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Dear Ag industry associate:

While there are many factors that producers can control and manage to protect forward margins, there are other risks to profitability that are outside of their control. As an example, dairy producers have recently been hit with mandatory deductions to their milk checks by processors trying to balance losses on handling excess milk in certain regions. These deductions have compounded the negative impact of a recent slide in milk prices, and present many implications for producers managing their forward dairy margins. Our feature article this month, "Account for the Impact of Milk Check Deductions," discusses the origins of these deductions, the challenges they pose for managing existing milk hedges, as well as possible strategies dairies should consider in light of the potential impacts.

In addition, our latest Margin Watch reports highlight the findings of several recent quarterly reports on hog and pig inventories, and grain stocks, as well as monthly reports on cattle and dairy, and present strategies producers are considering to manage their margins in light of these developments.

As always, if you have questions, please feel free to contact me.

Respectfully,



Chip Whalen
Managing Editor

Chip Whalen is the managing editor of MarginManager and the vice president of education and research for CIH. He teaches classes on margin management throughout the country and can be reached at cwhalen@cihedging.com.

Upcoming Education Events

[Dairy Margin Management Seminar](#)

San Diego

Oct 18-19

[Margin Management for Lenders](#)

Chicago

Oct 25-26

Account for the Impact of Milk Check Deductions

Recently, many dairy producers have seen their revenues decline as a result of mandatory deductions from processing plants.

While no one likes a smaller milk check, dairy risk managers who want to protect their profitability will need to account for these deductions as they calculate their forward margins and consider adjusting existing margin management strategies to account for the impact of the deductions.

Balancing Milk Supply

Processing plants balance changes in supply of milk against processing capacity and seasonal demand for end products. Spring flush brings more milk to plants, but plants compensate with longer operating hours or agreements with milk handlers to make sure all milk is processed. But demand for dairy products is seasonal and does not always coincide with spring flush. As school season begins in the fall, fluid milk

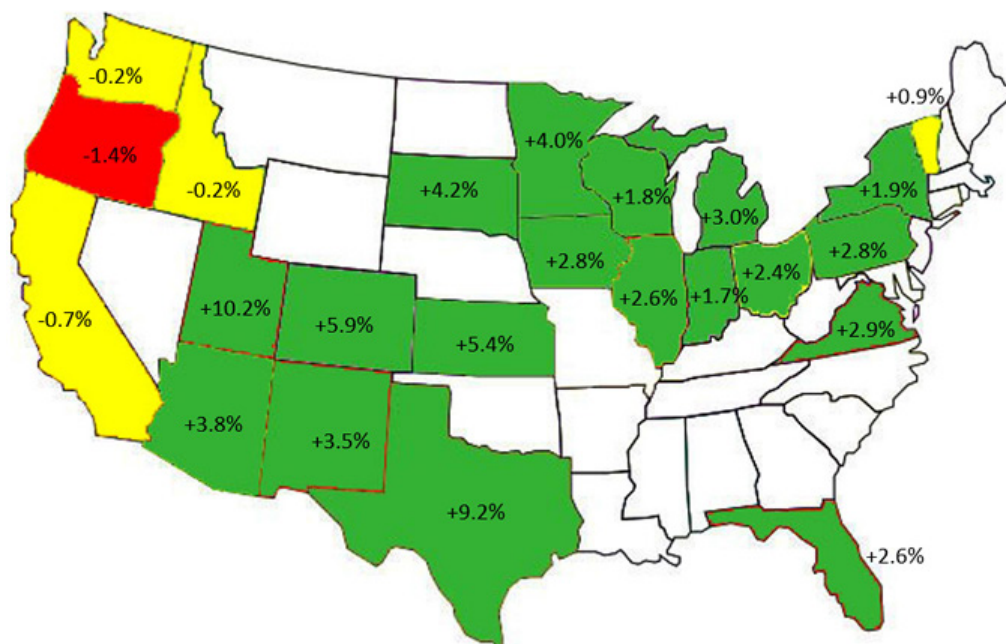
processors increase production, which pulls milk away from butter/powder plants. But even on a daily basis, regardless of season or supply of milk, plants will buy/sell spot loads to either fill an existing order or reduce excess supply. This is part of the business. But what happens when all processors in a region are at capacity and unable to handle the milk supply? Plants with excess supply are forced to either dump milk or haul it long distances to find a home. Either way, they face additional costs, which are then passed on to cooperative members through deductions to their milk checks, often labeled as “balancing plant costs.”

