

MARGINMANAGER

The Leading Resource for Margin Management Education

April 2015

★ Learn more at MarginManager.Com

INSIDE THIS ISSUE

Margin Watch Reports

Hog ... Pg 2

Dairy ... Pg 3

Beef ... Pg 4

Corn ... Pg 7

Beans ... Pg 8

Wheat ... Pg 9

Features

Understanding PPD and Hedging Milk in Dairy Margin Management 10

2015 CIH Educational Program Schedule. Pg 6

Dear Ag Industry Associate,

With spring now firmly established across the country, attention has turned to planting progress and the outlook for this year's crops. Thus far, weather conditions have been largely ideal across a broad area of the U.S. Corn Belt, and fieldwork is advancing quickly. While there is still a long growing season ahead, it is safe to say that optimism has prevailed over yield prospects and this has been evident in corn's price trend recently. Moreover, advancing cases of bird flu are also having an impact on perceptions for forward feed demand. The latest *Margin Watch* reports discuss how these factors are having different impacts on the livestock and crop sectors as it relates to projected profitability into 2016.

One of the recurring concerns we hear from the dairy industry is how the producer price differential or PPD affects the milk price received by producers and how this risk can be protected in a margin management plan. Our feature article this month focuses on this topic and discusses how the dairy industry is unique with more than one benchmark representing the revenue side of their margin equation. "Understanding PPD and Hedging Milk in Dairy Margin Management" (page 10) explores the difference between the uniform blend price a dairy producer receives for their milk and the futures price on the exchange. A thorough understanding of how a dairy is paid for the milk they market and how futures relate to this value as a benchmark and risk management tool can lead to more effective margin management decisions.

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

Upcoming Margin Seminars

Crop Margin Management Chicago, Illinois

July 8-9, 2015 (866) 299-9333

Hog Margin Management Chicago, Illinois

> July 22=23, 2015 (866) 299-9333

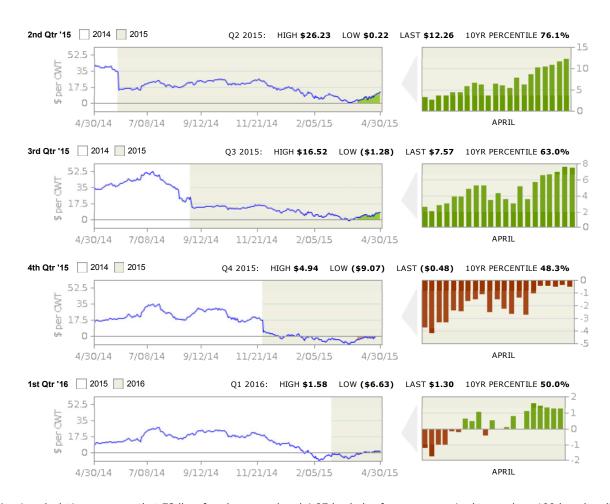
Dairy Margin Management Chicago, Illinois

Aug 5-6, 2015 (866) 299-9333

Hog Margin Watch: April



Margins continued to improve over the last half of April following further strength in the hog market and weakness in both the corn and soybean meal markets. Hog finishing margins are back over the 70th percentile in spot Q2 while just above the 60th percentile in Q3 and basically average from a historical perspective in Q4 and Q1 of 2016. The sharp improvement in margins recently has allowed many producers to "catch up" on coverage to protect positive margins after missing prior opportunities to establish a higher percentage of protection that they were trying to achieve. Hog prices have been supported by strength in the pork cutout, which has been trending higher the entire month after bottoming in early April. Also supportive is the fact that hog slaughter weights are now below year-ago levels, with the latest carcass weight for all hogs of 214.0 lbs. 1.5% below last year. This is helping to mitigate some of the larger slaughter run following a higher pig crop. Meanwhile, supplies of pork in Cold Storage at the end of March totaled 668.6 million pounds, up 16.2% over last year and 14.4% above the 5-year average. Stocks of pork trim inventories are particularly high, up 86.8% from last year and 30.5% over the 5-year average. Corn has been under pressure following nearly ideal planting weather, with 55% of the crop in the ground as of last Sunday compared to 38% on average for this time of year. Also negative for corn and particularly soybean meal, bird flu cases continue to expand in the Upper Midwest which will reduce poultry feed demand as operations are forced to depopulate flocks. Our clients have been implementing "catch-up" strategies with flexible positions that have allowed for improved margins from both the lower feed costs as well as the higher hog prices.



