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INSIDE THIS ISSUE

Dear Ag Industry Associate,

The grain and oilseeds markets have continued to advance through the month of May to the detriment of feeding margins for the hog, dairy and beef cattle industries, although crop producers certainly have welcomed the rally. Our latest installment of Margin Watch reviews the impact of this price advance for these various operations as we turn the page from spring to summer. On that note, our feature article this month revisits a topic we typically discuss at this time of year – with a new twist.

"Incorporating Seasonality into a Margin Management Plan" discusses the importance of including seasonality as a consideration in a comprehensive margin management policy. Most operations will set targets to trigger protecting favorable margins. While this is certainly a good place to start, there will not always be opportunities to secure favorable margins ahead of time for certain production periods. As a result, other factors need to be weighed as part of a thoughtful margin management plan, and seasonality can play a role in this process. Our feature article explores this topic in greater depth with a focus on the upcoming Q4 for the hog and dairy industries to highlight this point.

Sincerely,

Chip Whalen
Managing Editor

Managing Editor, Chip Whalen is the Vice President of Education and Research for CIH, a leader in Margin Management. He teaches margin seminars throughout the country and can be reached at cwhalen@cihedging.com

Incorporating Seasonality Into a Margin Management Plan

Typically at this time of year as the season switches to spring or summer, we explore the topic of seasonality as it relates to margin management. In our first installment two years ago, we discussed how agricultural commodities display seasonal price tendencies around production cycles. Last year, we reviewed the seasonality of option implied volatility and how that factors into the decision making process when choosing flexible margin management strategies to protect revenue or input costs. In this issue, we revisit the topic of seasonality as it relates to putting together and executing a thoughtful margin management plan. Among other factors that an operation should factor into a sound plan are profitability levels, with the goal of targeting a favorable return on equity. For instance. an operation may consider setting targets based on historical percentiles of profitability for the particular entity, with the goal of achieving an above-average return for a given production period. While profitability levels are a starting point, they are not the only factors that should be considered.

In a given year, profitability targets may not be reached such that protection would never be established to secure the operation against margin risk exposure. This is where seasonal considerations with respect to margins may help refine a plan. For example, are there certain times of year when a particular operation is exposed to greater risk of deteriorating profit margins? How might the operation wish to incorporate this knowledge as part of their margin management policy or plan? As an example, many hog operations have expressed concern about the future outlook of the market given expectations for increased hog slaughter and pork production later this year combined with uncertain demand. While year-to-date federally inspected pork production is currently running about 0.1% below a year ago, and the USDA's most recent quarterly Hogs and Pigs report indicated reduced farrowing intentions for the March-May and June-August periods relative to 2015, there remains concern that the market will be potentially oversupplied this coming winter. There has also been discussion that shackle space could become an issue given current slaughter capacity ahead of new facilities coming online in 2017.

On the demand side, pork exports for the year to date have been strong and many have pointed to the current disparity between the prices for hogs in the U.S. and China; however, the future is less certain. As grills heat up this summer, cheaper beef and chicken will present competition in the domestic market. Meanwhile, the Federal Reserve appears committed to gradual tightening of the money supply, with further rate increases as early as June, which could strengthen the U.S. dollar. The hog market remains very sensitive to – and dependent on – pork exports, which accounts for over 20% of total production. Renewed dollar strength, in combination with slower global growth, would certainly not be a welcome development. All that uncertainty means hog producers remain exposed to high levels of risk. From a margin perspective, there has not yet been a favorable opportunity to secure attractive margins in Q4. Projected returns for a model finishing operation have remained both below breakeven and below average when compared to the previous 10 years (see Figure 1.)

