



May 2014 – Crop Market Update

Public Policy Department

Budget & Economic Analysis Team

Important Points from the 2012 Agricultural Census

The 2012 Agricultural Census was released Friday, May 2. Unlike the early release at the USDA Agricultural Outlook Conference, this was the full data package, including the state and county data. The data is available at: <http://www.agcensus.usda.gov/Publications/2012/>. It is also possible to download the entire collection of tables and reports to your computer by going to http://www.agcensus.usda.gov/Publications/2012/Online_Resources/Desktop_Application/. You will need to run a self-extracting application and will need 315 MB of storage on your computer but accessing the data will be much faster with the application on your computer than pulling information over the internet.

The press release from the National Agricultural Statistical Service announcing the release and giving a quick summary of the results is available at:

http://www.agcensus.usda.gov/Newsroom/2014/05_02_2014.php

Some Highlights:

- There were 3.18 million farmers and ranchers in 2012 on 2.1 million operations, down from 3.28 million operators in 2007 who operated 2.2 million operations.
- Total land in farms, at 914.5 million acres was down from the 922.1 million acres in 2007, but the average size of a farm rose from 418 acres in 2007 to 434 acres in 2012. Interestingly, this is below the 441 acre average farm size in 2002. Harvested cropland in the United States also increased in 2012 to 315 million acres from the 310 million acres reported for 2007.
- Escalating land prices pulled the average market value of land and buildings per farm to just over \$1 million (\$1,075,491) as opposed to the \$791,138 figure for 2007.
- Continuing a long term trend, the average age of the farm operator increase by just over 1 year to 58.3 years old from 57.1 year old in the 2007 Census. For several years, the average age of an operator has gone up by roughly 1 year for every 5 calendar years.
- Remarkably, the market value of agricultural products sold sat at \$201 billion in 2002, rose to \$297 billion in 2007 and hit \$395 billion in 2012. This nearly \$200 billion rise in market value of goods sold over 10 years represents an amazing success story. Reversing a long tradition, the value of crops sold exceeds the value of livestock sold in 2012 by \$30 billion.
- But this rise in sales has not been free. Over the same ten years production costs went from \$173 billion in 2002 to \$241 billion in 2007 and now, \$329 billion in 2012. Over that ten year period, fertilizer, lime and soil condition costs have increased the most in relative terms, nearly tripling over the period. Energy costs and purchased feed come in at number two and three in terms of fastest rising components of farm production expenses.

- Family farm ownership continues to dominate the structure of farming. It is important to note that the Census lists farms as ‘Farms by legal status for tax purposes’. Consequently they list ‘Family or individual’ as operations that are really sole proprietorship and include in the documentation that a ‘partnership’ includes family partnership, just as their ‘corporation’ category includes family corporations. This is important because the Agricultural Resource Management Survey, or ARMS, come at farms in a different direction. The survey essentially says that a Nonfamily farm is one where the ‘operator and persons related to the operator do not own a majority of the business.’ In other words, all other operations, regardless of structure for tax purposes, that are owned by the operator family are considered a family operation. Under the Census, 87 percent of operations are listed under the ‘family or individual’ category with another 6.5 and 5.0 percent down as Partnerships and Corporations respectively. The ARMS data however says that 97.2 percent of all farms were ‘family farms’ in 2012, which the figure AFBF uses in its reporting.
- Concentration in agricultural production remains high with only 466 operations accounting for 10 percent of all output and 4,326 and 33,330 farms generating 25 and 50 percent respectively. In the 2007 Census however, it took only 4,009 operations to generate 25 percent of the output, so to at least a slight degree, agriculture has gotten somewhat less concentrated in the last five years. The number of operations needed to get to 50 percent in 2007 was 32,886.
- While overall numbers of farmers declined by 3 percent, the breakout of the change in farmer (not farms) numbers by age group relative to the 2007 Census showed some interesting shifts. The Census reports not just the age of the principal operator but the age of the second and third operator as well. While the total number of farmers under 25 dropped by nearly 13 percent, the number of farmers in the 25-34 age category remained essentially constant. Those in the 35 to 44 age bracket dropped by 20 percent while the 45 to 54 age group dropped 16 percent. The 55 to 64 age cohort on the other hand actually increased by 6 percent and the 65 to 74 years of age group rose more than 12 percent. Again this comparison extends across the principle, second and third operators on the farm.