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.

Dairy Margin Watch: April



Dairy margins improved over the last half of April due to a combination of higher milk prices and lower feed costs. Margins are now back above the 80th percentile of the previous 10 years through the remainder of 2015 and almost at the 90th percentile for the first quarter of 2016. Milk has been supported by higher trade recently in the spot butter and cheddar markets at the CME despite ongoing weakness in the skim milk powder market. Prices for both butter and cheddar are now back to December levels, although world prices for both remain under pressure. Milk prices also appear to be supported by Cold Storage data indicating strong demand for cheese. American Cheese stocks contra-seasonally declined during March to 629.5 million pounds, down 12.8 million pounds from February and 9.6 million pounds or 2% below last year to the lowest level for March stocks since 2011. Despite these supportive features though, the Spring flush remains strong and could necessitate dumping in some Orders – particularly in the Northeast. Corn planting progress meanwhile is progressing under nearly ideal weather conditions across the heart of the U.S. Corn Belt, with 55% of the crop in the ground as of last Sunday compared to 38% on average for this date. Corn and particularly soybean meal have also been pressured by expanding cases of bird flu which have required some operations to depopulate flocks and negatively impact feed demand. Our clients continue to chip away at coverage in deferred periods where margins are strong, especially in Q1 where opportunities exist at the 90th percentile of the previous 10 years. Our consultants have been working with clients to structure flexible strategies that will allow for continued margin improvement from both lower feed costs and higher milk prices.



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 \$7.00/cwt for non-feed expenses. Milk basis is \$0.75/cwt and non-milk revenue is \$1.00/cwt.

Beef Margin Watch: April



Beef margins were generally weaker over the second half of April, with the exception of far deferred marketing periods in 2016 where feeder cattle have yet to be placed. Both cattle prices and corn costs were lower in the past couple weeks, providing offsetting impacts on margins which remain deeply negative and historically depressed. Cattle prices have been pressured by Cold Storage data that indicated a significant build in stocks during March. USDA reported boneless beef supplies in cold storage at the end of March totaled 438.8 million pounds, up 20.3% from a year ago and 11.5% above the 5-year average. USDA's monthly Cattle on Feed report was also considered somewhat bearish. In particular, April placements of 1.809 million head were slightly above a year ago when the market was expecting a reduction of 4.4% from 2014. That figure came as somewhat of a surprise as placements have only been above a year ago twice in the past 13 months. Meanwhile, recent export data show beef shipments to Mexico over the past four weeks are down 34% from a year ago as high prices and the strong dollar limit trade. On a positive note, corn prices are slumping as planting weather has been nearly ideal across a large expanse of the U.S. Corn Belt. USDA reported the corn crop at 55% planted through last Sunday compared to 38% on average for this date as progress continues to lag in southern states. Corn has also been under pressure from expanding bird flu cases in the Upper Midwest which have caused some operations to depopulate flocks and negatively impact feed demand. Our clients continue to focus mainly on adjustments to existing positions with deferred margin opportunities limited by negative profitability. Despite lower corn prices, adding flexibility to feed hedges to allow for potential future volatility is a topic our consultants have been reviewing with clients recently.

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.

The information contained in this publication is taken from sources believed to be reliable, but is not guaranteed by Commodity & Ingredient Hedging, LLC, nor any affiliates, as to accuracy or completeness, and is intended for purposes of information and education only. Nothing therein should be considered as a solicitation to trade commodities or a trade recommendation by Commodity & Ingredient Hedging, LLC. All references to market conditions are current as of the date of the presentation. Futures and options trading involves the risk of loss. Past performance is not indicative of future results. Please visit www.cihmarginwatch.com to subscribe to the CIH Margin Watch report.