While national year-over-year milk production has been increasing steadily since this past spring, the growth has been uneven; significant growth in the Southwest, Upper Midwest and Mideast Marketing Orders has been offset by lower milk production in California and the Pacific Northwest (See Figure 1).

For example, in Michigan, a 3% annual growth rate in milk production has not been matched by a commensurate expansion in processing capacity, leading excess supply to be sold out of state and at discounted prices. This has put pressure on milk handlers in surrounding states. Members of cooperatives in this areas pay for this through deductions in their milk check, often labeled as “balancing plant costs.” This year alone farmers in areas effected by surplus milk have reported deductions up to \$1.90/cwt from their milk checks.



Figure 1: Year-Over-Year Change in U.S. Milk Production by State



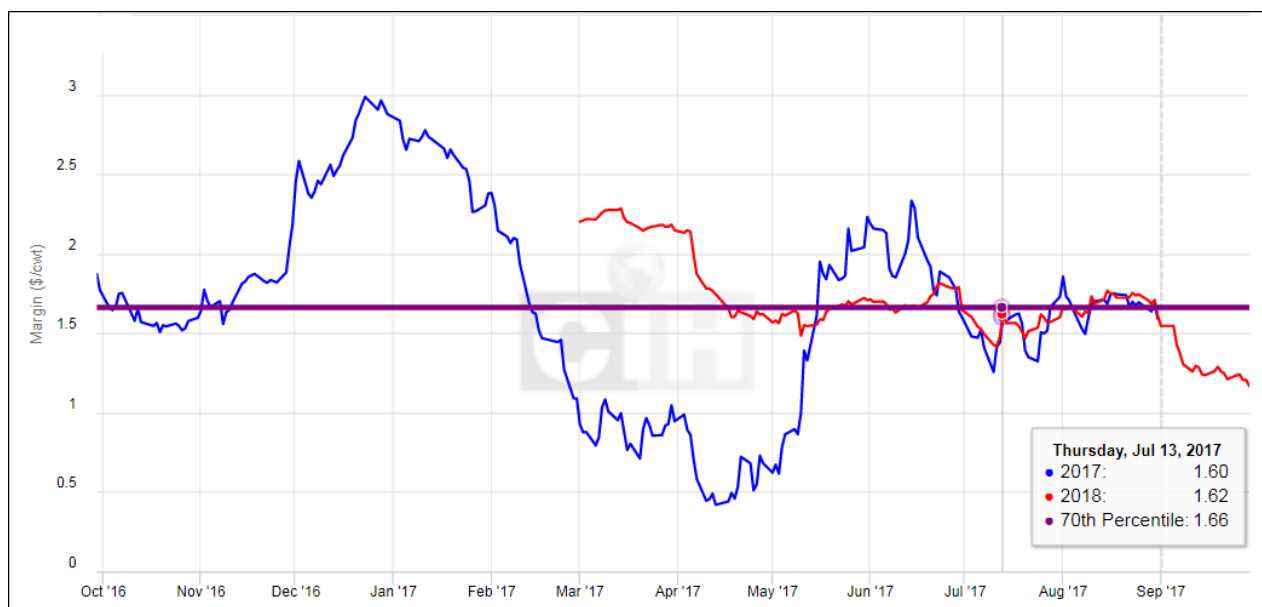
By contrast, as a result of lower production, California processing plants have been short on milk. This has led some coops and proprietary plants to add quality and yield premiums to the price they pay to entice higher production.

Take Deductions, Add Uncertainty

Just as milk supply and demand has varied from region to region, deduction amounts, durations and even communication with producers has varied from plant to plant. Some deductions were a one-time event, while others are ongoing. Some producers received advance notification about deductions from the plants. Some may also have some visibility into how big the deductions will be and for how long they will continue. But some producers learned the bad news when they received their final monthly milk statements and have no idea what to expect going forward. What also may be frustrating for dairy producers is that these deductions are taken *after* the uniform blend price has been calculated, making them a variable risk to profit margins that can't be effectively managed or controlled.

