

Iowa Farm Outlook

Department of Economics
Ames, Iowa

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Several Factors Underpinning Beef Packer Margins

A critical leverage point in cattle production and the beef market is the packer margin. While cattle producers determine long-run product supplies and the timing of those supplies with their decisions to breed cows and heifers and place cattle on feed, packers make critical short-run decisions on slaughter numbers and, consequently, how much beef to put on the market given current demand and available stocks. Packer margins have a longer-term impact on the performance of packing companies and balancing capacity with available cattle supplies. Beef packer margins have surged once again, even surpassing the highest levels achieved in the last two years.

The live to choice cutout spread is often referred to as the estimated packer gross margin. This price spread is the difference between the purchase price of a slaughter steer and the wholesale value (Choice boxed beef cutout) plus the total value of the non-meat (or byproduct) items from the steer. Importantly, the live-to-cutout spread does not represent beef packer profitability because it doesn't consider a processor's operating costs.

So, why stop at a gross margin level of detail? First, operating cost data for packing plants — or at least enough plants to determine an average slaughter/processing cost — is not readily available. Combine that with the fact that costs are likely quite different across plants; thus, any one number wouldn't represent operating costs very well across the industry. Second, operating costs are likely pretty stable in any given plant meaning that the variation in gross margins is very close to the variation in net margins and thus equally indicative of packers' desires and motivations to alter prices paid and/or operating rates.

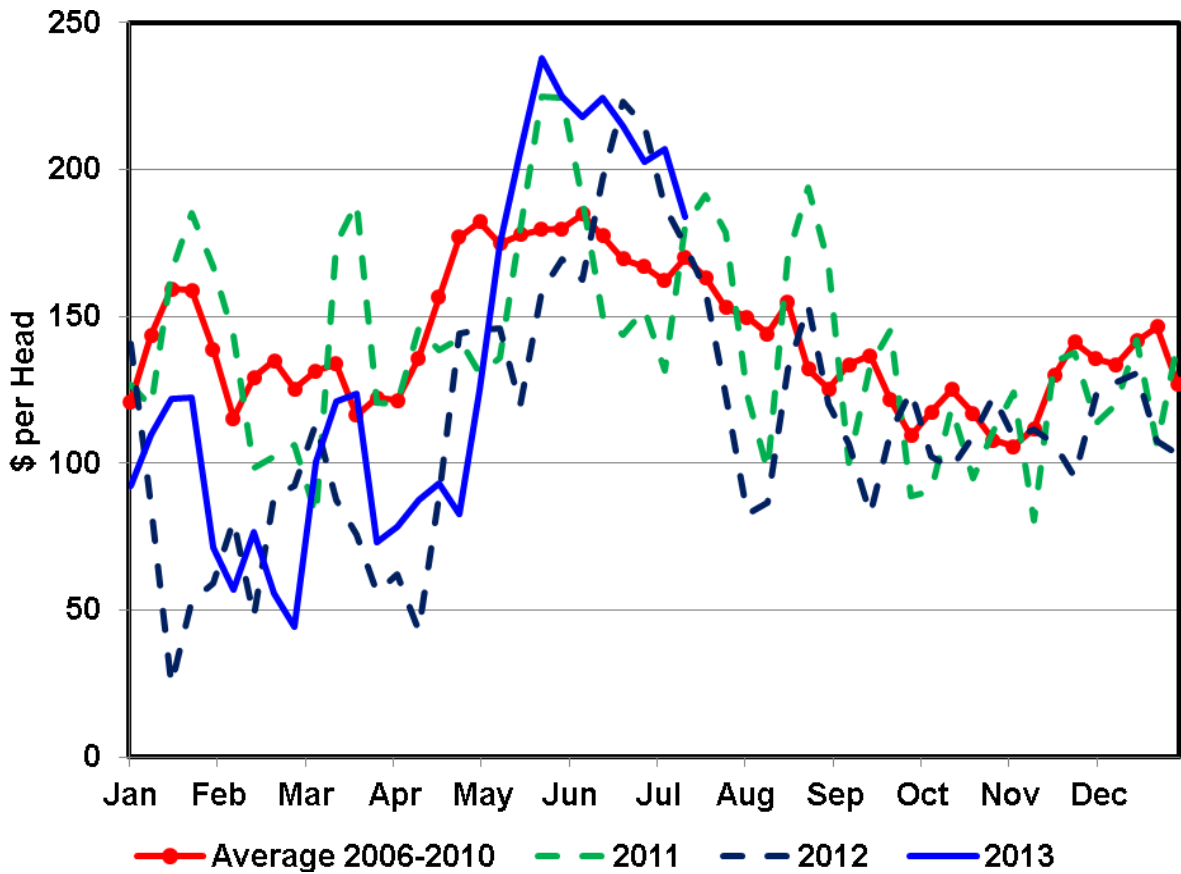
All of this is a prelude to point out that beef packer margins have been quite good as of late, rebounding significantly from early 2013 (figure 1). Through April this year packer margins were FAR below the 2006-10 average and 2011 levels and were only moderately above the lows of 2012. However, from May onward, they have been considerably better. Margins tend to follow a seasonal pattern; smaller during the first quarter, widening during the second quarter, and then modestly narrowing during the remainder of the year; suggesting a further decline may be imminent. However, several factors may continue to provide a boost to beef packer margins.

