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INSIDE THIS ISSUE

Dear Ag Industry Associate,

In this year-end issue of Margin Manager, we take a look back to reflect on our education programs in 2015 and the lessons learned in these classes. It was a challenging year for margins across most industries, and actively managing positions to improve on what opportunities were presented was a main factor distinguishing those who did well from those who struggled. Our feature article focuses on the "lessons learned" from actively managing margin positions, and how this was a common theme across all of the various agricultural markets we work with. Hopefully a better understanding of the benefits that these position adjustments provide will offer some guidance and wisdom for managing forward margin opportunities as we begin the New Year.

We also review the year-end margins of the crop, hog, dairy and beef cattle industries, and how our clients are managing these fluctuating margins which exist at levels well below where we began 2015. The landscape moving into 2016 looks to remain challenging across these various industries, and active margin management will continue to be important in securing profitability. We look forward to another busy year ahead with new classes and featured content in Margin Manager and marginmanager.com to advance your understanding of the margin management approach.

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

2015 Educational Programs Year-End Review – Lessons Learned:

Last year at this time, we reflected on our educational calendar and discussed the various programs conducted throughout 2014 along with the lessons learned from those classes. Continuing that theme, we thought year-end would be a good time look back on 2015, consider the educational events we have hosted both in our office as well as on the road, and what we can take away from them. In all, we conducted a total of 30 different programs for different industry groups including swine, beef and dairy cattle, crop, ethanol, commodity buyers including poultry integrators, egg layer operations and importers, as well as agricultural lenders. Some of those in attendance were clients while others were allied industry participants or producers and end users perhaps new to margin management and approaching price risk from a margin perspective. As forecast at this time last year, 2015 was a challenging year for many of these industry groups with margins either deeply negative or at the very least severely depressed from the levels enjoyed last year.

Consequently, while a passive approach to managing risk worked well for many producers in 2014, this year was a different story where proactive margin management helped separate those operations that had a good year from those who clearly struggled given the current landscape. A key lesson learned that resonated as a common thread through these different groups and industries is that taking advantage of opportunities to make adjustments on positions proved to be a major contributor of improved margins. In our July issue, we explored an example of this by looking at the corn market earlier this past summer. Some will recall that there was a brief weather scare due to excessively wet conditions in parts of the Midwest that caused new-crop corn futures to spike about 25% in value between mid-June and mid-July. Following this sharp price increase the market then retreated back to where it had previously traded ***(see figure 1 on following page)***.

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Figure 1

While some may have found this volatility unnerving, it allowed for very beneficial adjustments to be made on both sides of the market – for those with either long or short positions managing different price risks to improve upon those positions. For the corn producer referenced in that article, they were able to improve their sale price by a net of $0.25/bushel as a result of making adjustments through that period. The hog producer realized an even better improvement of $0.44/bushel to their purchase price, which effectively added $2.33/cwt. to their net margin for Q4. Now let's consider this same model hog operation looking forward to adjustment opportunities on

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upcoming marketing periods. Q2 of 2016 has just witnessed a noticeable improvement in projected margins based on a combination of lower feed costs and in particular, a significant recovery in hog prices from earlier in the fall. Data from the latest USDA Quarterly Hogs & Pigs report revealed lower than expected farrowing intentions this winter which suggests tighter hog supplies next summer. As a result, the June Lean Hog futures contract has recovered about $7.00/cwt. from price levels in mid-November.

Let's assume this particular producer had a short futures position from earlier in the fall, selling the June Lean Hog contract at $80.00/cwt. Following the drop in price from early October to mid-November, they decided to convert the futures position to an options strategy in order to increase flexibility should the market eventually recover (as it now has). In early November with the market trading around $72.00/cwt., the hog producer exits their short futures position, buying the contract back at $72.80/cwt. To address the risk of a further decline in price however, they decide to replace this position with a put spread, buying the $72 put and paying a premium of $4.30 while selling the $62 put and receiving a premium of $1.30. Therefore, the producer is protected over a $10 range of lower prices for a net cost of $3.00/cwt. while at the same time open to participate in all higher prices above the market. To summarize the adjustment, they exit the short futures position with a gain of $7.20 (sold at $80.00 and bought back at $72.80) and then spend $3.00 of this gain to replace the position with a $10 put spread with protection beginning at $72 and ending at $62. In total, they net a gain of $4.20/cwt. and maintain a limited range of protection to lower prices.