While dairy margins have been generally positive for producers thus far this year, they have not been overly strong, even excluding the deductions. For example, over this past summer, Q3 margins for a typical dairy operation in the Upper Midwest ranged between \$1.25 and \$2.25/cwt., which would be at about the 70th percentile of the past 10 years (see Figure 2). When you then account for the possible deductions, some dairies could have seen their third-quarter profitability wiped out, and in some cases, depending on how the dairy had hedged, they could even have recorded margins that were negative for a given month.

Figure 2: Historical vs. 2018-Projected Dairy Margins



The chart above shows Q3 2017 historical (blue) and 2018-projected (red) dairy margins.

Factor in Deductions, Consider Strategy Adjustments

For dairy producers facing these mandatory deductions from their milk plants, there are important risk management considerations that need to be addressed. First, to the extent that the plant has provided forward visibility on how large future deductions will be and how long they may last, it is imperative to factor these deductions into forward margin calculations. As an example, if I am an Upper Midwest producer currently projecting a Q4 average margin of around \$0.90/cwt. and I have been informed by my co-operative to expect a \$1.00/cwt. deduction from my final October milk check, I am now actually below my breakeven by 10 cents.

Next, I want to consider how these adjusted margin calculations impact the current risk management strategies I have in place to protect my forward margins. Let's assume for instance that I am short Class III Milk futures, and this hedge is part of my \$0.90/cwt. margin calculation. As a result of the mandatory deduction in my milk check, I am now looking at a loss of \$0.10/cwt. Given that projection, I may want to adjust my hedge by closing out the short futures contract and replacing it with a long put option so that I can participate in higher prices and a positive margin should the milk market continue to recover through the fall.

Another consideration would be whether or not any call options had been previously sold and at what strike price. This position may have been taken to help reduce the cost of a hedging strategy to establish a floor price under their milk by purchasing put options. It would be important to know the net price of the strategy, including the cost of the puts. If this maximum price is now effectively below breakeven for that month or quarter after the deduction is calculated, a producer using this strategy may want to buy those call options back and close out that part of the position – particularly if the call options have decayed and are worth less than what they were initially sold for.