Incorporating Seasonality Into a Margin Management Plan

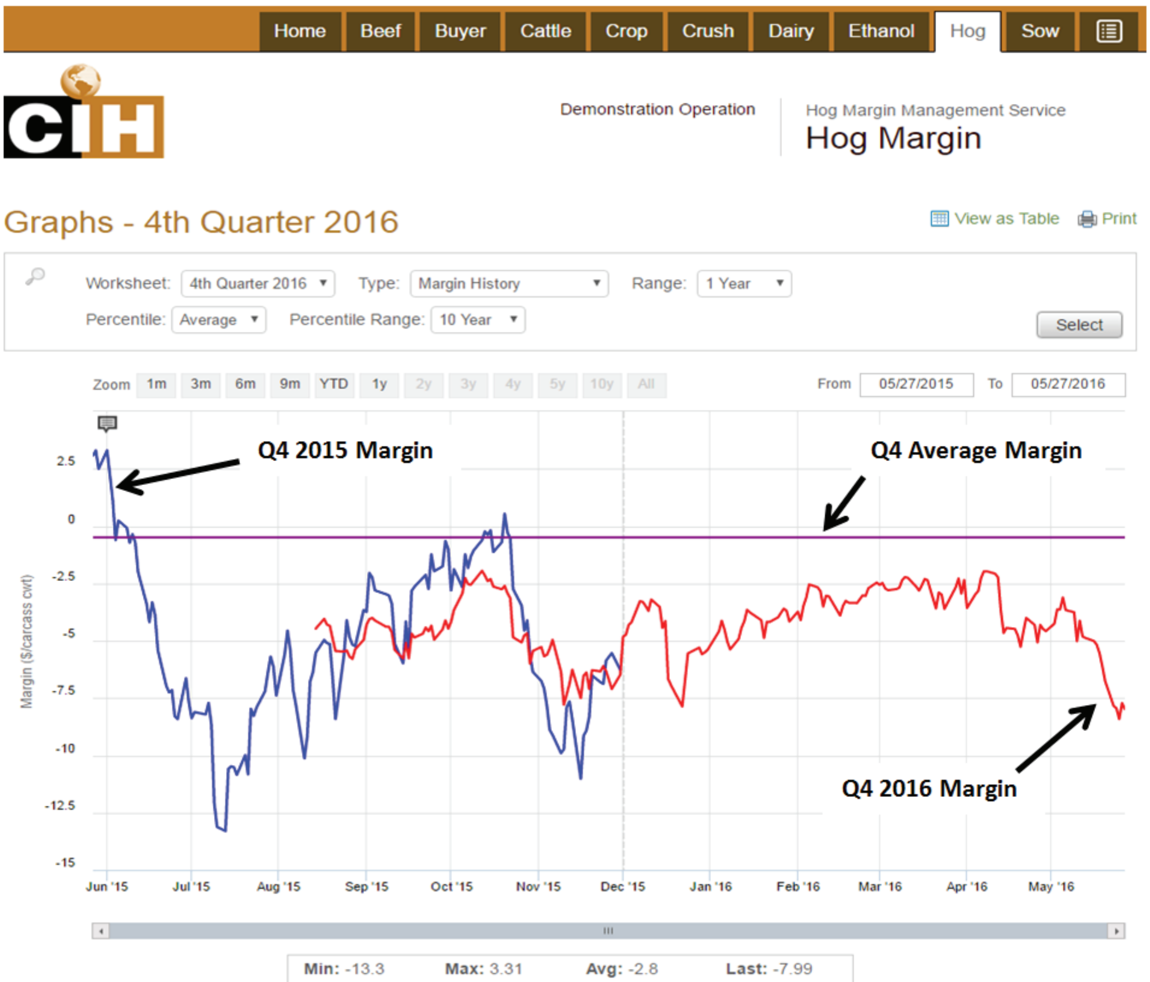

Figure 1

From a profitability standpoint, margins have not yet reached a level that offers a financial incentive to protect Q4 risk through contracting or exchange positions. While profitability targets would not have triggered Q4 margin protection, seasonal factors may very well have justified it. In other words, when managing risk from a margin perspective, certain times of the year might prove more favorable for contracting compared to others – regardless of where forward margins are being projected.

