Volume 2019 | Issue 2 Article 4

Spring 2019

Volatile Prices and Profi t Margins

Chad Hart
Iowa State University, chart@iastate.edu

Lee L. Schulz
Iowa State University, lschulz@iastate.edu

Volatile Prices and Profit Margins

by Lee Schulz and Chad Hart
lschulz@iastate.edu; chart@iastate.edu

THE CALENDAR year 2019 has been interesting for agricultural markets. We began the year with record supplies for all of Iowa's major commodities. However, trade disputes have cast a cloud over growth in crop and livestock usage and weather events and foreign disease outbreaks have sparked quick reversals in commodity prices. Since the first of the year, corn prices have fluctuated by $1.10 per bushel, soybeans by $1.55 per bushel, hogs by $28 per hundredweight, and cattle by $16 per hundredweight. And we're still only halfway through the year.

The hog industry has seen both gains and losses from trade this year. Initially, the various trade disputes the United States had/is having with other countries had a negative impact on prices and profit margins. For the first couple of months in 2019, lean hog futures generally drifted lower. However, the ramifications of the African Swine Fever (ASF) outbreak in China provided a significant trade boost in late March and April, which pushed hog prices over $100 per hundredweight. Since then, hog prices have settled back down, such that mid-June hog prices are equal to prices at the beginning of the year (about $82 per hundredweight).

The hog price swings directly translate into hog profit margins. Margins drifted lower the first part of the year, spiked with the trade rush from ASF, and have hovered lower as we enter summer. Figure 1 details the current (mid-June) outlook for hog margins. For livestock margins, we calculate the return to producers from selling the animal after subtracting the costs of initially obtaining the animal and the feed needed to bring it up to market weight. In general, margins over $40 per head would be considered profitable, as roughly $40 per head is needed to cover the additional costs in raising hogs. As Figure 1 shows, current projected margins for hogs are profitable for most of 2019 and 2020—the recent price slide has reduced profit margins, but not eliminated them.

For the cattle market, prices started the year on an upward trend that didn't break until mid-April. A combination of higher projected supply and feed costs have since put a damper on cattle prices. Prices quickly declined in late April and have continued to head lower. Currently, compared to the first of the year, cattle futures are down roughly $12 per hundredweight. Cattle margins mostly followed along with prices, improving from January to April, then deteriorating after. Figure 2 displays the current cattle margins—a rough breakeven is $150 per head. Cattle currently moving through the sale barn are profitable, but profitability looks more elusive in the third and fourth quarters of 2019, before returning in the spring of 2020. Seasonal pricing patterns take profitability lower again in the summer of 2020.

For both livestock sectors, projected feed costs have flipped from low and steady to high and volatile. One of the major keys to continued profitability for both cattle and hogs will be how feed costs (crop prices) continue to evolve this summer and fall. Corn and soybean stocks were at very high levels as we entered 2019. The abundance of available crop held crop prices in check for the first four months of the year. However, the extremely moist conditions across the majority of the Great Plains and Midwest for the bulk of spring have delayed planting and raised concerns of much smaller crop production for 2019. Those concerns are now the major driver for crop pricing this summer.

New crop corn prices, as measured by the December futures contract, started the year in the $4 per bushel range. With the approach of spring and planting season, corn prices began to fall, especially with the announcement of an intended hike in corn area for 2019 in the March USDA Prospective Plantings report. The low in corn prices hit in mid-May, but since then, corn prices have increased by $1 per bushel. The increase is being spurred by the record slow planting