Margins have been getting a big boost from strong values for hide and offal that has been in high demand since the Japanese market reopened to U.S. beef imports from cattle up to 30 months old. Tight fed cattle supplies have limited hide and offal availability and driven year-to-date values to more than 7 percent above 2012 values and more that 38 percent above the 2007-11 average.

When packers have struggled with margins, not too far in the recent past, one of the leading culprits has been excess capacity forcing them to aggressively compete for fed cattle. The industry may be beginning to see a meaningful impact from the Cargill Plainview, Texas plant closure in early February. The closing of the facility has reduced the demand for fed cattle and better aligned capacity with available supplies. Reduced demand for fed cattle has meant lower prices in the short- to moderate-term, a trend that has so far continued in 2013. Figure 2 shows the slight improvement in slaughter capacity utilization in 2013. However, importantly, while slaughter capacity utilization is looking to be improving, it still remains lower than historical averages.

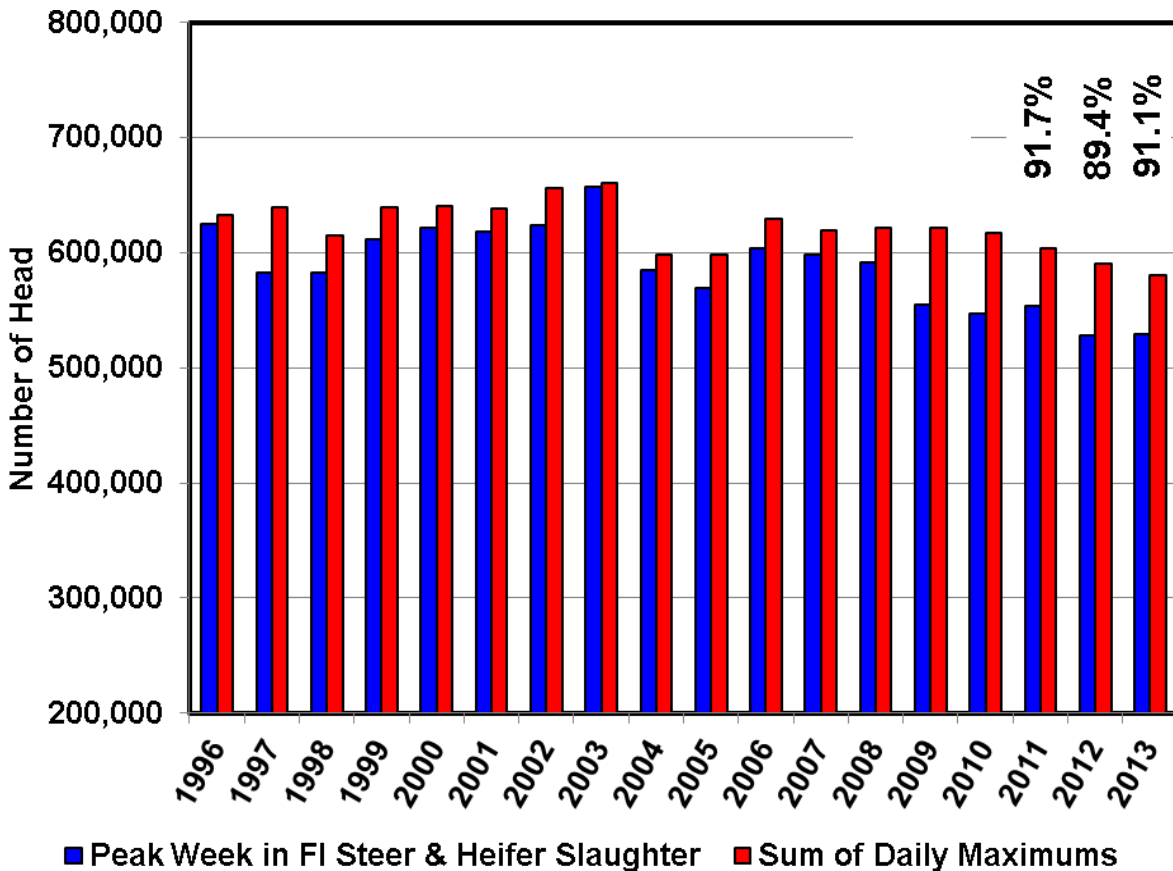
While feedlot supplies on July 1 declined 3.2 percent from a year ago, the weight distribution of cattle placed on feed in June implies that slaughter numbers will be frontloaded. Placements of cattle weighing more than 700 pounds increased 17.6 percent year/year, and placements of cattle weighing more than 800 pounds jumped 26.6