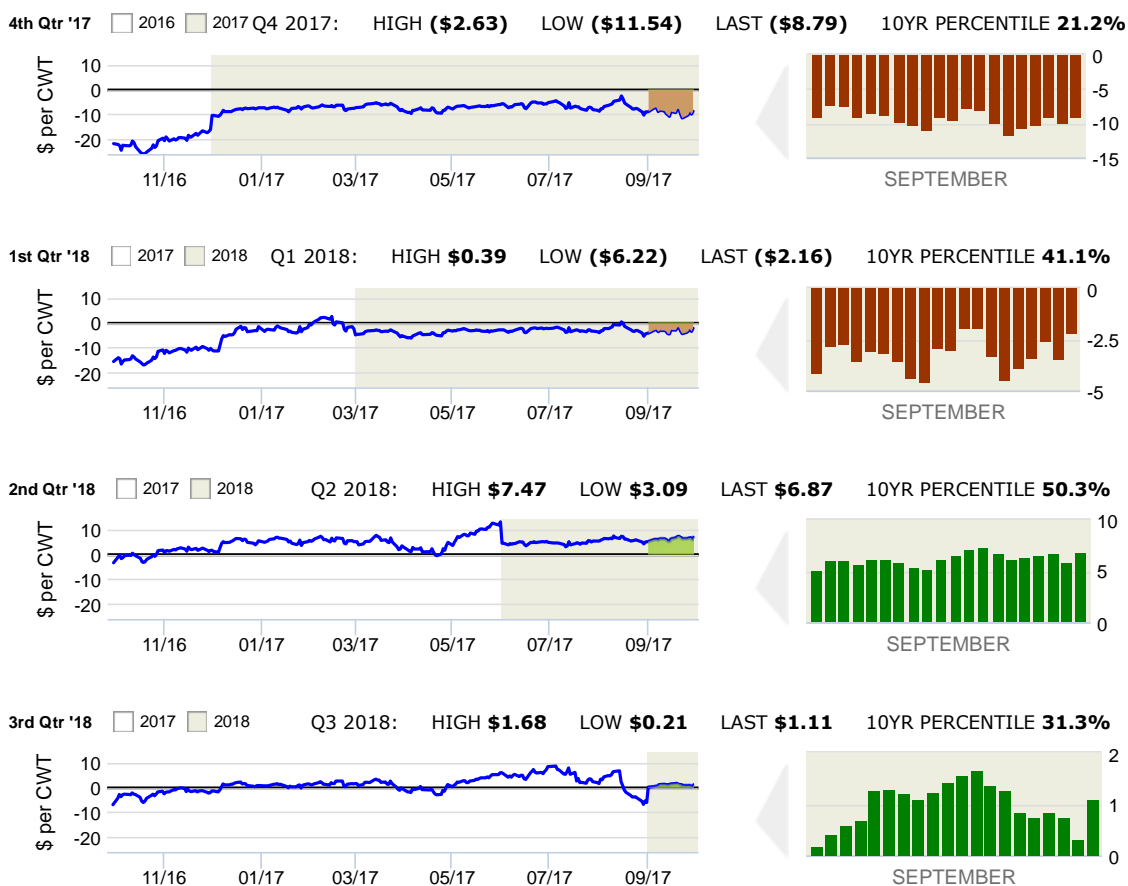
In addition to existing price hedges, this same approach would also apply to new positions in deferred periods. As an example, a producer contemplating their Q1 risk management plan might not know whether current deductions being taken by the plant may continue into 2018. As a result, added flexibility would be desirable to protect their milk price and allow for the possibility that higher prices could lead to improved margins. Here too, option strategies might be favored until the producer has greater visibility over the continuation of potential balancing plant deductions on their future milk checks. While these deductions are not something that producers can control or hedge against, it is possible to tailor existing or new price hedges to account for the impact these deductions will have on forward profit margins.

If you'd like more information about how you can maintain the flexibility you need to navigate an increasingly uncertain dairy margin landscape, please call us at 1.866.299.9333.

Hog Margin Watch: September



Margins were steady to slightly weaker over the last half of September, as both hog prices and feed costs have moved sideways since the middle of the month. Margins remain depressed from a historical perspective, no better than average in deferred Q2, while well below average in spot Q4. USDA released their much-anticipated Quarterly Hogs and Pigs report at the end of the month, which confirmed the industry expansion currently taking place. The figures were generally in line with pre-report expectations, although the by-weight breakdown reflected heavy inventories of market-ready hogs. All hogs and pigs as of September 1 were pegged at 73.549 million head, up 2.46% from last year when the market was anticipating a 2.5% increase from 2016. The kept-for-breeding figure of 6.087 million head was up 1.18% from last year when the market was expecting a 1.2% increase on average, while the kept-for-marketing figure of 67.462 million head was up 2.57% from a year ago versus industry expectations of a 2.6% average increase. Hogs in the 120-179 pound category and those weighing over 180 pounds were reported up 3.9% from 2016, when the market was expecting a 2.6%-2.9% average increase, and the Dec-Feb farrowing intentions of 3.025 million head were also 1.21% higher than the average industry guess. Despite those figures, the hog market has moved sharply higher to begin the month of October. USDA also released the Small Grains summary at the end of the month, pegging final old-crop corn ending stocks at 2.295 billion bushels and soybean ending stocks at 301 million. Both figures were below market expectations, although traders are waiting for more direction from harvest progress and new-crop yields. Given the margin movement, our hog producer clients have benefited from recent adjustments to existing positions, particularly adding flexibility to hog hedges.



The Hog Margin calculation assumes that 73 lbs of soybean meal and 4.87 bushels of corn are required to produce 100 lean hog lbs. Additional assumed costs include \$40 per cwt for other feed and non-feed expenses.

