May 2013 – Crop Market Update
Public Policy Department
Budget & Economic Analysis Team

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The General Economy

At least some still out there remember one of Ronald Reagan's favorite stories about the two twin brothers. One was an eternal pessimist, the other, an eternal optimist. The parents, worried about the divergent views of the two boys, take them to a child counselor. The pessimist is shown to a room full of brand new toys. He bursts into tears. When asked why he was crying he says that if he plays with the toys, he will undoubtedly break one. The optimistic son is lead into another room with a pile of horse pucky (translate that to manure). The optimistic son immediately dives into the pile and starts digging away. When asked what he was doing the boy replied, with all these droppings, there has to be a pony in here somewhere.

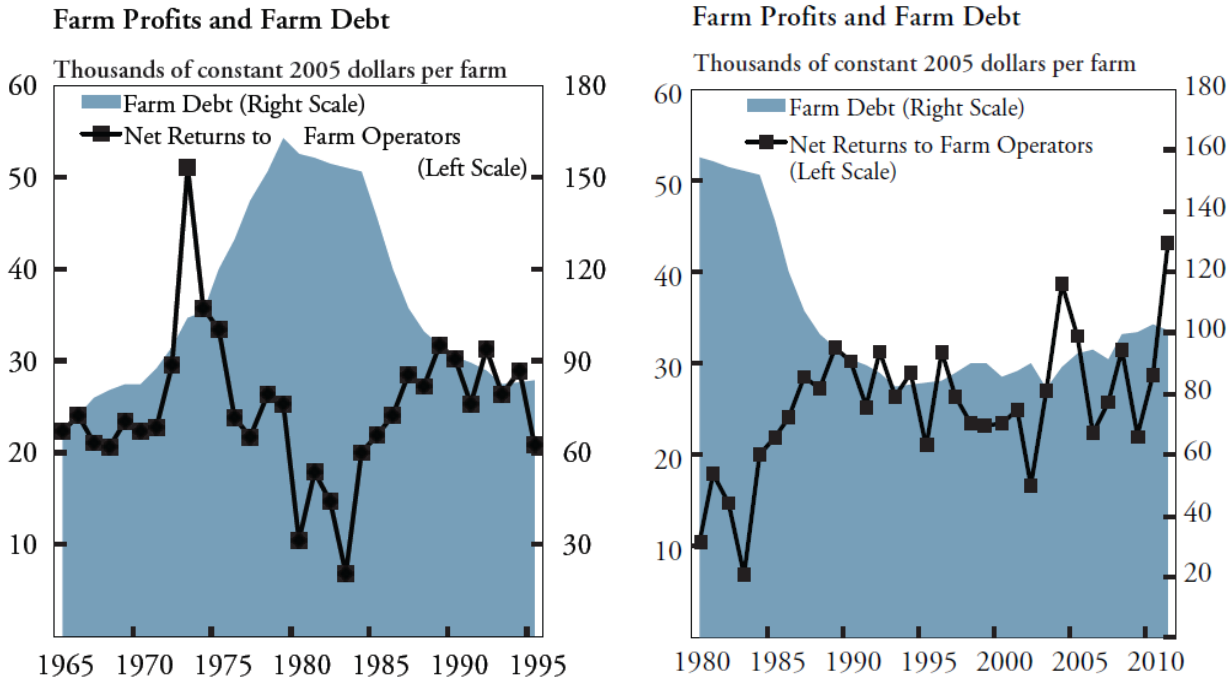
The Kansas City and Chicago Federal Reserve Banks released their spring summaries of land price and rental rates in the last few days. The Kansas City report has been picked up by a few in the media as being the harbinger of impending crisis for agriculture. An article by Mark Koba, a Senior Editor at CNBC, lead off with "Debt racked up by American farmers threatens to throw the agriculture industry out of its current economic boom and into a bust…" (http://www.cnbc.com/id/100739419) What do you think Mr. Koba would have done with the room full of toys?

Now to Mr. Koba's credit, the Kansas City Fed report did detail that if we do see the 25 percent decline in farm income being projected by USDA in 2014 and if we see farmers continuing to buy land and equipment even if or after those revenue declines happen and chew through cash reserves, it could put farmers into a more challenging financial position.