Figure 1. Live to Cutout Beef Price Spread, Weekly



Data Source: USDA-AMS, Compiled and analysis by LMIC

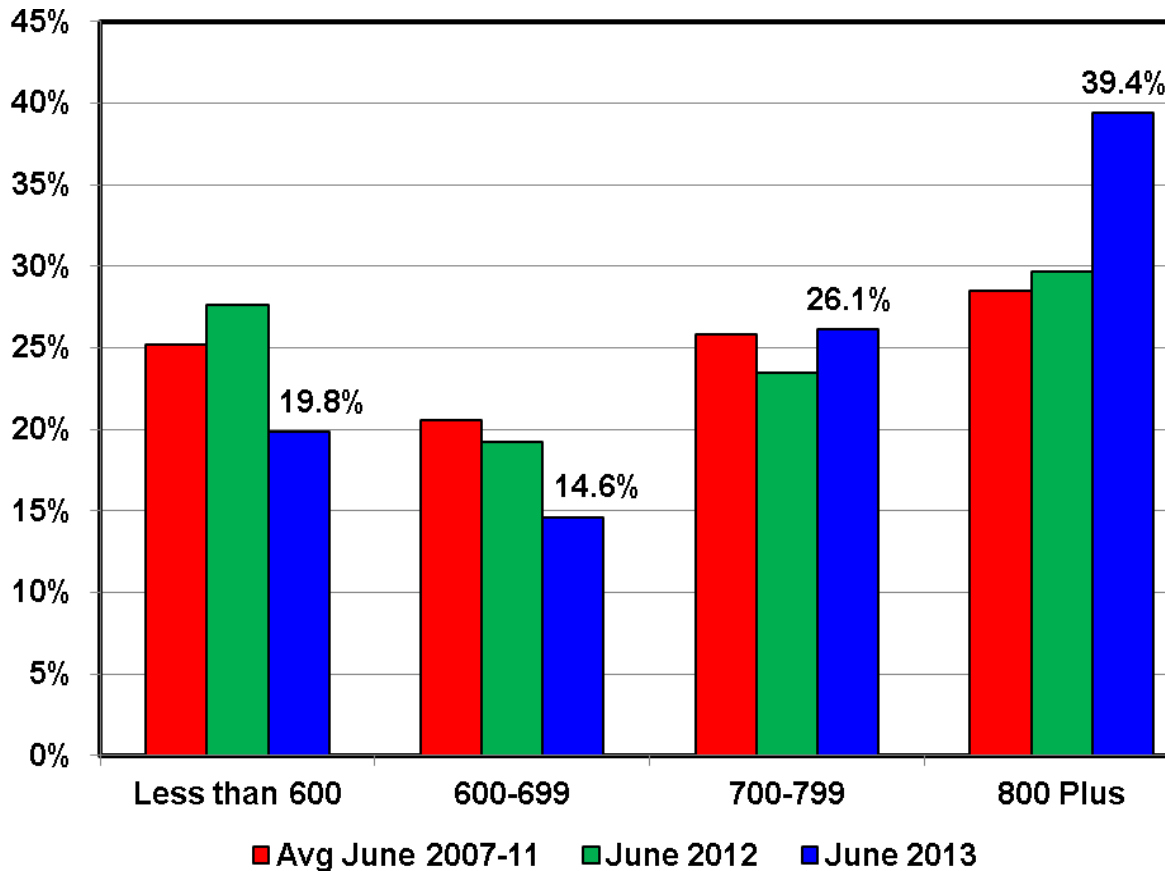
Figure 2. Weekly FI Steer & Heifer Slaughter Capacity, 1994 to YTD 2013



Source: USDA-AMS, Compiled and analysis by Lee Schulz

percent year/year. Almost 40 percent of the cattle placed on feed in June were over 800 pounds (figure 3). This implies that supplies of cattle coming to market this fall may not be as small as earlier expected. And, of course, the supply situation for fed cattle pushes margins — wider when numbers are high and tighter when numbers are low.

Figure 3. Cattle Placed on Feed During June by Weight Group on 1,000+ Capacity Feedlots, Weight Group as % of Total Placements



Source: USDA-AMS, Compiled and analysis by Lee Schulz

The net of these multiple factors will likely go a long ways in determining if the rebound in beef packer margins will last and either refuting or confirming speculation about future packing plant closures given the potential for growing excess capacity concerns.

Lee Schulz

Milk Production Increases during June

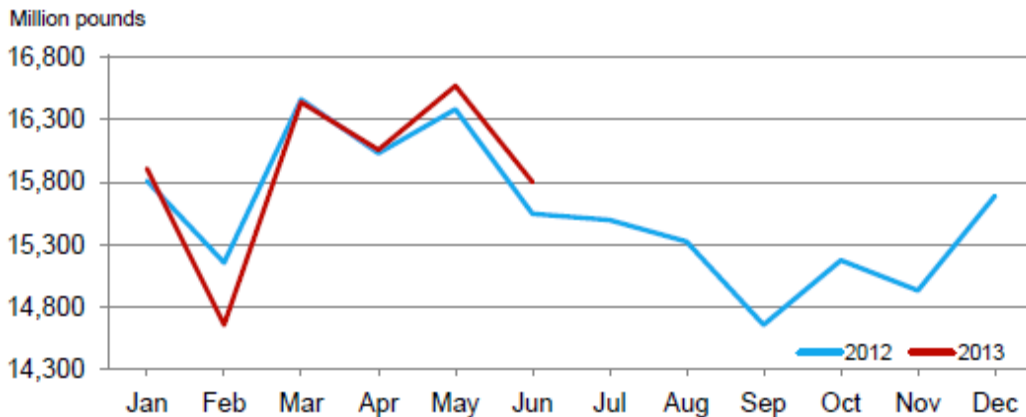
June 2013 23 major dairy states milk production increased by 1.6% compared to one year ago. May 2013 milk production was revised to +1.1% from the prior year, which was an increase of 0.3% or an increase of 47 million pounds. Second quarter 2013 US milk production was reported to total 52 billion pounds, up 0.9% from the same period one year ago. NE 2nd quarter milk production was 1 million pounds lower than one year ago, down 0.3%. Two of the 23 reporting dairy states lost milk production, California and Missouri. Kansas was the largest milk production gainer 9.38% and second was Indiana at 5.8%.