Currently, the market is trading at $78.00/cwt. after recovering from the lows in mid-November. To capitalize on this gain, the hog producer could exit the put spread and sell futures at the higher price level the market is now trading at. Let's explore how this would help them improve upon their previous sale price. The put spread could be sold for $1.50/cwt., so the producer would lose half the value they paid for this position in mid-November, although the market is now $5.20/cwt. higher than where they exited their previous short futures position at $72.80/cwt. They had a net gain of $4.20 from the previous adjustment, and they now can add $1.50 of salvaged value from their put spread to that gain for a total of $5.70/cwt. By selling the June futures contract at $78.00 and adding this gain of $5.70 to that price, their net sale price is now $83.70/cwt., $3.70 higher than where they started from back in October ***(see figure 2 on following page)***.

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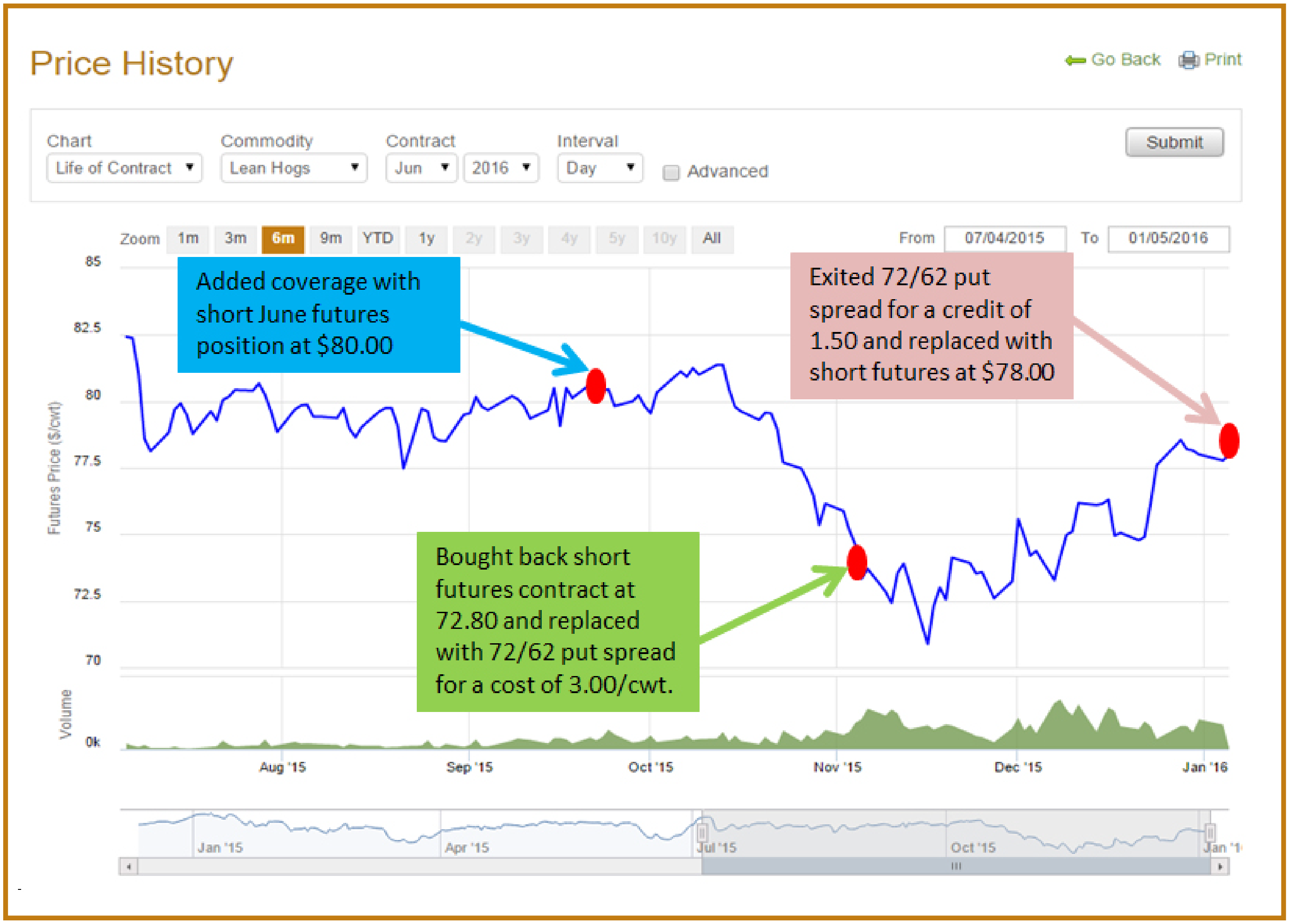
Figure 2



