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Dear Ag industry associate:

As summer approaches, the margin outlook remains mixed for agricultural producers across the crop and livestock sectors. Current planting progress is on par with historical norms for this point in the season, however, extremely wet spring weather in the Eastern Corn Belt contributed to early crop condition ratings that were below last year's, as well as below longer-term averages. The result may be an increase in prices that would be welcomed by crop producers, while raising feed costs for producers in the hog, cattle and dairy sectors.

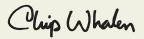
But we know that crop prices are predictably unpredictable. As we enter outdoor grilling season, both crop growers and buyers should consider how to protect their margins. Hedging strategies can be used to effectively manage the risks of both higher and lower prices, but they require significant capital – an asset in limited supply.

Our feature article this month, "Optimize Your Capital," discusses how risk managers can make the most of limited financial resources to help secure margins. By demonstrating the relationship between the value of hedge positions and the resulting change in projected forward margins, we aim to help both producers and their lenders to better understand the impact of hedges on net profitability.

In addition, we discuss the current profitability outlooks for the hog, beef, dairy and crop sectors in our regular Margin Watch reports.

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

Respectfully,



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

Hog Margin Management Seminar Chicago

June 27-28

Beef Margin Management Seminar Denver

Aug 16-17



Optimize Your Capital

For most agriculture producers, capital is an asset in limited supply. Hedging strategies, such as trading futures and options, require maintaining performance bonds, and these positions

can become quite capital intensive.



Moreover, longer-term positions can tie up capital for an extended period of time. Even strategies that are less capital intensive require producers to deposit and maintain funds in a brokerage account until the positions are closed out and converted to purchases and sales in the local cash market. That's why successful, competitive agriculture operations make it a priority to ensure they are using their capital efficiently. With that in mind, we examine how producers can optimize their capital and take these considerations into account as part of their risk management plans.

Consider Your Credit Choices

Some producers may avoid futures and options altogether out of fear that margin calls could drain capital reserves, relying exclusively on the cash market for their risk management. But the futures and options market offers valuable tools for capturing attractive forward margins, and most lenders are willing to extend capital to fund a client's hedging activities, particularly when they know it is part of a thoughtful plan aimed at securing an operation's profitability. In some cases, these lines of credit can be in addition to – and distinct from – operational lines of credit, so they don't inhibit the operation's ability to address basic expenses like salaries and input costs.

But regardless of how your credit lines are structured, if you rely on a lender to gain access to the liquidity you need to fund your hedging activities, it is important that both of you understand the impact of those hedges on your net profitability. For example, a beef producer might be short on cattle in the futures market, while simultaneously long on corn as a way to secure an attractive feeding margin. As a borrower, you should be able to demonstrate to your lender the value of those positions as the market moves, by connecting them to the resulting change in your projected forward margins relative to the open market.

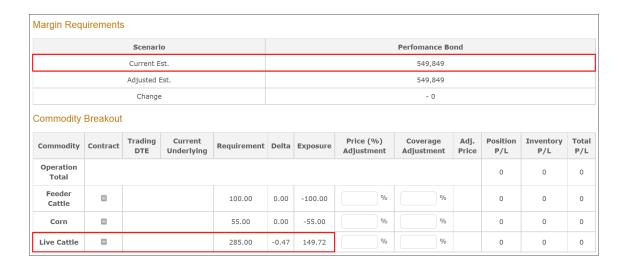
Make the Connection to Hedge Value

We can illustrate this connection by looking at hypothetical scenarios using a capital stress testing tool, such as CIH's capital monitor. Figure 1 shows a hypothetical cattle feedyard that has a 10,000 head



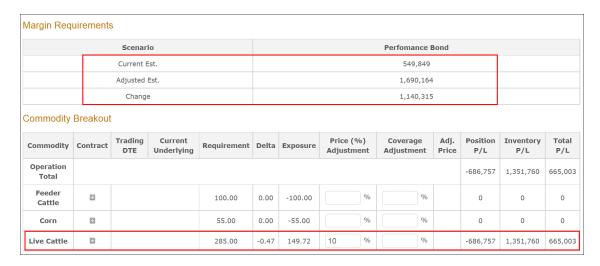
annual, one-time capacity. They are projecting and actively managing profit margins for their current on-feed inventory as well as forward crush opportunities. About 47% of their risk exposure is currently offset through hedge strategies made up of a combination of futures and options positions. The operation currently has \$549,849 of capital tied up in performance bond requirements.

Figure 1



As the market moves over time, the projected profitability, as well as performance bond requirements, will change. Let's say cattle prices rise 10% across all contracts that are currently hedged. This scenario is illustrated in Figure 2. While the cattle inventory value increases by \$1,351,760, the value of the open hedges drops \$686,757 so the net improvement is only \$665,003. At the same time, the performance bond requirement increases by \$1,140,315 to \$1,690,164.