USDA’s “Livestock Slaughter” report said dairy producers sent 220,000 dairy cows to slaughter during June 2013, 28,000 less than May 2013 and 9,000 less than one year ago. Because USDA is not surveying dairy farms to ascertain milk cow numbers, due to federal budget sequestration, we do not know current milk cow numbers.

Table 1. Milk Production: Selected Dairy States, May 2013

State	2012	2013	% change total milk
	total milk production (million pounds)	total milk production (million pounds)	
Iowa	359	375	4.46%
MN	744	758	1.88%
WI	2,262	2,302	1.77%
IL	159	160	0.63%
CA	3,523	3,495	-0.79%
CO	268	279	4.10%
KS	224	245	9.38%
ID	1,154	1,154	0.00%
AZ	378	378	0.00%
NM	671	679	1.19%
PA	859	880	2.44%
NY	1,098	1,141	3.92%
TX	785	800	1.91%
23-State	15,544	15,800	1.65%

Monthly Milk Production – 23 Selected States



Source: Milk Production, USDA

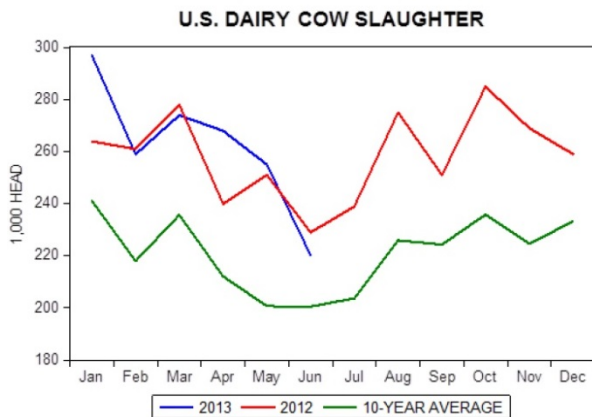
Livestock Slaughtered Under Federal Inspection, By Class – United States

[Data may not add to totals due to rounding]

Class	June 2012	May 2013	June 2013	January to June		June 2012	May 2013	June 2013	January to June	
	(1,000 head)	(1,000 head)	(1,000 head)	2012	2013	(percent of total)	(percent of total)	(percent of total)	2012	2013
Cattle										
Steers	1,504	1,455	1,435	8,018	7,905	53.2	51.5	53.3	49.9	49.9
Heifers	774	762	726	4,713	4,514	27.4	27.0	27.0	29.3	28.5
All cows	501	555	485	3,087	3,165	17.7	19.7	18.0	19.2	20.0
Dairy cows	229	248	220	1,523	1,567	8.1	8.8	8.2	9.5	9.9
Other cows	272	307	265	1,563	1,598	9.6	10.9	9.8	9.7	10.1
Bulls	47	50	47	266	265	1.7	1.8	1.7	1.7	1.7
Total	2,826	2,823	2,693	16,083	15,849	100.0	100.0	100.0	100.0	100.0

Source: Livestock Slaughter, June 2013

The June Slaughter report indicated that fewer dairy cows went to slaughter than any month during 2012, before feed prices rose so abruptly during drought. However one must be careful not to overanalyze this number since there were only 20 working days in June. If calculated on a per day basis that number was slightly above last year's daily number. And we are still well above the 10-year average for June.



Source: Dairy Herd Network

Demand or Disappearance

Commercial disappearance fell by 0.6% Jan-April 2013 compared to the same period one year ago. Fluid milk consumption is down 2% for the same Jan-April 2013 period. One year ago fluid milk consumption was down 1% Jan-April 2013. Butter consumption was up by 2% Jan-April 2013. American cheese was up 1.2% during the same period. NFDM was off by 9% however.

Dairy farmers are showing some real concern that demand for milk has been declining for several years. The beverage market is highly competitive and has become more so as “soy milk, almond milk and rice milks” become more prevalent. YTD dairy product consumption is down 0.6% with beverage milk 2% lower than one year ago. However the Feb-April number was down 2.2% thus indicating that the fluid milk consumption was declining more rapidly toward the end of the Jan-April period.

Commercial stocks are 0.1 percentage points lower than the previous month. The period, Jan-April, is prior to the usual spring flush of milk production. So we will need a couple more months to find out if stocks are affected by the recent rise in dairy exports.

COMMERCIAL DISAPPEARANCE: TOTAL MILK AND SELECTED DAIRY PRODUCTS - FEBRUARY-APRIL 2012-2013 AND YEAR-TO-DATE 2012-2013 1/