Commodity & Ingredient Hedging, LLC

175 W. Jackson, Suite 1760 • Chicago, IL 60604 • 312-596-7755

DAIRY MARGIN SEMINAR

August 5-6, 2015

Reserve your place early.

(866) 299-9333

2015 Educational Program Schedule



Commodity Price Management
May 13-14

Crop Margin Management
Jul 8-9

Hog Margin Management
Jul 22-23

Dairy Margin Management
Aug 5-6

Margin Management for Ag Lenders
Oct 21-22

Beef Margin Management Nov 11-12

Dairy Margin Managment Nov 18-19

Hog Margin Management
Dec 9-10

Crop Margin Management

Trading futures and options carry the risk of loss. All dates subject to change. Please check cihedging.com/education for more information and the latest additions to the schedule.

Corn Margin Watch: April



Corn margins have fallen further since the middle of April and are approaching last October's lows. Midwest weather has cooperated thus far, allowing farmers to plant 55% of the projected acreage well ahead of the 5-year average of 38%. Adequate moisture is forecast which should aid early crop development but could slow planting further. The USDA will be reporting its first balance sheet for the new crop year in the coming WASDE report with many in the trade focusing on the production estimates. For old crop, negative demand news continues. Export sales remain slightly ahead of the average pace to meet the USDA estimate, but shipments continue to lag. Currently exporters have shipped 59% of the USDA forecast compared to 64% on average. Feed demand has been a focus lately with animal health concerns in the news. Bird flu cases have been popping up around the U.S. for a few months and most recently in Iowa where several flocks have been affected. Swine health, although better than last year, also remains a concern. A continued deterioration in livestock health could lead to slower usage for feed. The lone bright spot for demand remains corn use for ethanol which continues on a pace to meet and possibly exceed the USDA forecast. On the global front, worker strikes in Argentina have caused only small amounts of demand to come to the U.S. Argentine workers are demanding a 43% salary increase as inflation has surged to nearly 30% year-over-year. A solution with the workers is expected shortly and should not have any impact on exports. Market prices continue to limit opportunities to protect attractive forward margins. Our consultants are working with clients to help make strategic adjustments to existing protection strategies to help improve margins over time. Producers continue to favor flexible strategies that would protect all lower prices while still preserving the opportunity to benefit should prices rise.



The estimated yield for the 2015 crop is 174 bushels per acre and the non-land operating cost is \$615 per acre. Land cost for 2015 is estimated at \$238 per acre 1 . Basis for the 2015 crop is estimated at \$-0.07 per bushel.



The estimated yield for the 2016 crop is 174 bushels per acre and the estimated operating cost is \$615 per acre. Land cost for 2016 is estimated at \$238 per acre 1 . Basis for the 2016 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.

Soybeans Margin Watch: April



Soybean margins have improved slightly since the middle of April. The planting season has just begun with farmers reporting progress of 13% complete slightly ahead of the 5-year average of 9%. Weather forecasts remain ideal for early spring development and planting. The USDA will be reporting its first balance sheet for the new crop year in the coming WASDE report with record planted area expected to be reported. Old crop demand remains on pace to meet and possibly exceed the USDA forecasts. Export sales commitments stand at 101% of the USDA expectation compared to 94% on average. It is not uncommon for exporters to sell more than the USDA forecast. On average, exporters end up rolling over roughly 3% of accumulated sales to the new crop year. The shipment pace stands at 93% compared to 86% on average which at worst confirms the USDA estimate but may warrant an upward adjustment in the coming months. Soybean meal demand for domestic livestock feeding is expected to slow somewhat as cases of bird flu have popped up around the U.S. along with reports of PRRS in swine. On the global front, worker strikes in Argentina have caused only small amounts of demand to come to the U.S. Argentine workers are demanding a 43% salary increase as inflation has surged to nearly 30% year-over-year. A solution with the workers is expected shortly and should not have any impact on exports. Opportunities to protect attractive forward margins remain limited. Our consultants are working with clients to evaluate current protection strategies and make adjustments while weighing the costs and benefits. Some of our clients that previously decreased the delta of hedges to capitalize on the lower market continue to consider similar adjustments to a greater percentage of coverage that would benefit should the market continue higher while maintaining protection to all lower prices.