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Dairy Margin Watch: September



Dairy margins have been mixed since the middle of the month, improving in nearby periods while weakening in deferred 2018 slots. Margins remain above average from a historical perspective through Q3 of 2018, even though they have been slipping recently. A slight recovery in milk prices following a steep decline since mid-August allowed nearby margins to improve recently, as feed costs have held relatively steady. USDA reported August milk production at 18.05 billion pounds, down 1.2% from July, but 2.0% higher than last year. The milking cow herd was pegged at 9.405 million head, unchanged from July, but up 71,000 from 2016. USDA's Cold Storage report showed August 31 stocks of all-natural cheese at 1.333 billion pounds, down 36.426 million pounds, or 2.66%, from July compared to the average July-August draw over the past 10 years of 2.19%. Although cheese stocks remain 91.984 million pounds or 7.41% greater than last year at this time, the cheese market appears to have been bid recently following the news at the CME spot auction. Butter stocks totaled 280.177 million pounds, which was down 27.182 million pounds, or 8.84%, from July. That compares to the average July-August draw over the past 10 years of 10.0%. The butter stocks were also down 38.597 million pounds, or 12.11%, from last year. USDA's Quarterly Grain Stocks report pegged final old-crop corn ending stocks of 2.295 billion bushels, with soybean stocks at 301 million. While both figures were below industry expectations, the market remains under pressure from advancing harvest progress. Given the market movements, our dairy producer clients have benefited from recent adjustments to existing positions, particularly adding flexibility to milk hedges.



The Dairy Margin calculation assumes, using a feed price correlation model, that for a typical dairy 62.4 lbs of corn (or equivalent) and 7.34 lbs of meal (or equivalent) are required to produce 100 lbs of milk (includes dry cows, excludes heifers not yet fresh). Additional assumed costs include \$0.90/cwt for other, non-correlating feeds, \$2.65/cwt for corn and meal basis, and \$8.00/cwt for non-feed expenses. Milk basis is \$0.75/cwt and non-milk revenue is \$1.00/cwt.

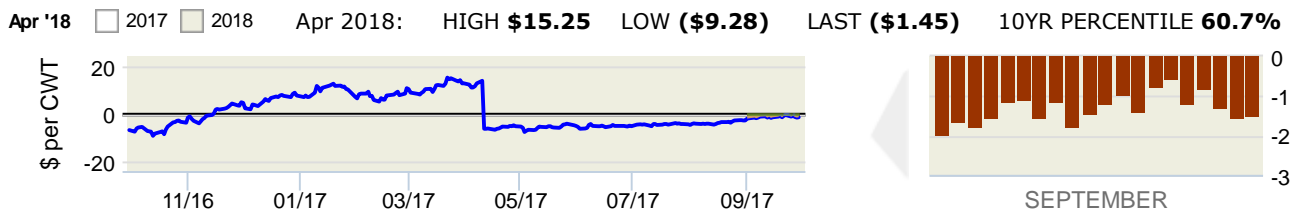
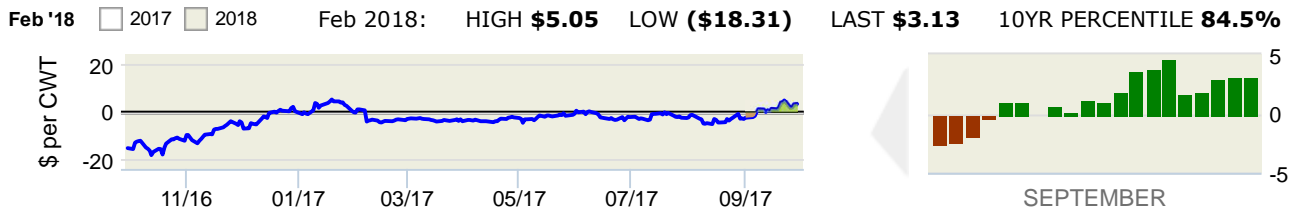
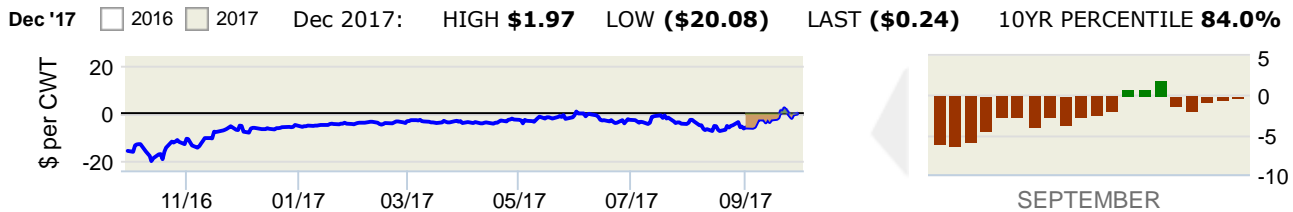
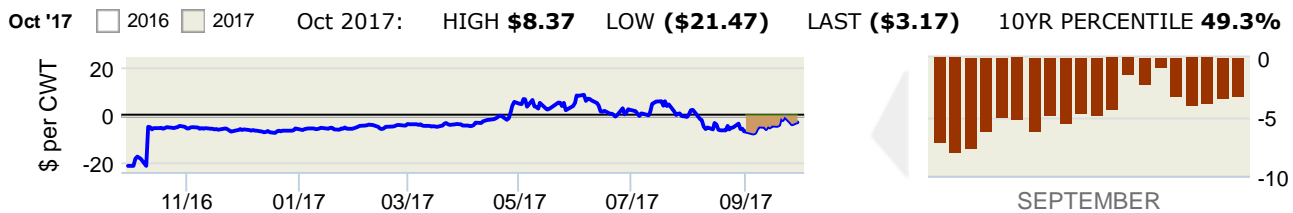
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Beef Margin Watch: September