Figure 2





If prices remain at current levels, the feedyard will secure \$665,003 of additional value on cattle inventory over the following year. Although the hedge position loses value as cattle prices rise, the operation participates in 49% of those increases. This improvement can be seen by measuring the change in the total profit/loss, which increased by \$665,003 as the inventory profit/loss rose by \$1,351,760.

But, of course, price changes can go either way. Figure 3 illustrates the scenario where cattle prices go down 10%. In this case, the short cattle hedge position gains in value by \$622,913, and performance bond requirements also go down, resulting in a \$470,812 surplus in the brokerage account. However, the inventory value deteriorates by \$1,351,760 as 51% of the total cattle inventory was unhedged and exposed to the lower prices.

Figure 3

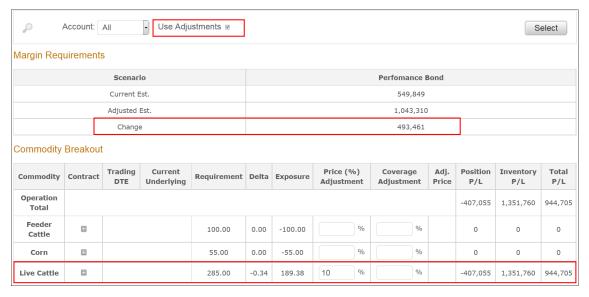
Margin Requirements														
Scenario					Perfomance Bond									
	Current Est.													
	Adjusted Est.				-470,812									
	Change				-1,020,661									
Commodity Breakout														
Commodity	Contract	Trading DTE	Current Underlying	Requirement	Delta	Exposure	Price (%) Adjustment		Coverage Adjustment	Adj. Price	Position P/L	Inventory P/L	Total P/L	
Operation Total										622,913	-1,351,760	-728,847		
Feeder Cattle				100.00	0.00	-100.00	9/	6	%		0	0	0	
Corn				55.00	0.00	-55.00	9/	6	%		0	0	0	
Live Cattle	=			285.00	-0.47	149.72	-10 %	6	%		622,913	-1,351,760	-728,847	

As the market moves, a lot of capital can be tied up in unrealized hedge losses and performance bond requirements. But producers can mitigate the cost of capital while still protecting margins. For example let's look again at the scenario shown in figure 2 where cattle prices increase 10%, and the position became capital intensive. The feedyard could have purchased call options against some of the upside exposure on the short cattle futures.

Figure 4 illustrates this adjustment. Comparing the performance bond requirements and profit/loss figures to those of Figure 2, we see that while the cattle position will still lose money from the higher open market prices, the loss with the calls is smaller than without. \$407,055 of negative equity accrues to the adjusted position value compared to the loss of \$686,757 without the purchase of the calls. Also, because the purchased call options offset much of the risk on the short futures positions, the added performance bond requirement is significantly smaller: \$493,461 versus \$1,140,315.



Figure 4



Consider Alternative Contracts

Some producers may not be comfortable with the performance bond exposure on hedging positions, or would rather allocate their limited capital elsewhere – such as investing in upgrades to their facilities or expanding their operations. These producers might want to consider forward contracts with packers or swap contracts with a financial intermediary, which might allow them to protect profitable margins without tying up capital. By contracting directly with a counterparty, the feedyard doesn't need to address performance bond requirements to initiate the contracts or maintain capital in an account to address daily settlement procedures as prices fluctuate.

While these contracting methods can free up capital to allocate elsewhere, they are not without other costs and risks. Forward contracts with a packer make the cattle feeder captive to that packer's basis upon delivery, which may or may not be competitive with other alternatives in their local market. Swap contracts typically cost more to execute than similar strategies on the exchange through the feedyard's own brokerage account. Also, depending on the intermediary, there might be additional costs or limits on adjustments that can be made to an initial strategy at a later date. Moreover, with either forward contracts or swaps, there is a counterparty risk associated with the single settlement procedure upon delivery or expiration.

Despite their limitations, swaps and forward contracts can be valuable contracting tools, especially when used in conjunction with exchange-traded alternatives to create a more flexible strategy. As an example, a feedyard might lock in a sale through a forward contract or swap agreement, and subsequently add price flexibility by purchasing call options in his own brokerage account. In this way, he need allocate only a limited amount of capital to address the opportunity cost of higher prices in a rising market.