Another point to make with these adjustments is to think about how quickly they can improve upon a margin. For the hog producer, they may have been monitoring Q2 2016 margins up to a year or more in advance. With a margin management policy in place they may have begun to initiate coverage at the 70th percentile in order to protect forward opportunities. Figure 3 shows the margin history for upcoming Q2 2016. You will notice that margins hit the 70th percentile just prior to the aforementioned corn adjustment, when prices spiked in response to the excessive rain last summer. Assuming the hog producer made the corn adjustment (or something similar to the example previously described) followed by the eventual hog adjustment (or something similar), they may have realized a net margin for that initial coverage well above the 70th percentile opportunity originally projected. The two adjustments presented in this article would have added just over $8.00/cwt. to the hog producer's Q2 margin which represents a substantial improvement to the open market value currently at about $10.00/cwt. ***(see figure 3 on following page)***

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Figure 3

Moreover, with margin improvement on an initial position, the hog producer may have felt more confident adding coverage as new opportunities presented themselves. You will notice that Q2 margins came back to the 70th percentile by late October. Having already improved upon the initial position following the corn adjustment, the hog producer may have felt comfortable adding another layer of coverage at that point even though their margin management policy may stipulate a higher percentile before increasing coverage. If for example their net margin for the initial position was effectively at the 80th percentile following the corn adjustment, they might elect to initiate a new strategy to protect forward margins at the open market level of the 70th percentile. The eventual hog adjustment previously reviewed then may have improved both positions where the operation might feel comfortable now adding a third layer of coverage to their Q2 margin

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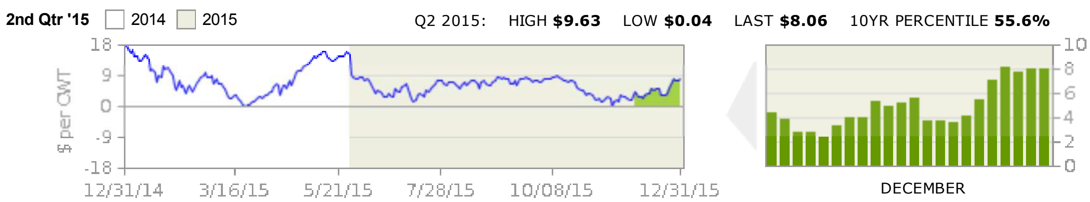
protection plan.

The main point is that similar to the recent history in 2015, in most years actively managing forward margin strategies is a big part of the margin management process. We invite you to learn more by exploring our 2016 education calendar and attending one of our classes in the upcoming year. The more you know about proactively managing forward margin opportunities, the better equipped you will be to assure the long-term profitability of your operation.