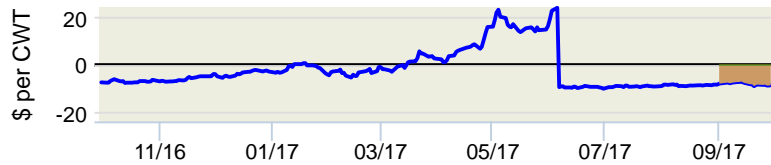


Beef margins were mixed over the second half of September, strengthening in nearby marketing periods against cattle already on feed while weakening in deferred slots against future placements for forward crushes. Cattle finishing margins are now projected at around breakeven for the December marketing period, while above breakeven for February. Cattle prices have held firm recently despite bearish reports from the USDA for both monthly Cattle on Feed and beef Cold Storage. USDA reported September 1 on-feed supplies at 10.504 million head, up 4% from last year when the market was expecting a 2.7% average increase from 2016. August placements of 1.928 million head were also above expectations, coming in 3% higher than last year when the market was anticipating a 2.7% average drop from 2016. August marketings of 1.979 million head were up 6% from last year when the market was expecting a 5.8% average year-over-year increase. Meanwhile, total beef in cold storage on August 31 was pegged at 476.26 million pounds, up 44.424 million, or 10.28%, from July compared to an average July-August draw of 1.3% over the past 10 years. On the feed side, USDA also reported Quarterly Grain Stocks that pegged September 1 final old-crop corn ending stocks at 2.295 billion bushels. While the figure was down 54 million bushels from the average trade guess and below the pre-report range of estimates, the market still remains under pressure from advancing harvest progress, as traders seek more direction from new-crop yield and production. The October WASDE report should provide clarification on this front. In response to recent price increases, our beef producer clients are looking to strengthen cattle hedges, while maintaining strong feed hedges.

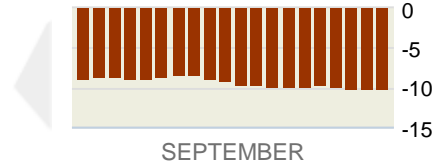
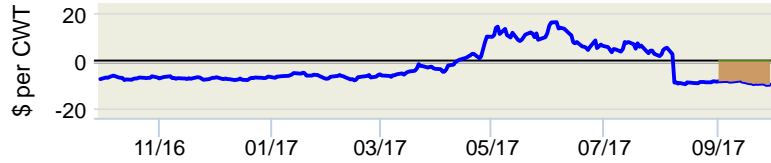
Live Cattle Marketing Periods:



Jun '18 2017 2018 Jun 2018: HIGH **\$23.69** LOW (**\$10.24**) LAST (**\$8.86**) 10YR PERCENTILE **24.4%**



Aug '18 2017 2018 Aug 2018: HIGH **\$16.06** LOW (**\$10.15**) LAST (**\$10.06**) 10YR PERCENTILE **14.6%**



The Beef Margin calculation uses Feeder Cattle futures to price inbound animals and assumes each will consume 55 bushels of corn and cost approximately \$250 per head (for other feed and non-feed expenses) to gain 550 pounds and reach a market weight of 1,250 pounds.