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Figure 2

Figure 2 illustrates the seasonality of Q4 margins over the past 10 years. The early spring period from March to mid-April tends to correspond with a seasonal high for Q4 margins ahead of a gradual deterioration into the summer. A producer might conclude that it makes sense to establish protection for Q4 in this timeframe, regardless of the actual level of projected margins.

For Q4 2016, while projected margins back in the spring would not have triggered a producer to establish protection based on profitability projections or historical percentiles, our clients nonetheless did choose to protect margins in this timeframe as their comprehensive margin management plans incorporate seasonality in the decision making process. As it turns out, Q4 margins have deteriorated since then due entirely to rising feed costs as Q4 hog prices have held relatively steady since early March. In fact, these factors have caused greater attention to be focused on risk to hog prices. Less attention has been paid (until quite recently) to the cost of feed in the margin equation. Very few people were able to foresee the 50% rally in soybean meal prices that has unfolded since early April. Corn prices likewise are about 50 cents above their lows to go along with the $100/ton plus increase in meal prices. The fact of the matter is that no one knows where the market is going or what factors may contribute to margin deterioration; however, a good comprehensive plan incorporates all aspects of a producer's risk including input costs.

How about a dairy operation? Here too there has been quite a bit of concern expressed about the future outlook of the market. Milk prices remain depressed at multi-year low prices that were last seen in 2009-10 during a period of horrendous negative margins for the industry. A strong increase in milk production both in the U.S. and especially the EU has weighed on global dairy product prices as demand has not kept up with the supply increase, allowing stocks to swell. At the same time, margins have deteriorated in response to rising feed costs, with both corn and especially soybean meal advancing sharply over the past month as previously highlighted. Unlike a hog operation, dairies have had opportunities from a profitability standpoint to establish coverage in Q4 with margins previously existing at historically high percentiles going back to last fall (see Figure 3).

Despite this, many dairies may realize that perhaps they do not have as much forward margin protection in place as they would like given the current outlook. What does seasonality say about Q4 dairy margins? Figure 4 displays a seasonal graph of margins for this production period, highlighting that margins tend to deteriorate from mid-June into mid-July. As a result, a dairy operation with margin risk exposure may choose to initiate protection strategies now to mitigate any further losses from either higher feed costs and/or lower milk prices that may come later.