How does a guy argue with that? If the income fall happens and if farmers behave much differently than they have in the last decade then yes, we could face a problem. But so far, the data just does not raise any of those kinds of concerns. Sure we've all heard of the reports of double digit land price increases going on for the last several years. For example, in their May

AgLetter, the Chicago Fed reported land prices in the first quarter of 2013 for their region were up 15 percent compared to last year's levels. And this is after double digit increases for several of the last few years.

The Kansas City report does go back and look at how the sector behaved over the last few boom/bust cycles. The late 1970's/early 1980's cycle remains one of the most painful and it is interesting to compare current conditions with how agriculture moved through that period. It is interesting to note that agriculture piled up about 50 percent more debt in real terms than we are holding now between 1975 and 1980. With the income collapse starting in 1980, it did not take very long for farm debt to come down – hard – with all the stress and strain those write-downs entailed.



The aggregate data at this point in time suggests the sector is in almost the best financial shape we have ever been in. Agriculture's debt to asset or the debt to equity ratios are at all time lows. Yes, this is based in large part on high-priced land that could certainly come under pressure if interest rates took off. And real estate debt is up 17 percent in nominal terms in 2012 over 2009 levels. Put in dollar terms, however, real estate debt increased by $21 billion while agriculture's equity level increased by $455 billion.

I recently met with a group of investors in New York City all with considerable interest (read that as billions of dollars) in the agricultural sector. One of the participants asked a very cogent question which went 'is there any set of reasonable circumstances you could come up with where commodity crop producers in the Midwest would not do well through 2014?' After giving my usual uba-uba-uba moment, I responded that it would be very difficult to come up with a set of conditions that would put us in a financial crisis mode through the end of calendar 2014. Not saying one couldn't talk about the asteroid strike or something like that, but with normal weather

assumed, one has to be cautiously optimistic about that part of the sector's finances at the moment.

Diving deeper into the Chicago Fed's AgLetter also showed other interesting features. The index of demand for non-real-estate farm loans is at its lowest value since 1986. And 1986 was kind of a forced decline. Lower loan demand levels were noted by 46 percent of the regions reporting banks. Average interest rates for operating and ag real estate loans were at record lows.

Could we be setting ourselves up for another bubble burst? It is certainly possible. Interest rate rises would probably be the one factor that could turn things the quickest – barring some military conflict somewhere. But as of right now, one has to think that the pony was at least around here a while back.

Link to Kansas City Fed Report:
http://www.kansascityfed.org/publicat/econrev/pdf/13q2Henderson.pdf

Crop Update: *The First Guess at the 2013-14 Ending Stocks and Price*

The May WASDE provides the initial forecast of the 2013-14 marketing-year ending stocks and prices. This report was important for corn and soybeans as there is hope that large crops will build stocks and provide some breathing room in both markets.

The slow start to corn planting is of concern as the potential for reduced corn yields increases each day past May 15 throughout the Corn Belt. The percent of corn planted for the week ending May 12, 2013 and for previous years at the same date is presented below. The 2012 planting rates are an anomaly given the warm winter and lack of spring rains. The Iowa planting progress is at the lowest percentage since 1980 and the Midwest states (except for Ohio) are significantly below the 2007 to 2011 average planting progress. Favorable weather the week of May 13 will allow a great percentage of the Midwest crop to be planted. The benefit of the spring rains is the recharging of soil moisture which will help the plant throughout the crop-year. Still, the question remains how many of the potential 97.3 million corn acres will be switched to soybeans as the corn planting season drags on.

Corn Planting Progress for May 12

	2013	2012	Average 2007-11	Minimum 1980 - 2013
	---------- % ----------			
COLORADO	32	84	63	29
ILLINOIS	17	95	66	10
INDIANA	30	93	53	10
IOWA	15	90	78	15
KANSAS	31	90	72	20
KENTUCKY	39	96	68	16
MICHIGAN	32	60	54	14
MINNESOTA	18	88	69	18
MISSOURI	28	93	60	16
NEBRASKA	43	91	76	11
NORTH CAROLINA	92	97	97	53
NORTH DAKOTA	18	83	39	7
OHIO	46	84	50	6
PENNSYLVANIA	48	56	49	11
SOUTH DAKOTA	37	79	41	2
TENNESSEE	63	99	84	63
TEXAS	78	93	89	78
US TOTAL	28	87	65	28
WISCONSIN	14	57	52	14