As the next several weeks unfold, AFBF staff will continue to suss out other details from the Census. This Census collected new data on selected production practices for example that had not been collected previously. Some of the other demographic data as well as the regional breakdowns will also be interesting to investigate.

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Crop Update: USDA Provides First Projections for 2014-15 Marketing-Year

As planting season is well underway, the USDA May WASDE provides the first supply and demand projections for the 2014-15 marketing-year. These projections are based on the *Prospective Plantings* survey conducted this past March along with trend estimates for yield.

Corn Outlook

While the focus of the report was on the new-crop projections, the May report made significant adjustments to the 2013-14 corn balance sheet. Corn exports have been the surprise story in the corn market as the projected exports are 500 million bushels above the level projected last November when the market was certain of the record corn crop. As of May 1, the 2013-14 corn exports are 651 million bushels above the 2012-13 level for the same week. The record 2013 crop and lower prices brought customers back to the U.S. with a strong appetite for corn.

The May report increased projected exports to 1.9 billion bushels for the 2013-14 marketing-year along with an increase in ethanol use. The overall increase in use reduced projected ending stocks by 185 million bushels to 1.146 billion bushels.

U.S. Corn Supply and Use					
	2011-12	2012-13	2013-14	2014-15	Change from
	Actual	Actual	May Forecast	May Forecast	2013-14
Million Acres					
Planted Acres	91.9	97.2	95.4	91.7	-3.7
Harvested Acres	84.0	87.4	87.7	84.3	-3.4
% Abandoned	-8.6%	-10.1%	-8.1%	-8.1%	+0.0%
Bushels per Acre					
Yield	147.2	123.4	158.8	165.3	+6.5
Million Bushels					
Beginning Stocks	1,128	989	821	1,146	+325.0
Production	12,360	10,780	13,925	13,935	+10.0
Imports	<u>29</u>	<u>162</u>	<u>35</u>	<u>30</u>	-5.0
Total Supply	13,516	11,932	14,781	15,111	+330.0
Feed & Residual	4,548	4,333	5,300	5,250	-50.0
Food, Seed & Industrial	6,437	6,046	6,435	6,435	+0.0
Ethanol for Fuel	5,011	4,648	5,050	5,050	+0.0
Exports	<u>1,543</u>	<u>731</u>	<u>1,900</u>	<u>1,700</u>	-200.0
Total Use	12,527	11,111	13,635	13,385	-250.0
Ending Stocks	989	821	1,146	1,726	+580.0
Avg. Farm Price	\$6.22	\$6.89	\$4.65	\$4.20	-\$0.45
Stocks-Use	7.9%	7.4%	8.4%	12.9%	+4.5%
Days of Ending Stocks	29	27	31	47	+16.4

The May report is projecting a record corn crop for 2014 even with projected planted acres reduced by 3.7 million from 2013. The USDA is using a weather adjusted trend model to project a record corn yield of 165.3 bushels per acre. The incorporation of the weather components (the percentage corn planted by mid-May, growing season precipitation and temperature) make a significant contribution to the yield prediction. Prior to the inclusion of weather variables, USDA used a 25-year trend model which for 1989-2013 would result in an estimated trend yield of 158.9 bushels per acre. The national average yield has only exceeded 160 bushels per acre twice in the last ten years so the projected yield of 165.3 bushels per acre is within the realm of possible outcomes but seems optimistic.

Given this is the first supply and demand projection for the 2014-15 marketing-year, the use projections are almost identical to those in the 2013-14 marketing-year. The projected feed use for the new crop is 50 million bushels lower than the current marketing year's projections. Corn for processing use is projected at the same levels as 2013-14. The surprising projection is that corn exports are projected 200 million bushels lower than the current marketing year. This reflects the strong export competition from the Southern hemisphere. New crop corn ending stocks are projected to increase by 580 million bushels to a projected 1.73 billion bushels ending stocks for 2014-15. The U.S. marketing-year average price is projected to be slightly lower to \$4.20 per bushel for 2014-15 as compared to \$4.65 per bushel in 2013-14.

Soybean Outlook

The old-crop soybean stocks are projected to remain historically tight as the report reduced projected ending-stocks to 130 million bushels which is a 3.8 percent stocks-use ratio. This is surprising as the previous minimum stocks-use ratio has been at 4.5 percent; USDA is describing an extraordinary situation by projecting a 3.8 percent stocks-use ratio.