Incorporating Seasonality Into a Margin Management Plan

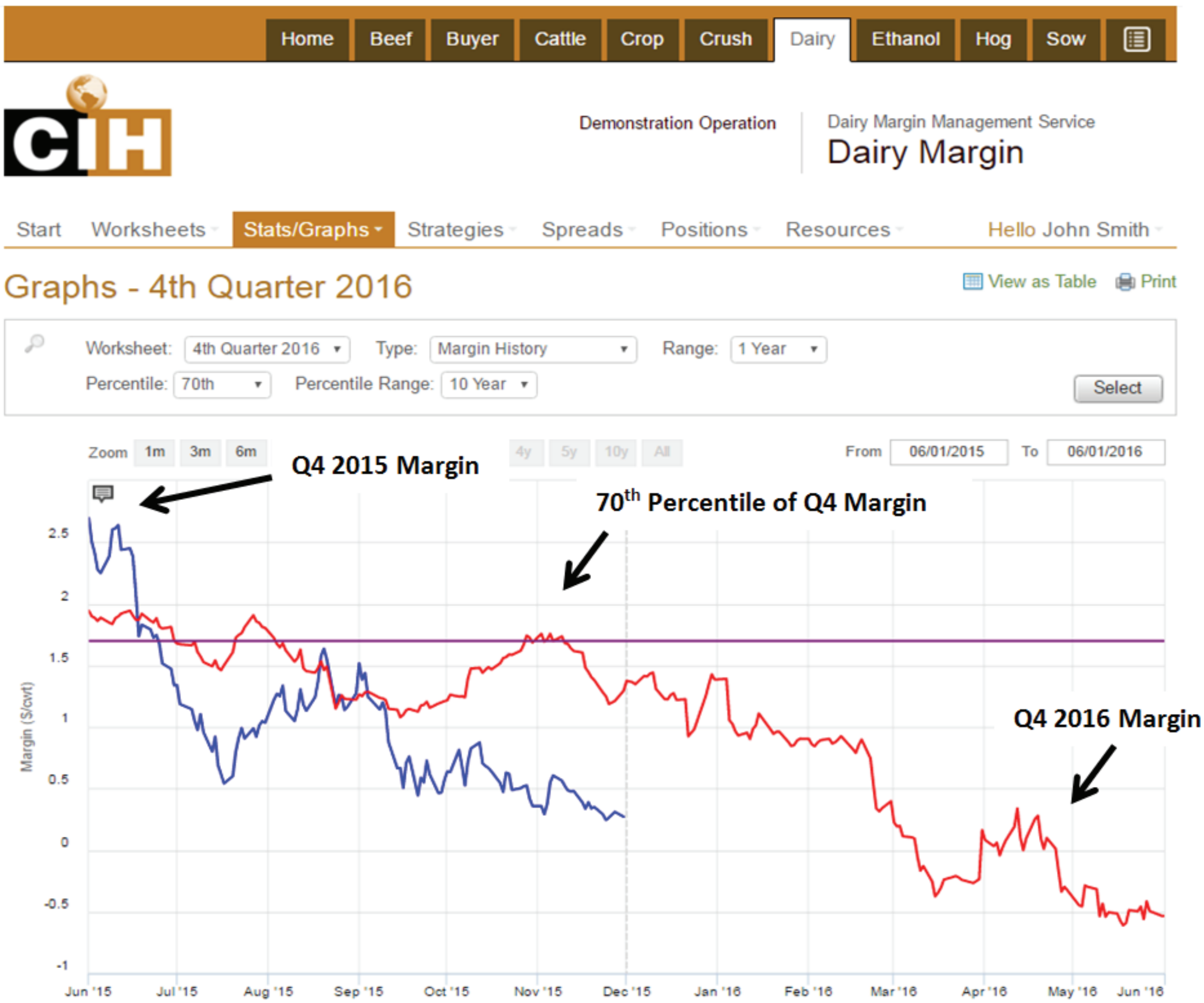


Figure 3

Just like the price of a commodity or the implied volatility of options, margins themselves also display seasonal tendencies. A thoughtful margin management plan should take those into consideration along with other factors such as historical percentiles or profitability targets to help refine the decision making process. With any plan, it is important to weigh many different considerations before implementing a strategy. It is also important to stay consistent in your approach. This helps smooth our year-to-year volatility so that you can achieve your goals and objectives over the long-term.

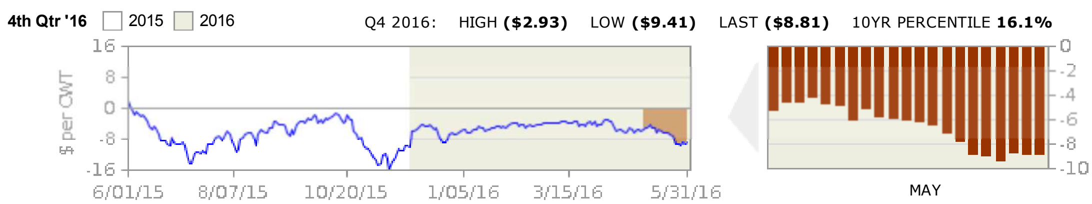
Incorporating Seasonality Into a Margin Management Plan