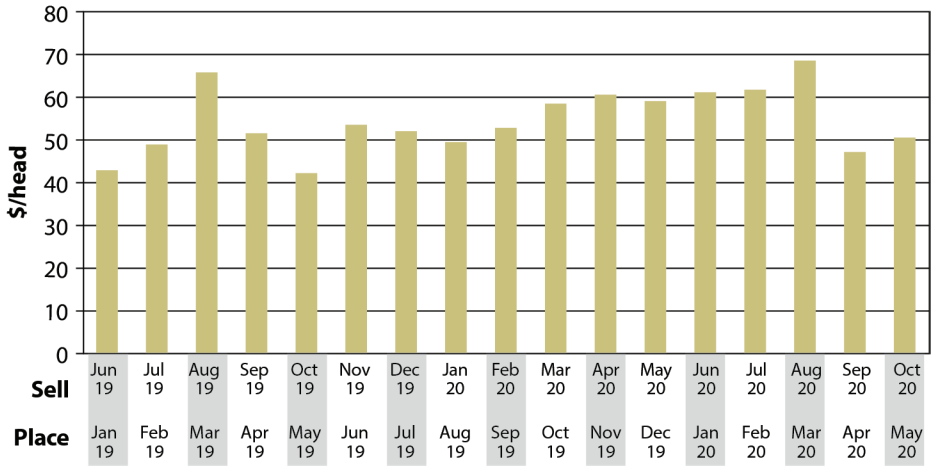

Figure 1. Projected hog margins

progress for corn across the nation. Normally, half of the nation's corn crop is planted by May 7. This year, it was May 20. The two week delay is significant as it pushes pollination into a hotter part of the year and increases the potential of a freeze impacting corn yields more likely. Within the past few days, corn prices have been at multi-year highs.

New crop soybean prices (November futures) started the year in the $9.40 per bushel range. While the general pattern in pricing follows the story from corn, the price movements themselves have been less profitable. The early year price decline was larger for soybeans than corn. By early May, soybean prices had slid below $8.50 per bushel. And while the weather delays have impacted soybeans as well, the price recovery was not nearly as substantial. Current prices are hovering just below $9.40 per bushel, so soybean prices rallied just enough to offset the declines from earlier this year.

Comparing projected crop revenues to production costs, corn has held the advantage throughout 2019. The slow degrade in corn prices earlier in the year had driven projected margins down to zero, but the weather rally has significantly increased profit margins for those who did get their corn planted. The trade issues had already put soybean margins at zero to begin the year. Early concerns about another big soybean crop and the escalation of trade problems drove those margins into negative territory in April and May. The planting delays have allowed a modest rebound in soybean margins, but current estimates are still below breakeven.

So, on the whole, livestock profit margins are positive, but have been slipping back. Corn returns are improving, but only because upcoming supplies are expected to be much smaller. Soybean returns are still being reduced by the lingering uncertainty in trade policy. Government support will offset some of the crop losses, via the trade aid, disaster package, and crop insurance. But the story for 2019 is definitely mixed for the Iowa agricultural economy—improvement in some areas coupled with losses in others. ■