The estimated yield for the 2015 crop is 52 bushels per acre and the non-land operating cost is \$365 per acre. Land cost for 2015 is estimated at \$238 per acre 1 . Basis for the 2015 crop is estimated at \$0.05 per bushel.



The estimated yield for the 2016 crop is 52 bushels per acre and the estimated 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 \$-0.22 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 margins have fallen to new lows since the middle of April and are now at the lowest level of the crop year. Spring wheat planting continues to advance with 75% of the crop planted compared to 40% on average. Vegetation health maps have improved again the last few weeks as rains across North America have helped. However, a lack of improvement in crop conditions remains across Oklahoma and Kansas. The overall winter crop was last estimated to be 43% in good-to-excellent condition compared to 31% last year. On the demand side, export shipments continue to lag. Exporters have currently committed 105% of the USDA export forecast for sale compared to 99% on average for this point in the crop year. While the sales pace is positive, the shipment pace is discouraging as Brazil and Chinese interest has been absent. Exporters have shipped 86% of the expectation compared to 89% on average. With one month remaining in the crop year, the shipment figures warn of additional reductions to the USDA estimate. On the world front, Russia's tariff on wheat shipments is expected to be lifted prior to July. This development has put further pressure on world prices. It is widely expected that once lifted, Russia will return to the export market, adding to the already-large competition pool. With adequate domestic supplies, the marketplace will place a greater importance on crop progress reports moving forward. Our consultants continue working with clients to protect these forward margins with flexible strategies on existing coverage that will allow for potential margin improvement over time. Some of our clients that previously decreased the delta of hedges to capitalize on the lower market continue to consider similar adjustments to a greater percentage of coverage that would benefit should the market move higher, while maintaining protection to all lower prices.



The estimated yield for the 2015 crop is 67 bushels per acre and the non-land operating cost is \$366 per acre. Land cost for 2015 is estimated at \$163 per acre 1 . Basis for the 2015 crop is estimated at \$-0.06 per bushel.



The estimated yield for the 2016 crop is 72 bushels per acre and the estimated operating cost is \$328 per acre. Land cost for 2016 is estimated at \$158 per acre 1 . Basis for the 2016 crop is estimated at \$-0.06 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.



Understanding PPD and Hedging Milk

in Dairy Margin Management:

Dairy producers face a unique challenge in margin management that their counterparts in the swine and beef cattle industries do not share. Unlike cattle and hogs where there is only one futures contract that serves as a benchmark of value for forward revenue projections, dairy producers have multiple contracts including Class III and Class IV Milk, cheese, butter, powder, whey and nonfat dry milk. As a result, understanding how to project forward prices using the futures market as a price discovery mechanism, and further how to protect those prices using those contracts' risk transfer functions becomes more confusing for a dairy. In order to make sense of this, it is important for dairy producers to understand how they are paid for their milk. From there, the relationship between the cash price dairies receive for their milk and futures prices that serve as a benchmark for this value in a forward time period can help producers get a better handle on how to manage their milk revenue in a comprehensive margin plan.

First, all dairy producers receive what is known as a "Uniform Blend Price" for the milk that they market commercially to their coops and creameries. The Uniform Blend Price essentially represents a pooled value for milk based on the utilizations for that milk in each part of the country where it is marketed. Raw fluid milk is processed and utilized in a variety of dairy products which varies from one area to another. As a result, the value of the milk pool likewise varies from region to region as milk is processed for different purposes in different areas. There are four classifications of milk with the following distinctions:

- Class I milk utilized for fluid consumption
- Class II milk utilized for soft manufactured products (cottage cheese, yogurt, etc.)
- Class III milk utilized for cheese and whey
- Class IV milk utilized for butter and powder

Regardless of the particular area or region of the country, milk is utilized in all classes every month, and the milk payments received by producers reflect the value of milk across these various classes. Because some classes have higher utilizations than others depending on the particular marketing order, producers receive different values for their milk.