Hog margins continued to recover through the end of December on a combination of higher hog prices and lower feed costs, with the exception of Q4 which deteriorated slightly over the past two weeks. Hog prices received support from USDA's latest Quarterly Hogs and Pigs report which was deemed friendly for deferred periods. Relative to expectations, the data was overall neutral although the Sep-Nov farrowings and Dec-Feb farrowing intentions leaned slightly bullish. All Hogs and Pigs as of Dec 1 were estimated up 0.8% from last year when the market was expecting a 1.4% increase. Most of the increased supply stems from market-weight animals, with the category over 180 lbs. up 5.36% from 2014 and those weighing 120-179 lbs. up 1.62% from last year. Although Sep-Nov farrowings were reported down 3.7% from 2014, pigs per litter were projected up 2.93% from last year so that the total pig crop for the quarter was only down 1.18% year-over-year. Meanwhile, the Dec-Feb farrowing intentions were estimated at 98% of last year by the USDA when the market was expecting only a 0.4% reduction. This would represent hogs to be marketed next summer. Feed prices also contributed to margin improvement since the middle of December with both corn and soybean meal trading down to new contract lows. While news has generally been lacking, Argentina's aggressive push to cut export taxes under new President Mauricio Macri along with renewed dollar strength in response to the Federal Reserve raising interest rates for the first time in 7 years have combined to weigh on export prospects for both corn and soybean meal. Our clients have benefited from recent adjustments to add flexibility to hog hedges, and now are working with their consultants to strengthen these positions following the market recovery.



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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Margins were mixed since the middle of December, from unchanged to slightly weaker in nearby periods to a little stronger in the second half of 2016. Dairy margins continue to project negative through the first half of the year on heavy milk production and high supplies of dairy products, while expectations for this balance to shift in late 2016 are helping to support deferred milk prices and dairy margins. USDA reported November Milk Production at 16.64 billion pounds, up 0.6% from last year with October Milk Production revised up to 17.11 billion pounds. As has been the recent trend, strong production gains in the Midwest more than made up for weaker production in western states, with increases in Wisconsin and Michigan alone almost completely offsetting the decline in California. The October milking herd was also revised up to 9.313 million head, representing a 3,000 head increase from September when USDA previously estimated a 1,000 head decline. Meanwhile, USDA's latest Cold Storage report showed November cheese stocks up 62.2 million pounds or 21.8% above last year which should continue to weigh on nearby Class III prices. Butter stocks fell 26% or 46.1 million pounds in November to 132.7 million pounds, although this is still up 26% from last year and the highest November stocks figure since 2009. Feed costs have trended down over the past two weeks with both corn and soybean meal marking new contract lows during the period. While news has been largely absent, Argentina's aggressive push to cut export taxes under new President Mauricio Macri combined with renewed dollar strength following the Fed's move to raise interest rates has put pressure on both markets. Our clients have benefited from recent adjustments to secure equity in milk hedges while maintaining protection to lower prices. The recent recovery in milk prices is also allowing for new adjustments to be considered.

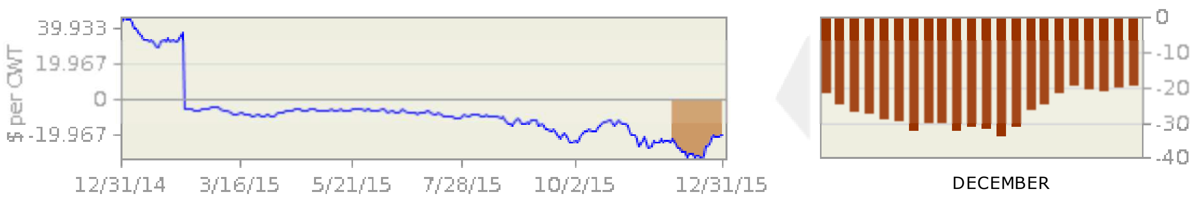
The Dairy Margin calculation assumes, using a feed price correlation model, that for a typical dairy 62.4 lbs of corn (or equivalent) and 7.34 lbs of meal (or equivalent) are required to produce 100 lbs of milk (includes dry cows, excludes heifers not yet fresh). Additional assumed costs include $0.90/cwt 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: December