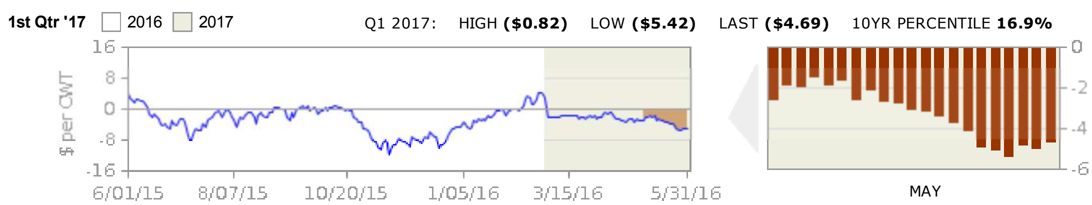
Figure 3

Figure 4

Hog Margin Watch: May

Margins weakened significantly over the second half of May on a combination of lower hog prices and higher feed costs. While hog finishing margins remain positive in the spot market through Q3 period, they are projected negative and well below average in both Q4 and Q1 where concern is growing over the prospect for significant red ink over the fall and winter marketing periods. Hog prices have succumbed to renewed pressure as pork cutout values have not been following cash hog prices higher recently during the month. In particular, a reversal in pork trim values following significant strength during April has put pressure on the primal market and raised some concern over demand. To be sure, exports remain strong and pork is priced competitively in the domestic market with respect to poultry and beef but demand will need to stay robust through the remainder of the year. USDA Cold Storage data for April was considered neutral with frozen pork supplies at 635.4 million pounds, up 3.5% from April in line with a normal seasonal build, but 9.4% below a year ago. Feed costs meanwhile have continued to increase with both corn and soybean meal prices moving higher over the past couple weeks. U.S. corn remains competitively priced in the export market as Argentina cash basis levels have advanced recently while strong ethanol margins are likewise supporting domestic demand. Soybean meal continues to draw fund buying interest with concern that lower protein levels in Argentine soybeans may increase demand for U.S. supplies over the medium-term. Our clients have benefited from recent adjustments to existing positions, particularly strengthening hog hedges while also continuing to add flexibility back to feed 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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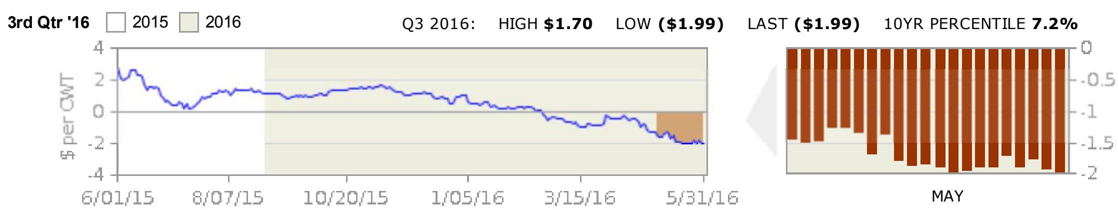
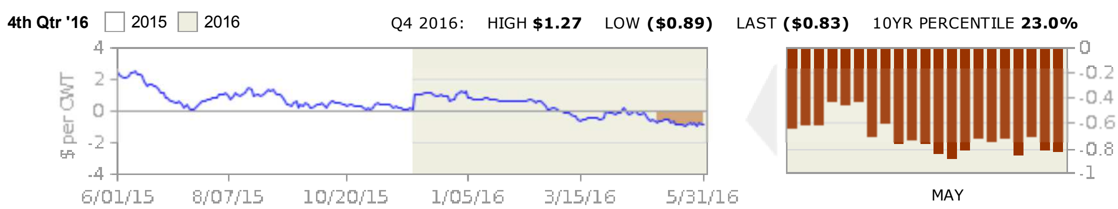
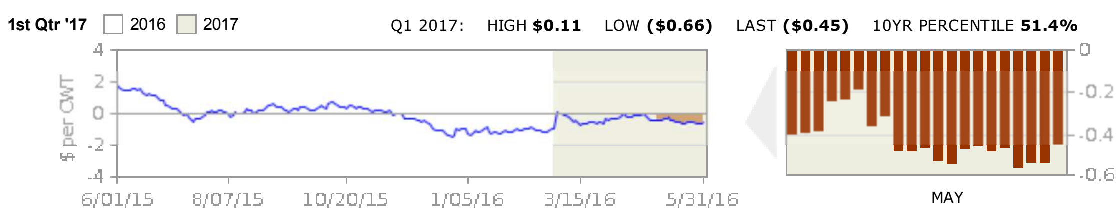
Dairy margins were flat to slightly weaker since the middle of May as a mild recovery in milk prices only partially offset a further advance in feed costs. Forward margins remain negative through the first half of 2017 and well below average from a historical perspective. The slight uptick in milk values may be more technical in nature than anything else as the fundamental backdrop remains largely negative. USDA's latest Cold Storage report showed end-April cheese inventories at 1.214 billion pounds, up 22.65 million pounds from March and 11.8% above last year. The figure was also the largest monthly stocks for cheese in more than 32 years. Butter stocks were likewise up 55 million pounds from March at 298.17 billion pounds and 28.3% higher than a year ago. Meanwhile, there has not been any indication of increased cow culling as dairy cow slaughter is only 1.5% below 2015 through mid-May. Feed costs are also headed the wrong way with both corn and soybean meal prices moving higher over the past couple weeks. Corn remains competitively priced in the export market with Argentina fob basis levels advancing recently while soybean meal continues to be supported by aggressive fund buying. Concerns over lower protein content in South American soybean supplies this season may increase demand for U.S. product over the medium-term. On a positive note, planting progress in the U.S. remains ahead of schedule with the first condition readings for the corn crop showing 72% in good-excellent status. Traders are also bracing for increased acreage to be reported for both corn and soybeans by the USDA in late June. Our clients continue to focus on adjustments to existing positions, particularly extending protection on milk and adding flexibility to feed 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.