While there are several dairy futures contracts that trade on the CME, Class III Milk is widely regarded as the benchmark value for milk across the country. This in part stems from the fact that the liquidity is highest for this particular contract and it is the most widely used among market participants, even beyond the hedging realm. Although most dairy producers reference the Class III price as a benchmark for the value of their milk, the reality is that their milk check is not based solely on this Class III value as the uniform blend price represents the utilizations for all classes of milk in their pool. In the component

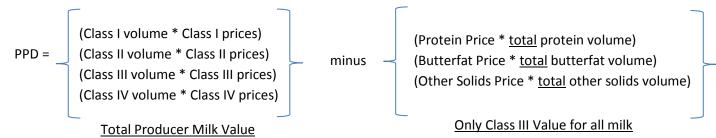
pricing orders (Northeast, Upper Midwest, Central, Mideast, Pacific Northwest, and Southwest) this creates what is known as the Producer Price Differential or PPD.

A simple way to think of PPD is that it represents the remaining value in the pool after paying the producer Class III. Dairy producers are paid only the Class III price (protein, butterfat, other solids) for the milk they market regardless of what the milk was used to produce. In that way, the producer may not receive the value of higher-priced classes nor lower priced classes. The Producer Price Differential is meant to shore up the difference between Class III payment and the remaining value in the pool. This could result in a negative value if Class III payments are in excess of the total pool value (a negative PPD).

Understanding the Producer Price Differential

This differential fluctuates from month to month as a function of the value of Class III relative to the other milk classes. Producer price differential is calculated as follows:

- The Marketing Order compiles all uses for the milk delivered in pounds and multiplies by the monthly price for that product to sum the Total Producer Milk Value
- Because producers are paid Class III components, the Marketing Order takes <u>all</u> pounds of protein, butterfat and other solids (regardless of what class it was used for) and multiplies by the corresponding price for each component to arrive at an Only Class III Value for all milk
- PPD is the difference between Total Producer Milk Value and the Only Class III Value

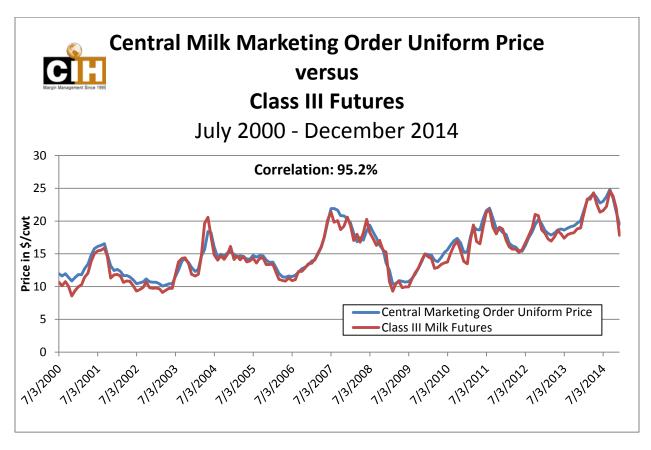


Uniform Blend Price versus Class III Futures

While using the Class III futures contract can serve as a benchmark of value for a producer's milk in a forward time period, Class III prices do not explain all of the variance in milk revenue values. In other words, there is not a perfect correlation between Class III futures and uniform blend prices. This can be seen by measuring the historical correlation between Class III milk and uniform blend prices. Correlations between Class III futures and uniform blend prices will be stronger for marketing orders that utilize a large percentage of the milk to create Class III products and will be weaker for areas that utilize a smaller percentage of the milk to create Class III products. This makes sense as a Federal Order

that utilizes milk only for Class III will not have any impact or variance for the value of milk from other classes.

For example, the Upper Midwest Milk Marketing Order has historically utilized between 78 and 82% of the milk delivered to produce Class III products every month of the year. As a result, the Upper Midwest uniform blend price correlates at 98% with Class III futures. By contrast, the Florida Milk Marketing Order has historically utilized between 82 and 86% of the milk delivered to produce Class I products every month of the year. The Florida uniform blend price correlates at 87% with Class III futures. Correlations similarly vary across other Federal Orders as a function of how much milk is utilized for Class III versus the other classes of milk. Each marketing order will have a different correlation between the uniform blend price and Class III futures. Below is a chart showing the correlation between the Central Milk Marketing Order and Class III futures:



Getting back to the futures market and the various dairy contracts available to use as a hedge against their future milk check, there is both a Class III and a Class IV milk contract. When analyzing what goes into the pricing for each of the four milk classes, it is interesting to note that all of them relate to Class III or Class IV in some way. Because of this, the uniform blend price that a producer receives for their milk will be influenced by both the Class III and the Class IV price. A look at the determinants of price for each class of milk can show the impact of Class IV on the uniform blend price:

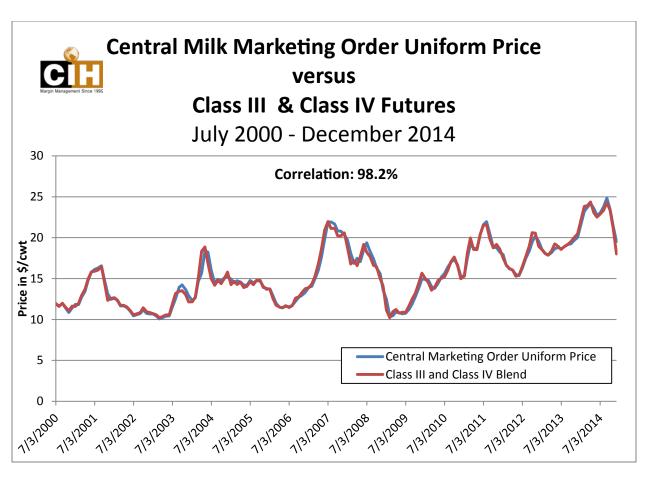
Class I price = Higher of Advanced Class III skim price or Advanced Class IV skim price

- Class II price = Advanced Class IV plus \$0.70
- Class III price = Butterfat, Protein, Other Solids (No effect from Class IV)
- Class IV price = Nonfat Solids price * 9

The Class II, III and IV price equations are fairly straightforward with Class II being a function of the Class IV pricing formula. Class I prices can be a function of either the Class III or the Class IV price, depending on which one is higher. The effect Class IV ultimately has on the uniform blend price will therefore be a function of the utilization for each class of milk in the particular marketing order, but this should be fairly similar from month to month.

What this suggests is that a dairy producer needs to look at both the Class III and the Class IV price of milk together as opposed to just Class III alone to represent a benchmark of value for their milk in a forward time period. The exact ratio between the two will depend on what particular marketing order a producer is located in. By analyzing price history, we can determine how much of an effect the Class III price and the Class IV price have historically had on the uniform blend price for any particular order. Furthermore, it is possible to combine a ratio of Class III and Class IV futures prices whereby the combination explains more of the historical variance in the uniform blend price for any particular order. In other words, the correlation between the ratio of Class III and Class IV (the combination of the two) and the uniform blend price improves from just using the Class III price alone for all orders. Below is a chart showing the correlation between the Central Milk Marketing Order and a combination of Class III and Class IV futures:

(PLEASE SEE CHART ON FOLLOWING PAGE)



The benefit of this is that by combining both contracts to improve the correlation between cash and futures (the historical variance between the uniform blend price and the milk futures price), much of the monthly fluctuations in PPD can be addressed and a more accurate hedge created to protect the value of a producer's milk in a forward time period. By only using the Class III contract to hedge milk, PPD will always be a risk factor to deal with and this risk will be greater for producers who sell their milk in marketing orders where the Class III utilization is lower. To learn more about how your uniform blend price has historically varied between Class III and Class IV futures, please contact us to conduct a more detailed analysis.

The information contained in this publication is taken from sources believed to be reliable, but is not guaranteed by Commodity & Ingredient Hedging, LLC, nor any affiliates, as to accuracy or completeness, and is intended for purposes of information and education only. Nothing therein should be considered as a solicitation to trade commodities or a trade recommendation by Commodity & Ingredient Hedging, LLC. All references to market conditions are current as of the date of the presentation. Futures and options trading involves the risk of loss. Past performance is not indicative of future results. Please visit www.cihmarginwatch.com to subscribe to the CIH Margin Watch report.

Interested in learning more about the margin approach to marketing?