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Corn Margin Watch: September



Corn prices and margins remained tightly range bound and were unchanged over the past two weeks. The Quarterly Grain Stocks Report offered September 1 corn supplies at 2,295 million bushels, below the average forecast of 2,349 million, but well ahead of last year's supply of 1,737 million. The lower-than-anticipated estimate was based on higher implied usage of over 700 million bushels in the June through August quarter and compares to 582 million disappearing last year. Harvesters' yield anecdotes, while less than last year, are better than the dry summer would normally indicate, and helped offset the lower stocks. The harvest currently stands at 17% complete, and basis levels are extremely weak throughout most of the breadbasket. The October WASDE report will adjust the stocks estimate to reflect the updated quarterly data, as well as the eagerly awaited yield forecast. U.S. corn export sales continue to lag last year's robust pace, and are also behind the average pace needed to meet the USDA expectation. The anticipated competition from South America is proving tough, as expected. The lack of range in the corn market is not providing producers much margin opportunity at the moment, but many are setting targets at more favorable levels in case something unexpected creeps into the marketplace.



The estimated yield for the 2017 crop is 182 bushels per acre and the non-land operating cost is \$595 per acre. Land cost for 2017 is estimated at \$238 per acre ¹. Basis for the 2017 crop is estimated at \$-0.2 per bushel.



The estimated yield for the 2018 crop is 184 bushels per acre and the estimated operating cost is \$547 per acre. Land cost for 2018 is estimated at \$228 per acre ¹. Basis for the 2018 crop is estimated at \$-0.3 per bushel.

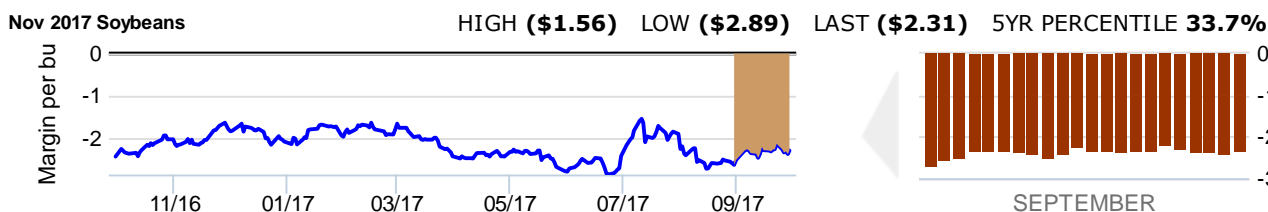
¹ The Corn Margin Watch yield, land and non-land operating cost values are based upon central Illinois low productivity farmland crop estimates in the "Historic Corn, Soybean, Wheat, and Double-crop Soybeans" report published by the Department of Agricultural and Consumer Economics at the University of Illinois.

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Soybeans Margin Watch: September



Soybean prices and margins were unchanged over the past two weeks and were extremely range bound. The Quarterly Grain Stocks Report offered September 1 soybean supplies at 301 million bushels, below the average forecast of 339 million, but ahead of last year's level of 197 million. Larger crush and export movement last quarter, as well as a lower production estimate, factored into the reduction in stocks. While the stocks data offered some support to the market, yield anecdotes from the fields have been better than many had expected and give credence to the NASS forecasts, which had stoked criticism and doubt given the conditions this summer. The bean harvest currently stands at 22% harvested, 2% behind last year and 4% behind the five-year average. The October WASDE report will further update those yields and incorporate the updated stocks estimate to fill out the new bean balance sheet. Weekly reported export sales of beans were record high last week at 110 million bushels, as China continues to be an active buyer. While the market has been within a tight range, soybean producers are actively setting targets at more favorable price levels.



The estimated yield for the 2017 crop is 52 bushels per acre and the non-land operating cost is \$365 per acre. Land cost for 2017 is estimated at \$238 per acre¹. Basis for the 2017 crop is estimated at \$-0.4 per bushel.