Beef Margin Watch: May

Beef margins weakened since the middle of May due mostly to higher feed costs as cattle prices were only slightly lower over the past two weeks. Cattle prices remain very volatile, having gyrated in a $10 trading range since the beginning of April. The early month strength reversed course in the middle of May while corn prices continued to advance to the detriment of feeding margins. Corn prices have been drawing support from ongoing strength in the soybean complex, particularly for meal. While U.S. corn prices remain competitive in the export market following a recent advance in Argentine fob basis levels, the fundamental outlook is not exactly bullish. Planting in the U.S. Corn Belt this season has progressed ahead of average and the first crop condition report from USDA put corn in 72% good-excellent status, also above average. Meanwhile, traders are bracing for an increase in both corn and soybean acreage to be revealed by the government at the end of June. Cattle prices have succumbed to renewed pressure following lower beef cutout values and bearish Cattle on Feed data. USDA reported April cattle placements up 7.5% from a year ago at 1.664 million head when the market on average was expecting a 1.4% reduction from last year. The report would indicate higher supplies than previously expected in Q4 which will temper bullish enthusiasm. Offsetting this somewhat was a more constructive Cold Storage report from USDA reflecting total beef inventories at the end of April down 3.2% from March and 6.6% below a year ago. The lower stocks figures are particularly impressive given that cattle slaughter is higher than last year. Our clients continue to focus on making strategic adjustments to existing positions, particularly taking advantage of the volatility in cattle prices to lighten delta recently.