Item	Feb.-Apr.	Percent	Feb.-Apr.	Percent	Jan.-Apr.	Percent	Jan.-Apr.	Percent
	2012	change ^{2/}	2013	change ^{2/}	2012	change ^{2/}	2013	change ^{2/}
Million Pounds								
<u>MILK</u>								
Production	51,246	4.2	50,614	-0.1	68,267	4.1	67,709	0.0
Marketings	51,003	4.2	50,373	-0.1	67,940	4.1	67,384	0.0
Beginning Commercial Stocks ^{3/}	12,500	6.0	13,456	7.6	10,983	0.5	12,194	11.0
Imports ^{4/}	774	3.1	752	-1.7	1,018	5.6	1,066	5.6
Total Supply ^{5/}	64,277	3.8	64,581	2.1	79,941	3.1	80,643	2.1
Ending Commercial Stocks ^{6/}	14,826	21.6	16,441	10.9	14,826	21.6	16,441	10.9
Net Removals ^{7/}	0	0.0	0	0.0	0	0.0	0	0.0
Commercial Disappearance ^{8/}	49,451	0.3	48,140	-1.6	65,115	0.2	64,202	-0.6
<u>SELECTED PRODUCTS ^{9/}</u>								
Butter	439.7	-4.2	429.3	-1.3	558.4	-5.3	564.7	2.0
American Cheese	1,066.7	-1.4	1,051.2	-0.3	1,418.4	-0.1	1,422.9	1.2
Other Cheese	1,658.7	1.3	1,669.7	1.8	2,222.5	1.8	2,246.5	1.9
Nonfat Dry Milk	482.9	47.5	453.8	-5.1	641.8	31.1	579.6	-9.0
Fluid Milk Products ^{9/}	13,190.2	-0.7	13,038.5	-2.2	17,832.3	-1.1	17,615.4	-2.0

^{1/} Commercial disappearance includes civilian and military purchases of milk and dairy products for domestic and foreign use, but excludes farm household use and USDA donations of dairy products. Disappearance is a residual figure and therefore can be affected by any inaccuracies in estimating milk production, on-farm use, stocks, and imports.

^{2/} From year earlier on a daily average basis. ^{3/} Milk-equivalent, milkfat basis. ^{4/} Totals may not add because of rounding. ^{5/} Commercial disappearance in product pounds. ^{6/} Sales. Estimate based on actual sales in Federal milk order marketing areas and California. These sales figures have not been adjusted for calendar composition.

Source: U.S. Department of Agriculture. Economic Research Service. Agricultural Marketing Service. Fluid Milk Products.

Source: Dairy Market News, USDA

The July Cold Storage report on cheese stocks reported over 1.148 billion pounds in cold storage. That is down by a little over 1 million pounds but 5% higher than one year ago.

Major dairy exporting regions are producing below year ago levels. New Zealand is down 26%, Argentina down 5%, EU down 2%, and Australia down 8%. The last top dairy exporter, US, has production up fractionally. Because most of the top 5 have lower milk for the first five months of 2013, US dairy product exported were \$629 million. NDM/SMP was up 31% and much of that was a large sale to Algeria as well as higher sales to China, Indonesia, Malaysia and Thailand.

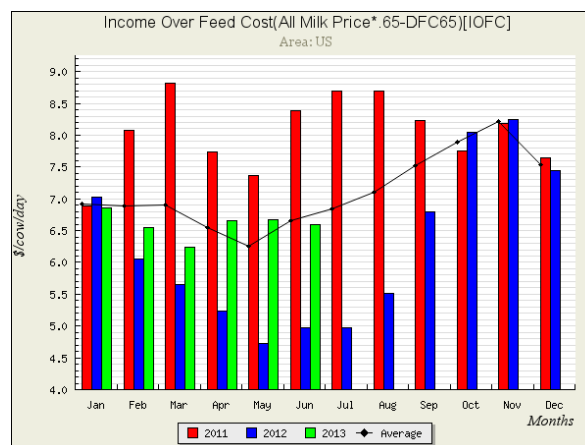
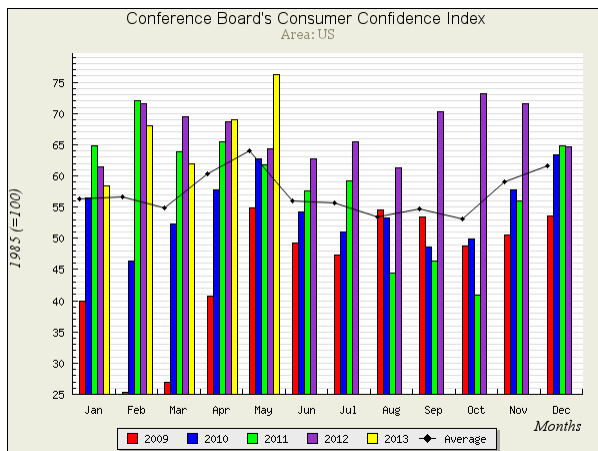
Table 2. Dairy Product Manufacture: April 2013

Product	Production	Apr 2012	Mar 2013	YTD
	1,000 pounds	% change	% change	% change
Butter	166,561	1.50	-0.2	1.7
Cheese, total	953,907	3.90	2.6	1.8
Cheddar	283,755	5.70	1.6	3.5
Other American	105,595	6.50	8.2	
Swiss	27,128	-5.20	7.9	
Italian Style	402,165	2.70	1.1	0.7
NDM	167,421	-13.40	4.6	-15.4
Sour Cream	109,889	0.10	12.1	-0.0
Yogurt	391,288	6.40	3.5	4.0
Dry Whey, total	78,048	-10.00	-4.4	-7.6
Lactose	91,761	4.80	2.4	1.7
WPC	42,807	16.90	5.6	3.7
Frozen	1,000 gallons			
Ice cream, regular	77,813	0.10	7.8	-0.9
Ice cream, lowfat	42,239	-11.10	9.6	-13.3