Source: USDA-NASS

Corn Supply and Use

The May report reduced the projected yield to 158 bushels per acre which is down from the February *Outlook Conference* yield forecast of 163.5 bushels per acre. This lower yield reflects the slow planting pace, but is more representative of the 20-year trend yield. If achieved, the U.S. yield would increase 34.6

bushels per acre from the 2012 crop. The report projects the corn crop at 14.14 billion bushels which would be a record if achieved. The report is also projecting greater corn use for all demand categories. Feed and residual use is projected to increase to 5.3 billion bushels which is an increase of 925 million bushels or a 21 percent increase in feed use from last year. This may be optimistic as the largest year-to-year percent increase from 1990-2012 was 17 percent, implying that tremendous expansion in the livestock and poultry sector will have to occur to generate this increase in demand. Exports are projected to increase 550 million bushels to 1.3 billion bushels which is a 73 percent increase from 2012-13. Again, this may be optimistic given the strong competition from South America – the second Brazilian corn harvest exports is expected to bleed into the start of the 2013 corn marketing-year – and the U.S. will have to be competitive in pricing to recapture lost market share. The largest year-to-year change in exports from 1990 to 2012 was 64 percent so the USDA may be optimistic in their exports forecast for 2013-14.

U.S. Corn Supply and Use

	2010-11 Actual	2011-12 Actual	2012-13 Estimated	2013-14 May Forecast	Change from 2012-13
			Million Acres		
Planted Acres	88.2	91.9	97.2	97.3	+0.1
Harvested Acres	81.4	84.0	87.4	89.5	+2.1
% Abandoned	-7.7%	-8.6%	-10.1%	-8.0%	+2.1%
			Bushels per Acre		
Yield	152.8	147.2	123.4	158.0	+34.6
			Million Bushels		
Beginning Stocks	1,708	1,128	989	759	-230.0
Production	12,447	12,360	10,780	14,140	+3,360.0
Imports	28	29	125	25	-100.0
Total Supply	14,182	13,516	11,894	14,924	+3,030.0
Feed & Residual	4,792	4,548	4,400	5,325	+925.0
Food, Seed & Industrial	6,428	6,437	5,985	6,295	+310.0
Ethanol for Fuel	5,021	5,011	4,600	4,850	+250.0
Exports	1,835	1,543	750	1,300	+550.0
Total Use	13,054	12,527	11,135	12,920	+1,785.0
Ending Stocks	1,128	989	759	2,004	+1,245.0
Avg. Farm Price	$5.18	$6.22	$6.90	$4.70	-$2.20
Stocks-Use	8.6%	7.9%	6.8%	15.5%	+8.7%
Days of Ending Stocks	32	29	25	57	+31.7

The May *WASDE* is projecting a large increase in ending-stocks to a little over 2 billion bushels. If achieved, the stocks-use ratio would soar to 15.5 percent and the projected marketing-year average price would fall to $4.70 per bushel which is a decrease of $2.20 per bushel from 2012-13.

Soybean Supply and Use

The May report is also projecting a record soybean crop based on a slight increase in harvested area and a return to trend yields. The projected 2013 soybean crop of 3.39 billion bushels, if achieved, would be 375 million bushels larger than the 2012 crop. USDA is projecting soybean demand to increase for both crushing and exports. Crushing demand is projected to be 1.69 billion bushels up 60 million from 2012-13. Exports are projected to increase to 1.45 billion bushels. Soybean exports will still have to compete with the South American crops that will be harvested six months into the 2013-14 marketing-year so this counter-seasonal production shortens the marketing window for U.S. soy exports.

The projected record soybean crop will allow soybean stocks to rebuild to 265 million bushels which would be an increase of 140 million bushels. If achieved, the stocks-use ratio would

increase to 8.1 percent which is almost double the 2012-13 ratio. This relative mountain of soybean stocks would allow the 2013-14 soybean price to soften to a projected price of $10.50 per bushel which would be $3.80 per bushel less than the 2012-13 price.