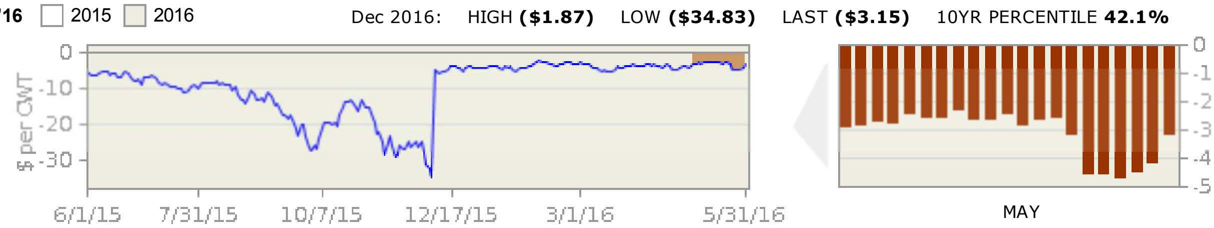
Live Cattle Marketing Periods:

Jun '16 2015 2016 Jun 2016: HIGH **$0.65** LOW **($15.72)** LAST **($9.49)** 10YR PERCENTILE **21.9%**

Aug '16 2015 2016 Aug 2016: HIGH **($2.49)** LOW **($15.61)** LAST **($9.68)** 10YR PERCENTILE **14.7%**

Oct '16 2015 2016 Oct 2016: HIGH **($1.60)** LOW **($37.51)** LAST **($6.35)** 10YR PERCENTILE **16.9%**

Dec '16 2015 2016 Dec 2016: HIGH **($1.87)** LOW **($34.83)** LAST **($3.15)** 10YR PERCENTILE **42.1%**



Feb '17 ☐ 2016 ☐ 2017 Feb 2017: HIGH **($3.19)** LOW **($33.93)** LAST **($4.22)** 10YR PERCENTILE **26.6%**

Apr '17 ☐ 2016 ☐ 2017 Apr 2017: HIGH **($1.00)** LOW **($20.55)** LAST **($4.49)** 10YR PERCENTILE **28.2%**

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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Dairy (Tahoe) - Jun 22-23

Crop (Chicago) - Jul 13-14

Hog (Chicago) - Aug 17-18

Corn prices and margins continued higher the past two weeks. The weather premiums inserted into the corn market have continued to grow. Uncertainty remains as to the impact of heat and dryness on the Brazilian 2nd crop corn production, as well as the extended moisture in Argentina on their corn production. The production issues in South America have certainly kick started the U.S. corn export market as U.S. origin corn is currently quite competitive on the world market. While corn shipments continue to run behind the pace needed to meet the new larger USDA export expectation of 1,725 million bushels, sales have justly recently overtaken the average pace needed to attain the estimate. Total U.S. outstanding corn sales are running at a 95.4% pace of the expectation, relative to the ten year average pace of 91.3%. Strength in U.S. corn exports is likely to continue until the South American crops are cut and final yields and production is totaled. The Safrina corn harvest in Brazil is just getting underway, while the Argentine corn harvest is about one-third complete. The U.S. corn crop is estimated to be 94% in the ground and initial conditions at the 72% Good/Excellent categories. While the initial conditions offer an early glimpse, weather is certainly the key driver going forward. Many market participants are interested in the new revelation that the El Nino weather pattern has run its course, and speculation is building as to how fast a conversion to a La Nina phenomenon may take hold. A quick conversion would imply a warmer, drier U.S. weather regime; however long range climate outlooks and soil moisture estimations are currently non-threatening. Our consultants have been working with clients by adjusting position deltas to match prevailing pricing in the markets while maintaining flexibility to the uncertainties of the current weather market.

The estimated yield for the 2016 crop is 182 bushels per acre and the non-land operating cost is $595 per acre. Land cost for 2016 is estimated at $238 per acre [1]. Basis for the 2016 crop is estimated at $-0.16 per bushel.

The estimated yield for the 2017 crop is 184 bushels per acre and the estimated operating cost is $564 per acre. Land cost for 2017 is estimated at $228 per acre [1]. Basis for the 2017 crop is estimated at $-0.23 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.