Weigh All the Factors

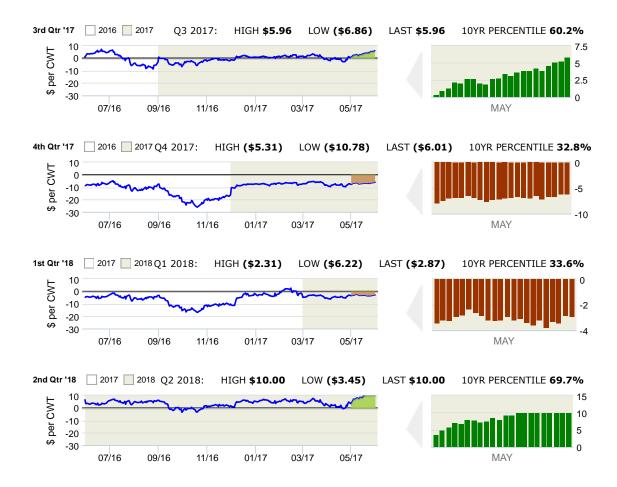
As with any hedging strategy, there's no one right way to allocate your capital. Determining the best solution for your needs will be a function of your operation's margins and debt level, as well as a number of other considerations. But being able to quantify the impact of hedges on net forward margins can help facilitate communication with your lender and is a critical part of an effective risk management strategy.

If you have questions or would like more information about how to use your hedging capital most efficiently, please contact CIH at 1.866.299.9333.

Hog Margin Watch: May



Hog margins continued to strengthen over the second half of the month from a combination of higher hog prices and lower feed costs, particularly for soybean meal. Most of the improvement was in nearby marketing periods where the increase in hog prices has been more pronounced, with deferred Q4 and Q1 showing only modest gains. Hog prices continue to draw support from strong demand in both domestic and international markets. Fears that surfaced this past spring over heavy supplies and large slaughter schedules have been muted by strong recent performance in the pork cutout, led by the belly primal. While pork bellies in Cold Storage increased during April according to the USDA, they remain at a 10-year low as we enter the summer season, when belly stocks tend to decline as usage peaks. These price levels are likely prompting buyers to fill their summer needs through the Labor Day holiday. In addition, there is a growing realization that pork is cheap relative to other protein alternatives, and pork is also quite competitive in export channels. The margin improvement was also supported by lower feed prices, as renewed weakness in soybean meal lowered the cost of the protein component in feed rations. Wet weather across the Eastern Corn Belt has raised concerns over potential replanting of corn, and there may be some acres switched into soybeans as a result. Moreover, there likely will be an increase in double-cropped acres this year, as soybeans are planted on winter wheat ground being harvested. Given recent price action, our hog producer clients have been strengthening existing hedge positions in both hogs and soybean meal.



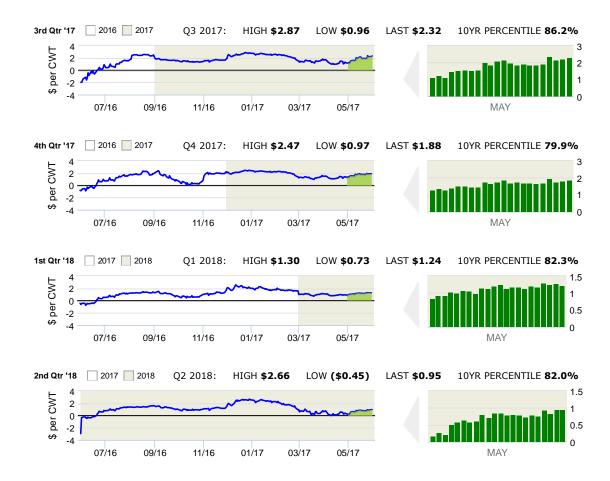
The Hog Margin calculation assumes that 73 lbs of soybean meal and 4.87 bushels of corn are required to produce 100 lean hog lbs. Additional assumed costs include \$40 per cwt for other feed and non-feed expenses.

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Dairy Margin Watch: May



Dairy margins held steady over the second half of the month, with strength in milk offset by slightly higher feed costs. Margins remain at historically strong levels, near or above the 80th percentile of the previous 10 years through Q1 of 2018. Milk prices continue drawing support from strength in dairy product values, particularly cheese and butter. CME butter prices, currently around \$2.40/lb., have not been this high since September of 2014, when the spot market reached \$3.06/lb. Global prices are also at lofty levels, as the last Global Dairy Trade auction for butter was up 11.2% from the previous event at the USD equivalent price of \$2.42/lb. Butter in Cold Storage as of April 30 was reported at 292.3 million pounds, an increase of 19.8 million pounds, or 7.26%, over March. This was less than half of the average build of 14.45% from March to April over the past 10 years. In addition, year-over-year butter inventories were lower, decreasing 3.5 million pounds, or 1.18%, from April of 2016. Natural cheese in Cold Storage of 1.334 billion pounds was up 42.0 million pounds, or 3.25%, from March. That compares to a 1.77% average build from March to April over the past ten years. The April cheese stocks were also up 125.3 million pounds, or 10.36%, from 2016, although some of this storage build might be tied to increased export business as cheese prices are competitive in the world market. April milk production totaled 18.3 billion pounds, an increase of 2.0% from April of 2016. Meanwhile, feed costs were up slightly since the middle of May, as early season corn crop conditions were down from last year due to excessively wet weather in the Eastern Corn Belt. Following the recent price spike, our dairy producer clients have been strengthening milk hedges and adding protection in deferred marketing periods to take advantage of the margin improvement.



