries are very similar there are different attitudes towards business and markets in Canada and the U.S. In this U.S. a more developed commodity futures industry has educated American farmers, and promoted and encouraged the use of these tools.

"Farmers can grow the best crop in the world, but many agree that their marketing needs improvement."

The objective of this three-part series is to address the myths, misperceptions and opportunities in agriculture commodity marketing.

What do we know?

Farm businesses need to implement the marketing advantages uniquely available to them to level the playing field between farmers and other market participants.

Part 1 will review what we know now and where we are today. Part 2 will explore some myths and misperceptions and opportunities in agriculture commodity marketing and hedging. Part 3 of the series offers up some opportunities and provide some real-time marketing and hedging solutions for farm businesses.

What do we know so far?

There have been some attempts to quantify and apply rigorous scientific analysis to farm marketing and hedging with a couple of larger studies done over 10 years ago.

In 2000 and then again in 2006, professors at the University of Illinois undertook performance studies of grain market advisory hedging services for wheat, corn and soybeans. The main conclusions of these studies were:

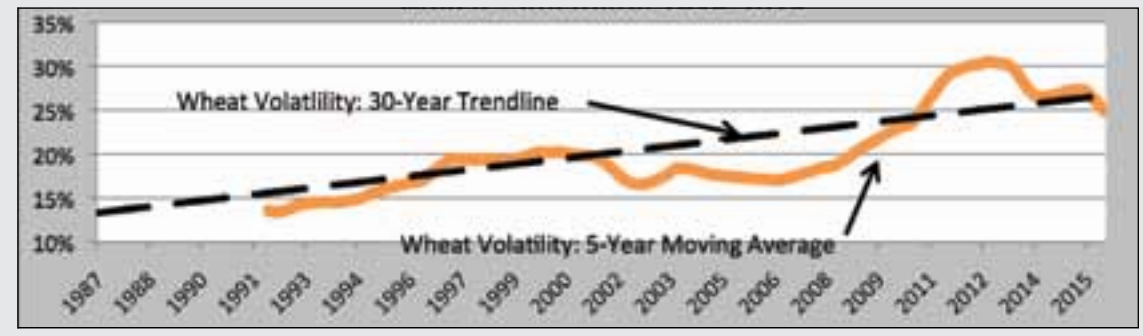
- "There is limited evidence that advisory programs as a group outperform benchmarks (including selling equally throughout the year), particularly after considering risk."
- "… the results provide little evidence that future advisory program pricing performance can be usefully predicted from past performance."
- "… producers selecting top-performing programs based on a given year, and expecting them to continue to be top-performing funds, would actually experience just the opposite result."

A final question raised by these studies is:

- "… whether farmers can most effectively improve marketing performance by pursuing 'active' strategies, like those recommended by advisory services, or 'passive' strategies, which involve spreading sales across the marketing window."

As we'll see, research shows that the answer is somewhere in the middle: Not by pursuing just active or passive strategies but by implementing a proactive combination of both – ones that are "actively passive" or "passively active."

WHEAT VOLATILITY 1986 - 2015



Right questions?

With only so few Canadian farmers using all the selling and hedging tools available to them, it shows not enough effort and attention is focused on marketing. Self-admittedly, farmers can grow the best crop in the world, but many agree that their marketing needs improvement.

This is where "farming" big data can help bridge that gap. Wikipedia offers a thought-provoking definition of "big data": an information set so large and complex it is impossible to process using traditional tools.

If markets are indeed large and complex, that then begs the question: Are traditional marketing tools like production contracts or even futures contracts sufficient to properly manage and fully process your marketing plan?

Furthermore, if every hedger, trader, investor or analyst is using the same data analysis, indicators or newsletters, then asking the right question becomes key.

There's a saying that goes: "What gets measured, gets treasured." If more time and effort is invested into marketing to fully manage revenue, balance risk, and measure outcomes, then farmers will more likely treasure their marketing results, especially in these volatile times.

One comment I hear a lot from farmers is: "Markets are more volatile than ever!!" Is this true? Yes. Most agriculture markets have become more volatile over the past few decades, some more than others, such as grain markets compared to livestock. For example, wheat volatility trends have doubled since the late 1980s.

So what do you do about this increased volatility and uncertainty? How do you better manage the associated risks? As a first step, the next article in this series addresses some of the main myths and misperceptions that surround commodity marketing.

David Derwin is a commodity portfolio manager with PI Financial Corp. The views here are his own, presented for educational purposes, rather than as specific market advice. For a copy of the complete research study "Farming Big Data — Myths, Misperceptions & Opportunities in Agriculture Commodity Hedging" contact him at dderwin@pifinancial.com.