U.S. Soybean Supply and Use

	2010-11 Actual	2011-12 Actual	2012-13 Estimated	2013-14 May Forecast	Change from 2012-13
			Million Acres		
Planted Acres	77.4	75.0	77.2	77.1	-0.1
Harvested Acres	76.6	73.8	76.1	76.2	+0.1
% Abandoned	-1.0%	-1.6%	-1.4%	-1.2%	+0.3%
			Bushels per Acre		
Yield	43.5	41.9	39.6	44.5	+4.9
			Million Bushels		
Beginning Stocks	151	215	169	125	-44.0
Production	3,329	3,094	3,015	3,390	+375.0
Imports	14	16	20	15	-5.0
Total Supply	3,495	3,325	3,204	3,530	+326.0
Crushing	1,648	1,703	1,635	1,695	+60.0
Exports	1,501	1,362	1,350	1,450	+100.0
Seed & residual	130	91	95	120	+25.0
Total Use	3,280	3,155	3,080	3,264	+184.0
Ending Stocks	215	169	125	265	+140.0
Avg. Farm Price	$11.30	$12.50	$14.30	$10.50	-$3.80
Stocks-Use	6.6%	5.4%	4.1%	8.1%	+4.1%
Days of Ending Stocks	24	20	15	30	+14.8

Wheat Supply and Use

The 2013 wheat crop is projected to be reduced 212 million bushels from the 2013 crop. The extreme weather impacting the Hard Red Wheat crop is impacting the balance sheet through an increase in projected abandonment (17.2 percent in 2013 compared to 12 percent in 2012) and lower projected yields. As a result, the projected 2013 wheat crop is 2.057 billion bushels. Wheat exports are projected to be reduced to 925 million bushels due to strong competition from other major wheat exporting countries. The record projected corn crop will reduce the demand for feed wheat so overall wheat use is projected to decline 159 million bushels from 2012-13.

Wheat ending stocks are projected to decline slightly to 670 million bushels due to the smaller wheat crop. The stocks-use ratio will remain near 30 percent with a large surplus available to meet future demand surge or production shocks. Wheat prices are projected to decrease to $6.80 per bushel due to the weaker corn price.

U.S. Wheat Supply and Use

	2010-11 Actual	2011-12 Actual	2012-13 Estimated	2013-14 May Forecast	Change from 2012-13
			Million Acres		
Planted Acres	53.6	54.4	55.7	56.4	+0.7
Harvested Acres	47.6	45.7	49.0	46.7	-2.3
% Abandoned	-11.2%	-16.0%	-12.0%	-17.2%	-5.2%
			Bushels per Acre		
Yield	46.3	43.7	46.3	44.1	-2.2
			Million Bushels		
Beginning Stocks	976	862	743	731	-12.0
Production	2,207	1,999	2,269	2,057	-212.0
Imports	97	112	125	130	+5.0
Total Supply	3,279	2,974	3,137	2,917	-220.0
Food	926	941	945	958	+13.0
Seed, Feed & Residual	203	240	436	364	-72.0
Exports	1,289	1,050	1,025	925	-100.0
Total Use	2,417	2,231	2,406	2,247	-159.0
Ending Stocks	862	743	731	670	-61.0
Avg. Farm Price	$5.70	$7.24	$7.80	$6.80	-$1.00
Stocks-Use	35.7%	33.3%	30.4%	29.8%	-0.6%
Days of Ending Stocks	130	122	111	109	-2.1

Cotton Supply and Use

Cotton stocks are projected to decrease in 2013-14 due to a projected 3.32 million bale reduction in production. The May report is projecting a cotton crop of 14 million bales due to a reduction in planted acres as well as a yield that is slightly lower than 2012. Cotton demand is projected to be sluggish due to a reduction in exports as China is expected to slow their importation and stocks rebuilding regime. Ending stocks for 2013-14 are projected at 3 million bales which is a stocks-use ratio of 20 percent. Cotton prices are projected at $0.78 per pound up $0.06 per pound in 2012-13.

U.S. Cotton Supply and Use

	2010-11 Actual	2011-12 Actual	2012-13 Estimated	2013-14 May Forecast	Change from 2012-13
			Million Acres		
Planted Acres	9.15	10.97	12.31	10.03	-2.28
Harvested Acres	7.53	10.70	9.37	8.40	-0.97
% Abandoned	-18%	-2%	-24%	-16.3%	+7.6%
			Pounds per Acre		
Yield	777.0	812.0	887.0	800.0	
			Million Bales		
Beginning Stocks	6.34	2.95	3.35	4.00	+0.65
Production	12.19	18.10	17.32	14.00	-3.32
Imports	0.00	0.01	0.01	0.01	+0.00
Total Supply	18.53	21.06	20.67	18.01	-2.66
Domestic Use	3.46	3.90	3.40	3.50	+0.10
Exports	12.04	14.38	13.25	11.50	-1.75
Total Use	15.50	18.28	16.65	15.00	-1.65
Unaccounted	0.08	0.18	0.02	0.01	-0.01
Ending Stocks	2.95	2.60	4.00	3.00	-1.000
Avg. Farm Price	$0.629	$0.815	$0.720	$0.780	+$0.0600
Stocks-Use	19.0%	14.2%	24.0%	20.0%	-4.0%
Days of Ending Stock	69	52	88	73	-14.7