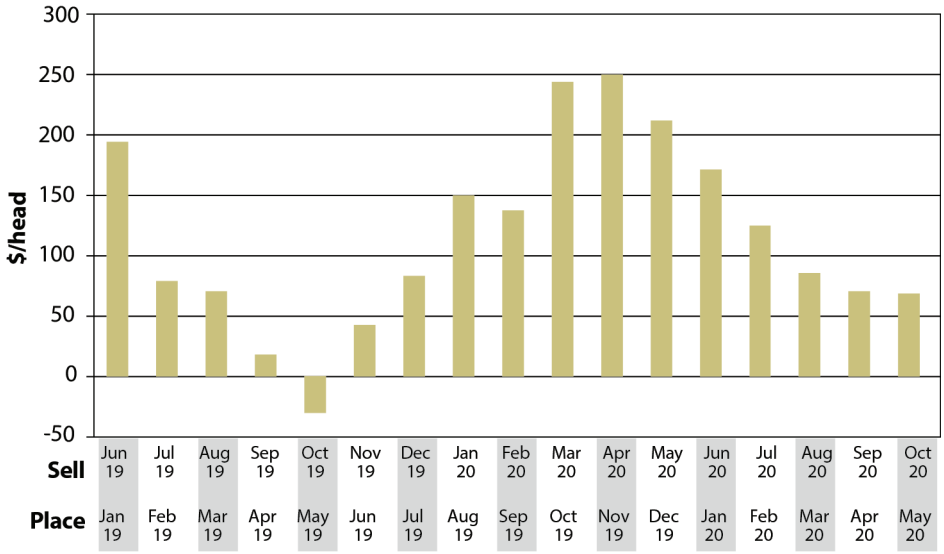

Figure 2. Projected cattle margins

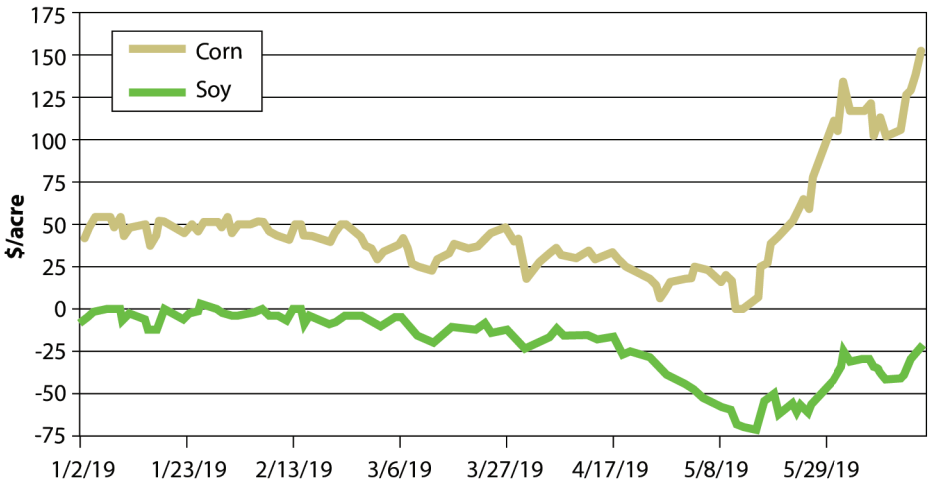

Figure 3. Projected crop margins for the 2019 crops

The Adaptation of Soy-corn Double-cropping to the Brazilian Savanna
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Perhaps the most important policy lesson from the double-cropping boom in Brazil is the interlinkage of developmental technologies, agricultural, and environmental policies. First, the policy objective behind the adaptation of soy and corn to production in the savanna is the economic development of a large low-income part of the country where land was mostly used for extensive grazing. The transition from extensive grazing to intensive commercial farming has increased rural income, migration, commodity exports, local tax revenue, and infrastructure. Second, the innovation and diffusion processes underlying BNF soy and double-cropping systems have resulted from a series of technology policy decisions, such as integrating public and private research organizations early in the process, regulating seed patenting, and opening agricultural and technology markets to private investment.

Agricultural expansion into marginal soils and climates increases yield risk. The Brazilian Agriculture Corporation (EMBRAPA) has developed an agricultural zoning system to assess climate risk for farming and inform the underwriting processes for insurance and credit. This risk management system is used to determine soybean-free periods to reduce the costs and risks associated with Asian Soybean Rust. Finally, agricultural intensification can affect the environment through leaching and the conversion of natural vegetation. The agricultural expansion in Brazil led to the revision of the Brazilian Forestry Code in 2012, designed to protect forests on private properties. Although all these policy components are incomplete and constantly evolving, the large-scale adaptation of agriculture in Brazil can inform similar agricultural expansion processes in other savanna regions to stimulate economic development and respond to environmental changes.

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Patent Expiration, Product Concentration, and Glyphosate Use: A Tale of Unexpected Consequences
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increased focus by university extension programs on applicator understanding of conversion rates between different products, not only for glyphosate but pesticide products in general. From a regulation standpoint, there may be benefits to simplifying instruction labels with emphasis on highlighting the appropriate application rates. More generally, our work points to the need to investigate possible behavioral effects in other, related contexts (for example, antibiotic use in animal agriculture).

For more information, see:

Perry, E.D., D. Hennessy, and G. Moschini. 2019. "Product Concentration and Usage: Behavioral Effects in the Glyphosate Market." *Journal of Economic Behavior & Organization* 158(February 2019): 543–559. ■

It is with great sorrow we ***announce the passing of our colleague and friend, Georgeanne Artz, on April 25, 2019.***

"Georgeanne was a leading scholar in CARD, as smart as they come, but humble and always willing to help. She shall be greatly missed not only for her regular contributions to CARD's mission but more importantly as a friend and advisor to so many. Thank you Georgeanne for your dedication. You have made Iowa State University a better place and we are all the better for having had you here." – John Crespi, Interim Director, CARD.

Artz studied at Yale University, the University of Maine, and Iowa State University. She received both the Impacting Iowans Award and the College of Agriculture and Life Sciences' Outstanding Service in Student Recruitment and Retention Award.

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