Soybean prices and margins have again continued higher over the past two weeks. Issues from the prolonged period of wetness in Argentina continue to impact the soybean market. Not only has the actual harvest been delayed, but the quality levels of the Argentine meal have also been compromised. The Argentinian soybean harvest while nearing completion at 72% harvested still lags the 5 year average of 87% and last year's harvest pace of 90%. The USDA estimates that Argentina will be the largest exporter of soybean meal this year, accounting for 32.80 of the 67.25 million metric tons of the total estimated world meal movement. The quality of Argentinian meal therefore, is having profound impacts on the soybean and soybean meal marketplaces, in spite of large stocks of U.S. soybeans. In fact, the price movement has inspired talk of increased U.S. soybean planted acreage. The definitive answer will come June 30th in the Planted Acreage Report from NASS. Producer surveys are underway that will form the basis of that report as well as the Quarterly Grain Stocks Report. The current estimation of soybean planting progress is 73% seeded against a 5 year average pace of 66% in the ground, and the current acreage projection from the March Prospective Plantings Report is 82.2 million acres. Another focus of the overall market has been the report that the El Nino weather pattern has run its course; speculation now shifts to the timing of a potential conversion to a La Nina pattern. Our consultants are working with clients to adjust position delta to current pricing in the soybean complex, while staying cognizant of flexibility given the uncertainty of the weather market.

The estimated yield for the 2016 crop is 52 bushels per acre and the non-land operating cost is $365 per acre. Land cost for 2016 is estimated at $238 per acre [1]. Basis for the 2016 crop is estimated at $-0.32 per bushel.

The estimated yield for the 2017 crop is 53 bushels per acre and the estimated operating cost is $339 per acre. Land cost for 2017 is estimated at $228 per acre [1]. Basis for the 2017 crop is estimated at $-0.3 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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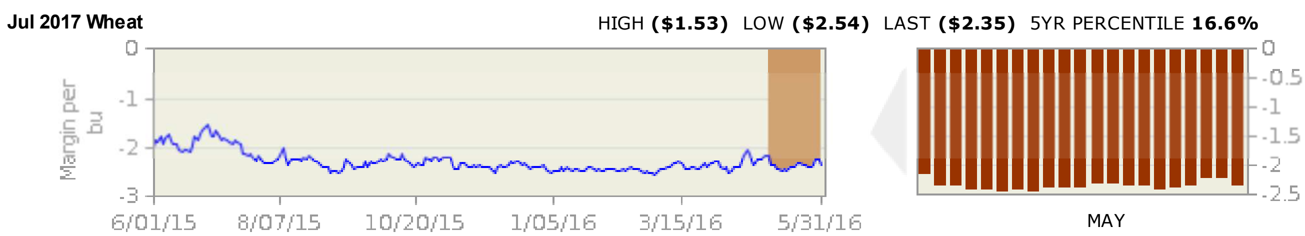
Wheat prices and margins were largely unchanged the past two weeks. Wheat finally did move higher on the strength of the overall grain and oilseed markets, only to fall back at month end. Concerns of too much moisture in the plains raising disease concerns were put on hold with a somewhat dryer outlook. The most recent winter wheat conditions report offered 63% of the crop in Good/Excellent shape compared to just 44% last year. The spring wheat conditions indicated 79% in the Good/Excellent categories. U.S. wheat export sales are closing in on the 780 million bushel expectation from the USDA with outstanding sales at approximately 757 million bushels. Argentinian producers are reported to be planning on increasing wheat acreage amid the changes to the grain export tax policies; projections are for 5.3 million hectares planted next year, close to a million higher than this year's total. Our consultants are working with clients to adjust position delta to capture recent market volatility, while trying to maintain flexibility to capitalize on the uncertainties of the weather market.

The estimated yield for the 2016 crop is 67 bushels per acre and the non-land operating cost is $358 per acre. Land cost for 2016 is estimated at $158 per acre [1]. Basis for the 2016 crop is estimated at $-0.25 per bushel.



The estimated yield for the 2017 crop is 68 bushels per acre and the estimated operating cost is $345 per acre. Land cost for 2017 is estimated at $150 per acre [1]. Basis for the 2017 crop is estimated at $-0.35 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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