China holds the fate of cotton in their hands. If China decides to continue imports, then there will be an opportunity for higher prices. However, China currently accounts for 57 percent of world cotton stocks and that is projected to increase to 63 percent of world cotton stocks in the 2013-14 marketing-year. China could also decide to slow imports which would cause prices to weaken.

Energy Update: *Summer Driving Season Brings Renewed Hope for Production*

Ethanol Production Uplifted, Inventories Continue Downward Slide

Ethanol production over the past month stayed relatively consistent with a few ups and downs, but is currently 44,000 barrels per day above the weekly average for 2013. The increase in production was seen mainly due to healthy producer margins as weekly returns over variable costs averaged approximately $0.27 per gallon over the course of the month. Ethanol production for the week ending May 10 tied its yearly high and was reported at 857,000 barrels per day, which is annually equivalent to 13.1 billion gallons of ethanol and 4.78 billion bushels of corn. The 1.7 percent week-over-week increase in ethanol production allowed for ethanol's discount to gasoline to widen. Speculation on gasoline output increasing before summer driving season helped uplift ethanol production as more gasoline is expected to be needed in order to meet demand. However, current ethanol production continues to remain below levels reported last year. Ethanol production at this time last year was reported at 904,000 barrels per day and is 5.2 percent above production levels seen currently.

Ethanol-blended gasoline remained strong over the course of the month. Ethanol-blended gasoline made up 95 percent of the total U.S. gasoline pool for week ending May 10. Even with this strong level reported, ethanol-blended gasoline actually decreased week-over-week. Last week (week ending May 3), ethanol-blended gasoline was seen at a record high of 97 percent (Figure 2). With producer margins healthy over the past month, there were no U.S. imports of fuel ethanol for a third straight week.

Figure 1: U.S. Ethanol Production vs. U.S. Ethanol Inventories (2012 - Present)

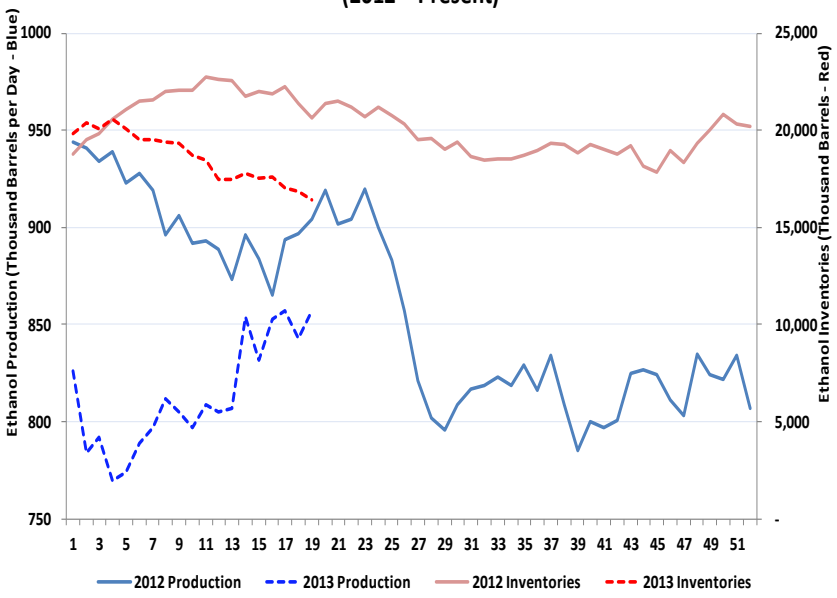
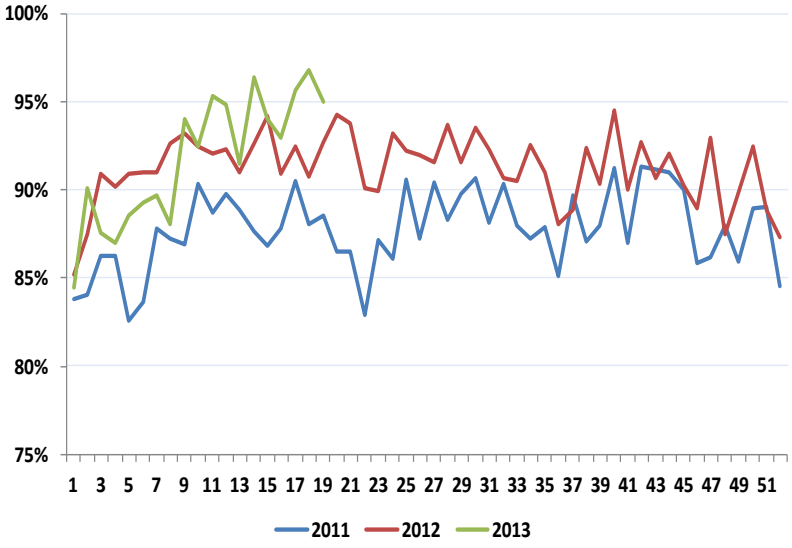