Source: Dairy Products, USDA

Analysis

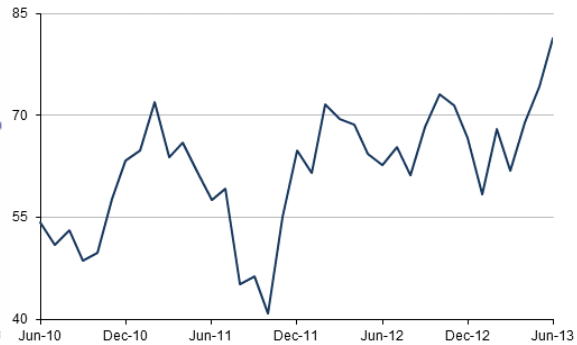
The Consumer Confidence Index took another jump in June, up 7.1 points to 81.4. That is the highest consumer confidence index since January 2008. The restaurant performance was once again above 100. “Buoyed by stronger same-store sales and customer traffic levels, the RPI hit a 14-month high in May. The RPI stood at 101.8 in May, up 0.9 percent from April and the third consecutive monthly gain. May also represented the third straight month that the RPI topped the 100 level, which signifies expansion in the index of key industry indicators.” Unfortunately, Income Over Feed Cost dropped from May to June, 7.1 cents per hundredweight.



Source: Understanding Dairy Markets, U of WI



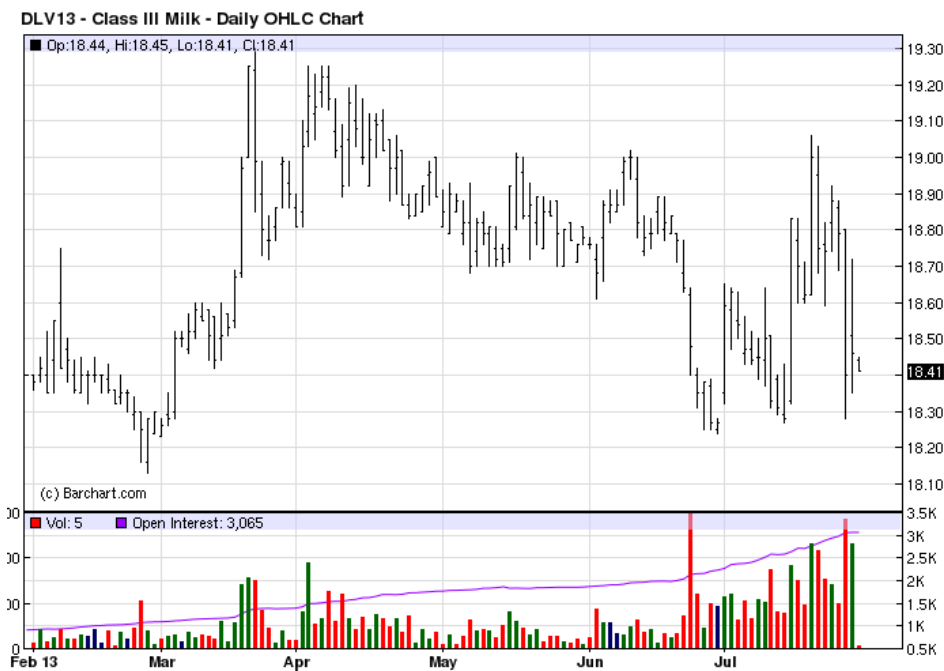
Source: National Restaurant Association



Source: Conference Board

Below is the Oct 2013 Class III milk price at the CME as of July 29. Class III milk for Oct 2013 closed at \$18.41. That is about where June ended and much of July traded. It was 39 cents higher just 4 days before and is trading near the March 2013 number.

The dairy market appears to conclude that the last Milk Production report from USDA was mostly neutral. Milk prices have traded mostly flat for all months through October. However “Dave Kurzawski, dairy analyst for FCStone in Chicago, termed the report “slightly bearish,” since milk production was slightly higher than expected.” Source: Dairy Herd Network. But Doane’s advisory service isn’t so confident that milk prices will remain near their current level by year’s end.