The estimated yield for the 2018 crop is 53 bushels per acre and the estimated operating cost is \$290 per acre. Land cost for 2018 is estimated at \$228 per acre¹. Basis for the 2018 crop is estimated at \$-0.5 per bushel.

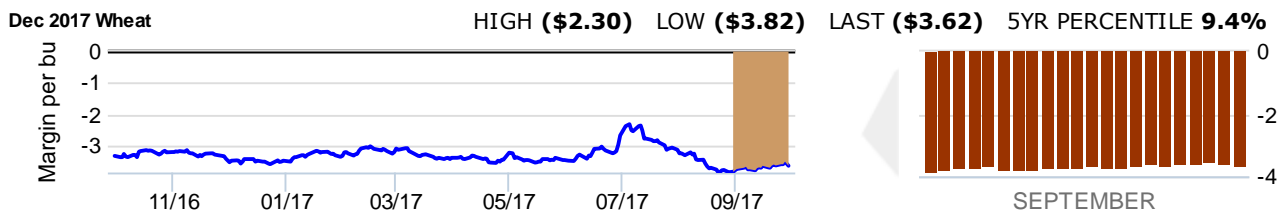
¹ The Soybeans Margin Watch yield, land and non-land operating cost values are based upon central Illinois low productivity farmland crop estimates in the "Historic Corn, Soybean, Wheat, and Double-crop Soybeans" report published by the Department of Agricultural and Consumer Economics at the University of Illinois.

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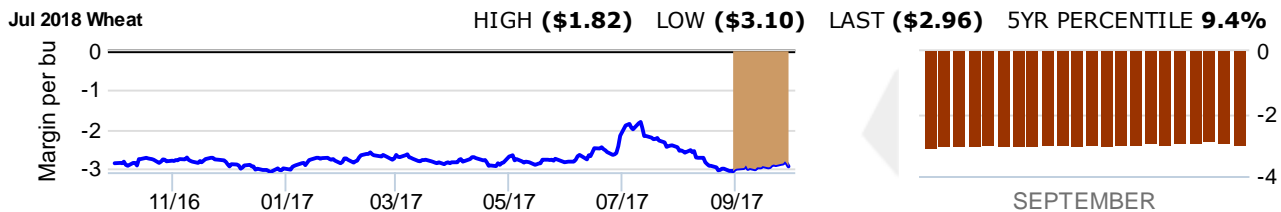
Wheat Margin Watch: September



Wheat prices and margins were virtually unchanged over the past two weeks and were stranded in an extremely tight range. The Quarterly Grain Stocks and Small Grain Summary offered larger stocks and higher production than anticipated, slightly pressuring the market. Spring wheat production was greater in spite of lower acreage totals, as impacts from drought conditions were less harsh than expected. Wheat feed use was less in the June through August quarter as the run-up in pricing this summer rationed consumption, raising stocks. The September 1 supply of wheat was 2,253 million bushels, 33 million over the average expectation, and nearly doubles last year's supply of 1,181 million bushels. Wheat exports are going to have to step up the pace to relieve the supply burden as sales stand at just over 50% of the USDA expectation, about 6% behind the average pace needed to meet the estimate. Winter wheat is currently 36% planted, behind the five-year average of 43%. Given the market conditions, wheat producers are actively setting targets at more favorable price levels.



The estimated yield for the 2017 crop is 67 bushels per acre and the non-land operating cost is \$358 per acre. Land cost for 2017 is estimated at \$158 per acre¹. Basis for the 2017 crop is estimated at \$-0.4 per bushel.



The estimated yield for the 2018 crop is 68 bushels per acre and the estimated operating cost is \$358 per acre. Land cost for 2018 is estimated at \$150 per acre¹. Basis for the 2018 crop is estimated at \$-0.4 per bushel.

¹ The Wheat Margin Watch yield, land and non-land operating cost values are based upon central Illinois low productivity farmland crop estimates in the "Historic Corn, Soybean, Wheat, and Double-crop Soybeans" report published by the Department of Agricultural and Consumer Economics at the University of Illinois.

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