Figure 2: Percentage of Ethanol in Total U.S. Gasoline Pool



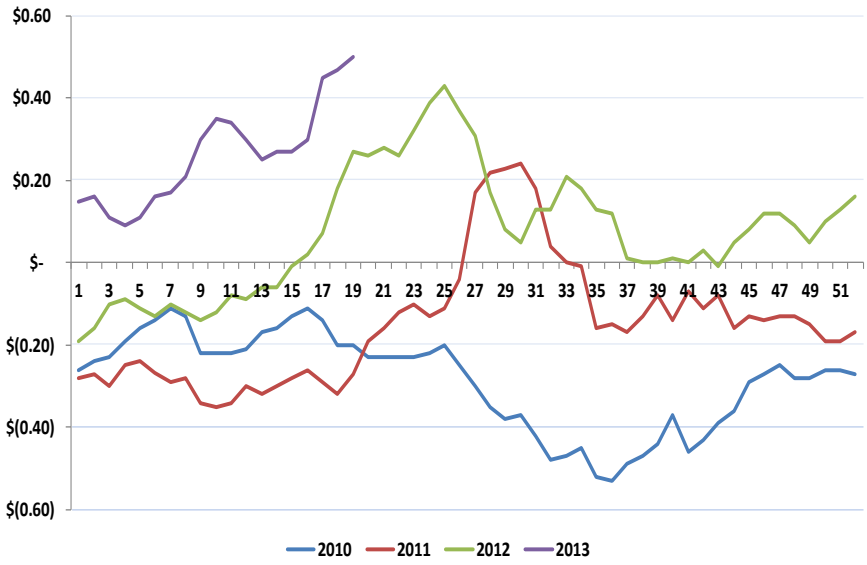
Ethanol stockpiles, on the other hand, have been continuously declining over the course of the month and even during the duration of the year. Stockpiles declined for the third straight week and fell 2.5 percent to just over 16.4 million gallons matching the lowest level since December 3, 2010. These tight supply conditions continue to uplift spot prices for ethanol. In addition, the combination of the United States not importing any fuel ethanol for the third straight week, increased gasoline production to meet the demand for the summer driving season and a tight corn supply market resulted from the drought will continue to add to the tight market conditions to the ethanol market. Year-over-year stockpiles continue to widen its large gap as current stockpiles are over 20 percent below levels seen at this time last year. Moreover, stockpiles from this year to last year have certainly been affected by two market extremes. At this time last year, stockpiles remained healthy due to the result of increased production from the elimination of the $0.45 per gallon tax credit. With the result of the drought from this past summer, this abundance of ethanol in inventory allowed for inventories to work as

a hedge against high corn prices which lowered ethanol inventories. Even post-2012 drought, current stockpiles continue to struggle.

Ethanol Margins Healthy, But Can They Maintain Momentum?