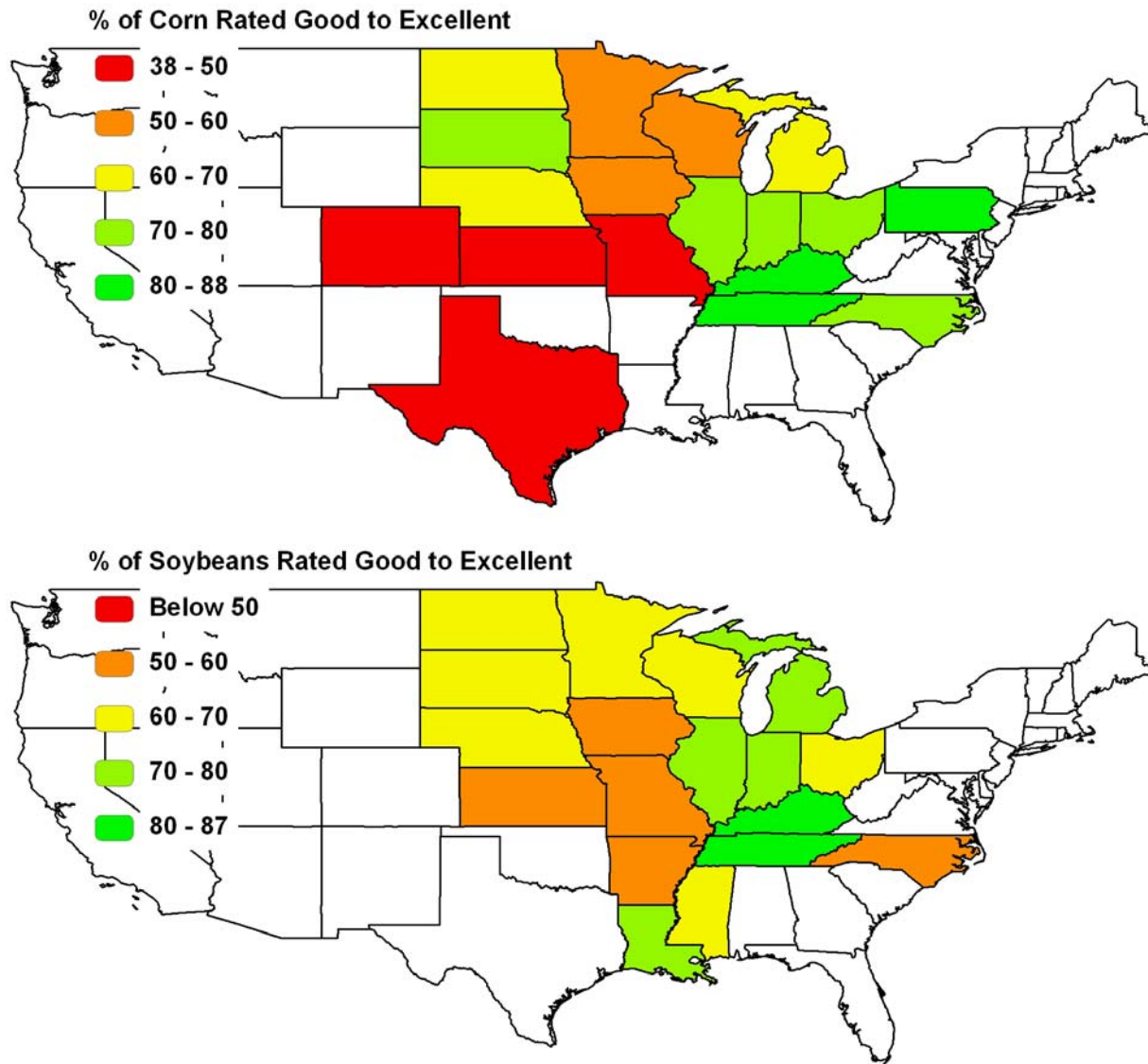
Source: Barchart.com: October 2013 Class III milk

Robert Tigner

National Crop Outlook Continues to be Good

The 2013 crop year has been an interesting one, to say the least. We started off worrying about the after-effects of the 2012 drought. Then the rains came, recharging soils but delaying planting. And then, for central Iowa, another round of dry weather through most of the summer. Crop pollination came later in July and early August. Normally, that would have a sizable cause for concern. But high temperatures staying in the 70s and low 80s, the crops didn’t have to deal with heat stress. As the following maps show, Iowa and the states to our south and west are the areas where the crops have struggled the most. To our north and west, crop progress has been slower than usual, but the corn and soybean crops look fairly good. And the eastern Corn Belt looks very strong this year.

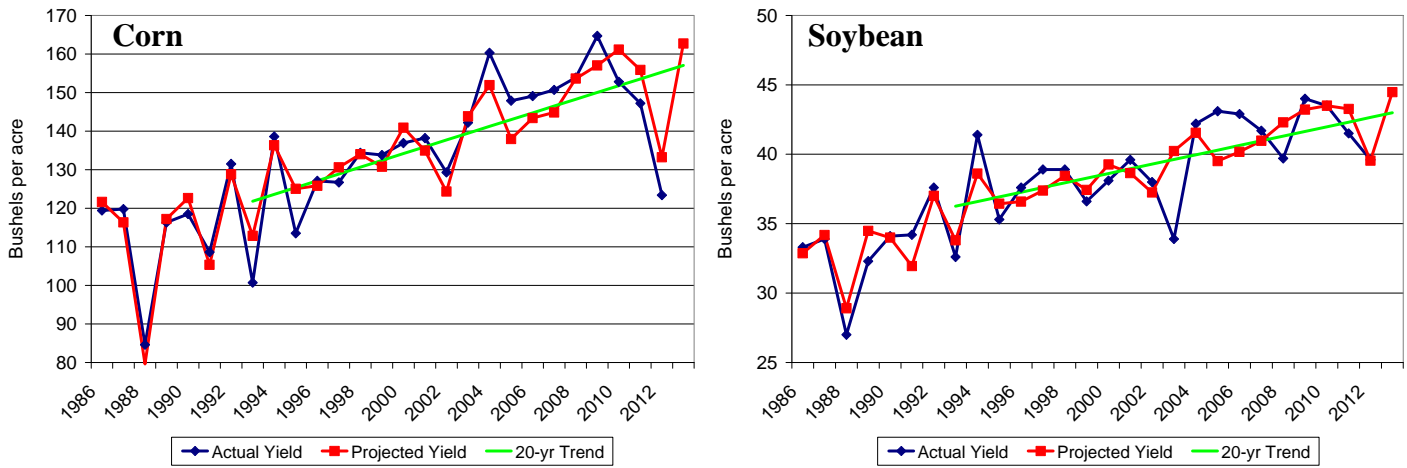
Figure 1. Crop Ratings at the Beginning of August.