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: May



Beef margins strengthened over the second half of May following an increase in cattle prices, while feed costs held mostly steady. Beef finishing margins remain very strong through fall marketing periods, well above the 90th percentile of profitability over the past 10 years for cattle already on feed. Cattle prices remain buoyed by strength in the beef cutout, with solid domestic and export demand supporting the market. From a seasonal perspective, beef cutout values tend to be strongest in the second half of May through the Memorial Day weekend, and this year prices topped out near \$2.50/lb. – the highest level since July 2015. This year the market has been supported by a series of events, including the JBS scandal in Brazil and news of China re-opening its market to beef imports from the U.S. Based on weekly data so far, April beef exports are projected to be up 12.9 million pounds, or 6.9%, from last year, while May exports are on track for an increase of 6.9 million pounds, or 2.5%. According to USDA, boneless beef in Cold Storage at the end of April totaled 415.6 million pounds, down 4% from last year and 3% below the five-year average although boneless beef stocks normally hold steady during the month. In addition, USDA reported 10.998 million head of cattle on feed as of May 1, up 2% from last year and the largest cattle on feed inventory since February 1, 2013. April placements into feedlots of 1.848 million head were 11% larger than last year and above market expectations. Meanwhile, corn prices have increased slightly as early season crop conditions were lower than expected following extremely wet spring weather in the Eastern Corn Belt. Given this margin backdrop, our beef producer clients continue to examine opportunities to add upside flexibility to existing cattle hedges, while maintaining strong protection against further price weakness.

Live Cattle Marketing Periods:





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: May



.Corn prices and margins continued to trade in a tight range without any fresh fundamental data to alter the overall tone of the market. The corn crop is now 96% seeded and corn conditions have incrementally improved to 68% in the Good-to-Excellent categories, lagging last year's crop by 7% in those same categories. Not to trivialize the current conditions, but these poorer numbers do not pack the same punch at this early point in the development phase. Corn export sales and shipments are both running ahead of the pace needed to meet the USDA expectation of 2,225 million bushels and many believe the USDA may up that estimate in this month's WASDE report. Weekly ethanol production runs have returned to an average of above a million barrels per day after the seasonal maintenance slow-down. The U.S. weather quickly changed from a cool, wet regime to a drier and warmer pattern. If that were to persist, concerns over crop development would increase. Given that backdrop, corn producers continue to favor flexible hedging strategies.



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 \$-0.25 per bushel.

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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: May



Soybean prices and margins moved lower over the past two weeks, as the harvest has completed in Brazil and is near completion in Argentina. Those beans will compete with U.S. soybeans in the world export marketplace, even as the current U.S. soybean export expectation has been nearly 105% sold and almost 92% shipped. Many anticipate the USDA will up the estimate by 25 million bushels on the June WASDE report, in the face of the available South American competition. The U.S. soybean crop stands at 83% seeded, just ahead of last year and the five-year average, notwithstanding the cool, wet spring. NASS will release the initial condition estimate next week, giving the market some indication of the effect the damp spring has had. Given the move lower, many soybean producers now favor a flexible hedging strategy ahead of crucial summer weather volatility.



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 acre ¹. Basis for the 2017 crop is estimated at \$-0.3 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 acre ¹. Basis for the 2018 crop is estimated at \$-0.3 per bushel.

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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: May



Wheat prices and margins continue to hold steady. The market has not produced pertinent fundamental news to change the current perception of price. The winter wheat conditions continue to lag last year's levels, while concerns over the cool wet spring have yet to manifest themselves in a concrete way. The winter harvest stands at just 10%, so anecdotes about quality off the combine are sure to increase as the harvest advances. The spring wheat conditions also lag last year's pace, and concerns over dryness across parts of the high plains have begun the ebb and flow of summer weather worries. On the export front, U.S. all wheat sales are just over 100% sold, while shipments are at 92%, shy of the USDA expectation of 1,035 million bushels. Just one week remains in the marketing year, so most of the unshipped balances will be moved forward into the new crop year. Wheat producers continue to favor maintaining flexibility in their new and existing positions.



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 acre ¹. 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 acre ¹. Basis for the 2018 crop is estimated at \$-0.3 per bushel.

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