There is without doubt that stronger ethanol production over the past month resulted from healthy ethanol margins. Healthy producer margins for ethanol were driven by decreased corn prices to begin the month of April as the prospective plantings report indicated that farmers are expected to plant the largest corn crop since 1936 at over 97 million acres of corn and on news that there was more corn in inventory than originally thought. This market news saw corn prices drop 12 percent, but corn prices have managed to reverse trend due to a slow planting season across much of the Corn Belt. Even though it is too early to call it too late for farmers to switch away from corn (however, we are calling it close with each passing day!), 28 percent of the corn crop was planted for week ending May 12 which is significantly lower than reported at this time last year (85 percent) and even the 5-year average (65 percent). Basis levels are also feeling the upward lift from the slow planting season. As reported from USDA's Agricultural Marketing Service, basis levels in Eastern Iowa have doubled since the release of the prospective plantings report and averaged $0.50 over for week ending May 10 (Figure 3). However, with relatively good weather on the horizon across the Midwest, farmers should be able to get a lot of the corn crop in the ground. With the continued tight supply of ethanol, I would expect ethanol prices to remain strong enough to endure the uplift that is being seen in corn prices due to late planting conditions cross the Corn Belt.

Figure 3: East Iowa, IA Weekly Basis Averages for Corn (2010 - 2013)



Nevertheless, ethanol producer margins were healthy over the past month and continue to be positive even with corn prices uplifted due to the slow planting season. Beginning in mid-April, weekly producer margins [over variable costs, including DDGs] for Iowa were approximately $0.38 per gallon, which were the highest weekly level since December 2011. Since, weekly corn prices increased 6 percent and managed to cut away from the 16-month high. Producer margins continuously decreased from the increased price in corn and managed to settle at $0.09 per gallon [over variable costs] for week ending May 3 (Figure 4).

Similarly, ethanol margins for Illinois followed trend (Figure 5). With average basis levels not reported as strong in Illinois, weekly producer margins in Illinois were stronger than that seen in Iowa. Weekly producer margins [including DDGs] for Illinois began mid-April at

approximately $0.52 per gallon and managed to decrease to $0.30 per gallon as of the beginning of May.

Depending on how the progress for corn planting goes and if all goes well, I would expect corn prices to settle bringing good news to producer margins for ethanol. Tight supply conditions and increased production of gasoline to start the summer driving season should also help support ethanol prices and help with ethanol production. All in all, it seems that the positives outweigh the negatives for ethanol markets…for now. However, the focus of policy will turn to the issue of the blend wall [most likely] this summer and into fall – when the Renewable Fuels Standard will be debated and held under a microscope.

Figure 4: Iowa Weekly Ethanol Margins (2010 - Present)

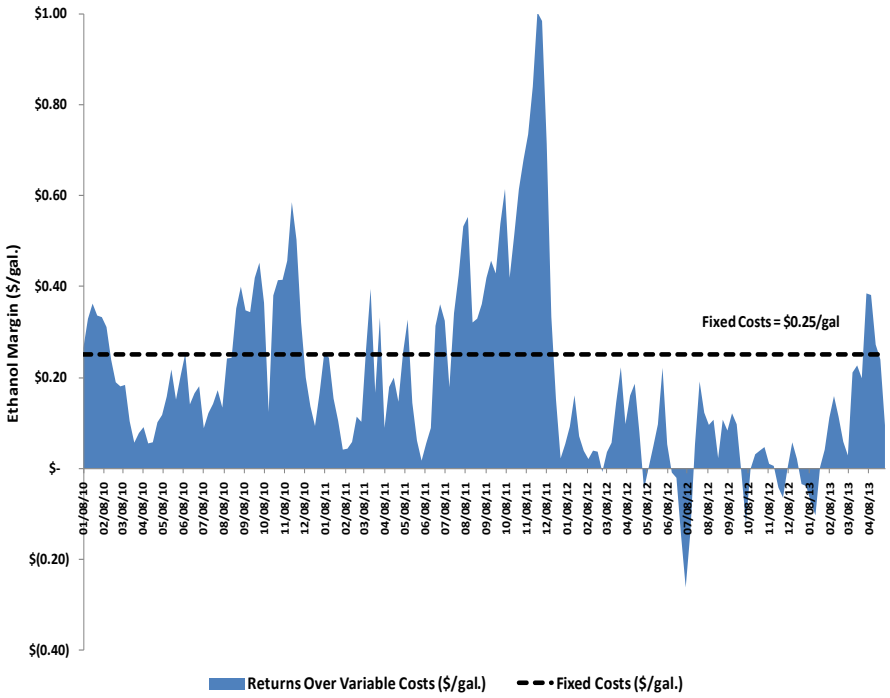


Figure 5: Illinois Weekly Ethanol Margins (2010-Present)