Beef margins improved substantially over the second half of December to finish 2015 on the combination of a strong rally in cattle and a further decline feed costs. While margins remain negative, summer to fall marketing periods are quickly approaching breakeven levels which may offer cattle feeders a much-welcomed opportunity to get out from under. Cattle prices recovered from deeply oversold levels earlier in the month as USDA released the latest Cattle on Feed report which was deemed bullish for the market. Specifically, placements in feedlots during November totaled 1.60 million head, 11% below 2014 and the lowest for November since the series began in 1996. On average, the market was only expecting placements to be down 4.1% from last year, so the figure was particularly friendly for spring and summer live cattle prices. Also, the total number of cattle on feed as of December 1st at 10.8 million head was essentially the same as last year, representing the first month since April that the cattle feedlot inventory has not been above a year ago. Meanwhile, the USDA reported total beef in Cold Storage at 510.5 million pounds, up 4.6 million pounds from October and remaining at a 10-year high up 27% from last year. On the feed side, corn has dropped to new contract lows amidst a general lack of news, although the export outlook remains negative. The Federal Reserve's recent move to hike interest rates for the first time in seven years has led to renewed dollar strength while Argentina's new president has simultaneously eliminated corn export tariffs. Both should weigh on corn export demand through the winter. Our clients have benefited from recent adjustments to add flexibility to cattle hedges, and our consultants are now busy helping clients to evaluate new adjustments to strengthen existing positions following the strong increase in prices.

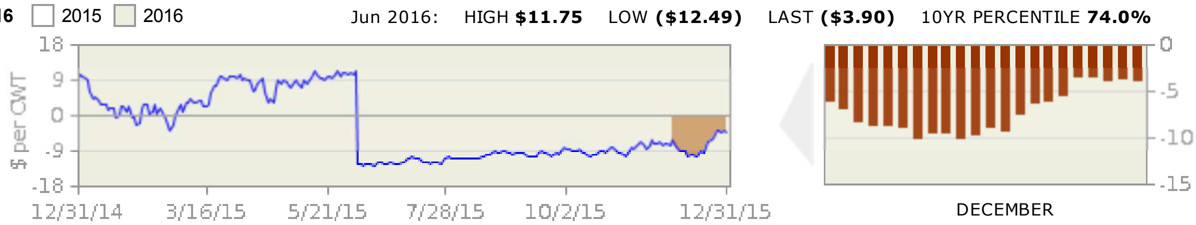
Live Cattle Marketing Periods:

Feb '16 ☐ 2015 ☐ 2016 — Feb 2016: HIGH **$45.93** LOW **($33.93)** LAST **($19.66)** 10YR PERCENTILE **2.0%**

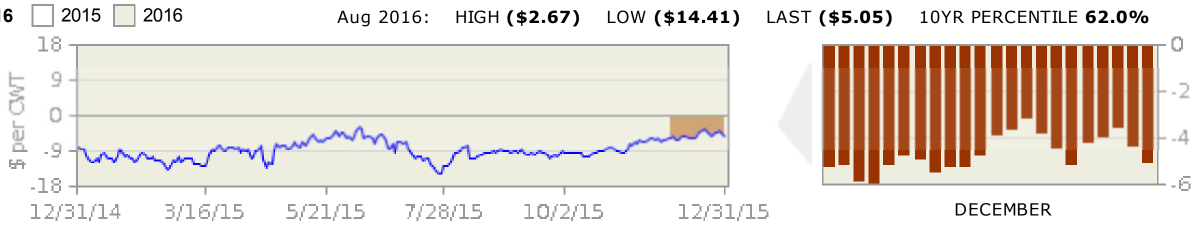


Apr '16 ☐ 2015 ☐ 2016 — Apr 2016: HIGH **$36.42** LOW **($20.55)** LAST **($6.41)** 10YR PERCENTILE **18.1%**

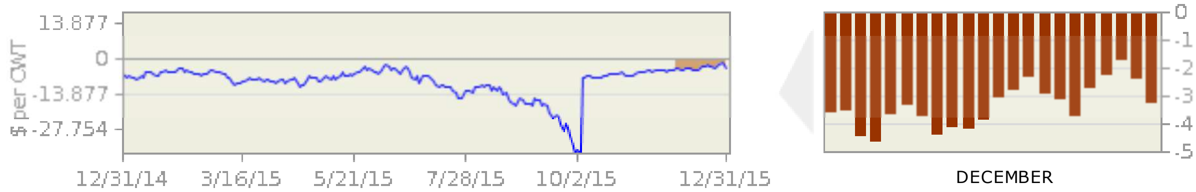
Jun '16 ☐ 2015 ☐ 2016 — Jun 2016: HIGH **$11.75** LOW **($12.49)** LAST **($3.90)** 10YR PERCENTILE **74.0%**



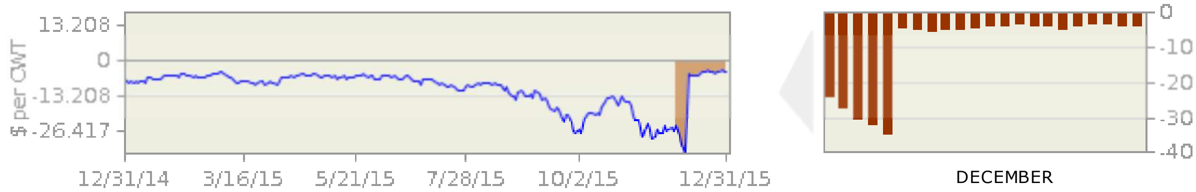
Aug '16 ☐ 2015 ☐ 2016 — Aug 2016: HIGH **($2.67)** LOW **($14.41)** LAST **($5.05)** 10YR PERCENTILE **62.0%**



Oct '16 2015 2016 Oct 2016: HIGH **($1.70)** LOW **($37.51)** LAST **($3.21)** 10YR PERCENTILE **40.9%**



Dec '16 2015 2016 Dec 2016: HIGH **($3.30)** LOW **($34.83)** LAST **($4.21)** 10YR PERCENTILE **32.9%**



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: January

Corn prices and margins were slightly lower the past two weeks. Holiday markets have prevailed with little tangible news to digest and very limited price movement. The biggest news came last week with the St. Louis, Missouri area receiving almost six inches of rain over two consecutive days. This lead to severe regional flooding and swelling river levels throughout parts of Eastern Missouri and Southwestern Illinois. In fact the Mississippi River has been closed to barge traffic for several days, however limited traffic is expected to begin relatively soon with the onset dryer weather. The rains also wreaked havoc with grain storage units in lower lying areas. To salvage as much grain as possible from these vulnerable low lying areas quick and diligent movement of stored grain to higher areas was required. This also impacted U.S. origin corn exports, which continue at a lackluster pace. Corn sales are running at 45% of the total needed to meet the current USDA estimate, which is a full 10% behind the ten year average to meet that projection. Also impacting U.S. corn export sales was aggressive movement of corn out of Argentina with the new export tax regime there. The corn market is gearing up to receive news from NASS and the USDA on final production and yield estimates on the 2015/16 corn crop. The final figures will be released on January 12th in both the Crop Production Annual Summary and the January WASDE report. Until then our consultants will work with clients to square positions ahead of these reports, as well as to set alerts to take advantage of favorable deferred opportunities when they occur.

Mar 2016 Corn HIGH **$0.85** LOW **($0.25)** LAST **($0.25)** 5YR PERCENTILE **1.3%**

The estimated yield for the 2016 crop is 175 bushels per acre and the non-land operating cost is $400 per acre. Land cost for 2016 is estimated at $250 per acre [1]. Basis for the 2016 crop is estimated at $-0.05 per bushel.

Dec 2016 Corn HIGH **$0.50** LOW **($0.19)** LAST **($0.19)** 5YR PERCENTILE **2.4%**

The estimated yield for the 2017 crop is 175 bushels per acre and the estimated operating cost is $400 per acre. Land cost for 2017 is estimated at $250 per acre [1]. Basis for the 2017 crop is estimated at $-0.25 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.