Based on those patterns and continued good weather over most of the Corn Belt, private industry crop estimates are heading higher. Doane and Goldman-Sachs have both posted corn yield projections above 160 bushels per acre nationwide. Soybean yield estimates are holding in the lower 40s for bushels per acre. Those estimates are inline with some very simple models I have used in the past to estimate crop yields. Figure 2 shows the past performance and results for crop yield models, constructed with a simple time trend and the percentage of the national crop that is rated “Good” to “Excellent” in the USDA Crop Progress reports. As you can see, the corn model has done a very decent job of estimating yields in the past. Whereas, the soybean model is a little noisier. The key feature this year is that both the corn and soybean models indicate yields above the 20-year trends, around 162 bushels per acre for corn and 44.5 bushels per acre for soybeans. Currently, USDA projections are 156.5 bushels per acre for corn and 44.5 bushels per acre for soybeans. Combined with USDA’s estimate for harvested acres, these numbers point to a record 14 billion bushel corn crop and a record 3.4 billion bushel soybean crop.

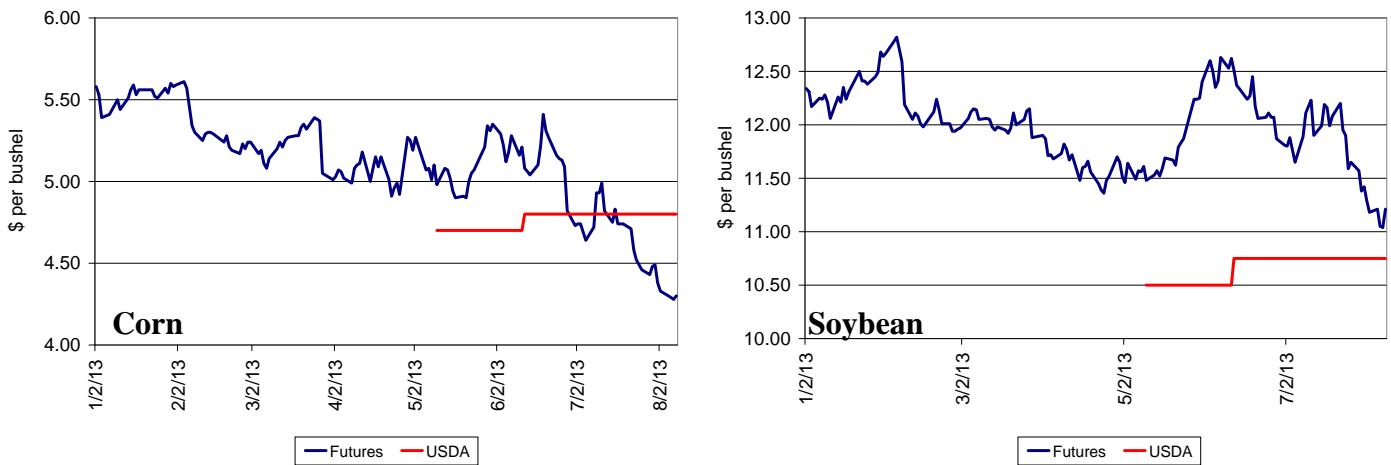
Looking back over the last 27 years, the largest gaps between the projected yields from the models and actual yields are 12 bushels for corn and 6 bushels for soybeans. Using those gaps to establish lower bounds for crop yields, corn yields could drop as low as 150 bushels per acre and soybean yields could fall to 38.5 bushels per acre. Those yields, given USDA’s harvested acres, would put the lower bounds for crop production at 13.4 billion bushels for corn and 2.96 billion bushels for soybeans. So even the lower bound estimate for corn is still record production. The biggest threat left for production is the potential for an early freeze. And given the late planting in Iowa and points north and west, that threat could still have significant consequences. But so far, the 2013 crop year looks to be a record breaker on the production side.

Figure 2. Actual vs. Projected Yields.



The markets have reacted to this news by removing most of the weather premium from crop prices. As the graphs in Figure 3 show, crop prices have been on a downward trajectory since the beginning of July. Corn has given up around \$1 per bushel, where soybeans have lost about \$1.50 per bushel. In fact, for the last month corn futures have been generating 2013/14 season-average price estimates below USDA’s current projection of \$4.80 per bushel. And within the last two weeks, the futures-based season-average price estimate has fallen below \$4.50 per bushel, which is the ISU estimate for corn production costs this year, highlighting the potential for negative margins as we move into the 2013/14 marketing year. On the other hand, soybean futures have maintained at a high enough level to project season-average prices above USDA’s current estimate of \$10.75 per bushel and above \$11, ISU’s soybean production cost estimate. So Iowa’s farmers face a squeeze on both ends, through lower than expected yields and prices.

Figure 3. Projected Season-average Prices.



With the weather premium disappearing from the market and the return of more traditional basis levels, cash prices for new crop corn and soybeans are not exciting a lot of sales from the countryside. Those who forward marketed some of their crop are now feeling pretty good about that pricing decision. Crop insurance coverage will also protect against some of this price loss. Looking forward, the marketing situation is also returning to a more traditional pattern. The markets are structured to put the lows at harvest and provide some carry to shift crop marketings into the springtime. Unlike the last few years, margins are now very thin, more in line with historical averages. Cost and storage management will be crucial to capturing margins if the crop is held through the winter. At least for now, corn and soybean production has returned to competitive (and sometimes unprofitable) roots.

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