Soybeans Margin Watch: January

Soybean prices and margins were range bound the past two weeks. The lack of pertinent news and holiday inactivity held the soybean market in check. The biggest piece of news was from the Midwestern U.S., where in the St. Louis, Missouri area, almost six inches of rain fell over just two consecutive days. A wide surrounding area was impacted, flooding low lying areas as well as swelling rivers above the banks. In fact the Mississippi River has been closed to all barge traffic for several days since the rain. River transport is however expected to pick back up soon with the onset of dryer weather. Several low area grain storage units also had to be quickly evacuated and transported to higher less vulnerable ground to salvage as much grain as possible amid the hard charging rain. Soybean export sales took a breather this period, recording the lowest weekly sales figure, 18 million bushels, so far this marketing year. Even with the lower holiday sales, overall soybean inspections remain well ahead of the average pace to meet the USDA yearly projection, 80.4% versus the ten year average of 74.2%. Looking past the lethargic holiday soybean market, NASS and the USDA will reveal the updated 2015/16 soybean yield and production figures. Both reports will be released on January 12th. The marketplace will focus on both reports as well as continuing to concentrate on South American weather and its impact on the new crop soybean crop there. Our consultants will continue to work with clients to square positions going into the release of the ever important reports. They will also encourage clients to set alerts to capitalize on favorable forward margin as they occur.

The estimated yield for the 2016 crop is 50 bushels per acre and the non-land operating cost is $325 per acre. Land cost for 2016 is estimated at $175 per acre [1]. Basis for the 2016 crop is estimated at $-0.15 per bushel.

The estimated yield for the 2017 crop is 50 bushels per acre and the estimated operating cost is $325 per acre. Land cost for 2017 is estimated at $175 per acre [1]. Basis for the 2017 crop is estimated at $-0.28 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.

Wheat Margin Watch: January

Wheat prices and margins were lower the past couple of weeks. In spite of the holiday inspired market there was some pertinent news for the wheat market to digest. Namely, the Russians taking a page out of newly elected Argentinian President Mauricio Macri's playbook. Russian leaders were said to be discussing a similar elimination of wheat export taxes there in early 2016. This would certainly spark Russian wheat exports, while continuing to pressure U.S. origin wheat sales, amid the aggressive Argentinian sales since their new export tax regime kicked in. With the competitive global headwinds U.S. all wheat sales are running behind the pace needed to meet the USDA projection of 800 million bushels. The pace of which is 72.2% of sales versus the ten year average pace of 76.3%. On the global weather front recent snows in both Russia and Ukraine have provided much needed adequate snow cover and eased concerns of cold snaps in both areas. Back in the U.S., two consecutive very heavy days of rain dropped almost six inches around a large surrounding area of St. Louis, Missouri. The heavy rains produced flooding and rising rivers eclipsing their banks. In fact the Mississippi River has been closed to barge traffic since the storm. River transport however is expected to begin soon with the onset of dryer weather. Another concern stemming from the heavy rain is the condition of the soft winter wheat in those effected low lying areas. The marketplace will keep a watchful eye on conditions there, as well as the central plains areas. The January WASDE and Crop Production Annual Summary will be revealed on January 12th and will offer the marketplace some certainty on the 2015/16 estimates. Until then our consultants are working with clients to square up positions going into the new year ahead of these potential market moving reports. They are also encouraging clients to set alerts to capitalize on favorable forward margin opportunities should they arise.

The estimated yield for the 2016 crop is 70 bushels per acre and the non-land operating cost is $300 per acre. Land cost for 2016 is estimated at $125 per acre [1]. Basis for the 2016 crop is estimated at $-0.3 per bushel.

The estimated yield for the 2017 crop is 70 bushels per acre and the estimated operating cost is $300 per acre. Land cost for 2017 is estimated at $125 per acre [1]. Basis for the 2017 crop is estimated at $-0.16 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.