U.S. Soybean Supply and Use					
	2011-12	2012-13	2013-14	2014-15	Change from
	Actual	Actual	May Forecast	May Forecast	2013-14
Million Acres					
Planted Acres	75.0	77.2	76.5	81.5	+5.0
Harvested Acres	73.8	76.2	75.9	80.5	+4.6
% Abandoned	-1.6%	-1.3%	-0.8%	-1.2%	-0.4%
Bushels per Acre					
Yield	41.9	39.8	43.3	45.2	+1.9
Million Bushels					
Beginning Stocks	215	169	141	130	-11.0
Production	3,094	3,034	3,289	3,635	+346.0
Imports	<u>16</u>	<u>36</u>	<u>90</u>	<u>15</u>	-75.0
Total Supply	3,325	3,239	3,519	3,780	+261.0
Crushing	1,703	1,689	1,695	1,715	+20.0
Exports	1,362	1,320	1,600	1,625	+25.0
Seed & residual	<u>91</u>	<u>90</u>	<u>95</u>	<u>110</u>	+15.0
Total Use	3,155	3,098	3,390	3,450	+60.0
Ending Stocks	169	141	130	330	+200.0
Avg. Farm Price	\$12.50	\$14.40	\$13.10	\$10.75	-\$2.35
Stocks-Use	5.4%	4.6%	3.8%	9.6%	+5.7%
Days of Ending Stocks	20	17	14	35	+20.9

The May report increased soybean exports for 2013-14 to 1.6 billion bushels which would be a record if achieved. As of April 27, total soybean export commitments, those soybeans shipped and those soybeans sold but not yet shipped, is at 102.5 percent of the USDA export projections. There are 40 million bushels on the books that will be shipped before September 1, rolled over into the new marketing-year, or cancelled to meet the projected level of exports. Alternatively, USDA may increase projected 2013-14 exports further.

The 2014 soybean crop is projected to be a record 3.635 billion bushels based on a projected record level of planted acres at 81.5 million as well as a record soybean yield of 45.2 bushels per acre. Like with corn, USDA is using a weather adjusted trend model to project the yield as a 25-year trend projection would provide an estimated yield of 43.8 bushels per acre. Again, the projected yield could be achieved if Mother Nature is very cooperative.

The projected use for 2013-14 is for very strong demand in all categories. Export demand is projected to increase to another record of 1.625 billion while crushing demand is projected to increase to 1.715 billion bushels. At this point, expected use in 2014-15 is not projected to increase sufficiently enough to absorb the projected increase in production of 346 million bushels. Ending stocks are projected to increase by 200 million bushels to a projected ending stocks level of 330 million bushels for 2014-15. This increase in stocks will force prices lower to from \$13.10 per bushel in 2013-14 to \$10.75 per bushel in 2014-15.

Wheat Outlook

The May report made no change to the 2013-14 ending stocks projections of 583 million bushels. The 2014-15 marketing-year projections are for a smaller wheat crop due to lower projected wheat yields reflecting the drought in the Southern Plains. On the demand side, exports are projected to be 235 million bushels lower in 2014-15 due to the smaller projected U.S. crop and larger wheat supplies in the major exporting countries.

U.S. Wheat Supply and Use					
	2011-12	2012-13	2013-14	2014-15	Change from
	Actual	Actual	May Forecast	May Forecast	2013-14
Million Acres					
Planted Acres	54.4	55.7	56.2	55.8	-0.4
Harvested Acres	45.7	48.9	45.2	45.9	+0.7
% Abandoned	-16.0%	-12.2%	-19.6%	-17.7%	+1.8%
Bushels per Acre					
Yield	43.7	46.3	47.2	42.7	-4.5
Million Bushels					
Beginning Stocks	862	743	718	583	-135.0
Production	1,999	2,266	2,130	1,963	-167.0
Imports	<u>112</u>	<u>123</u>	<u>175</u>	<u>160</u>	-15.0
Total Supply	2,974	3,131	3,023	2,706	-317.0
Food	941	945	960	970	+10.0
Seed, Feed & Residual	240	461	294	246	-48.0
Exports	<u>1,050</u>	<u>1,007</u>	<u>1,185</u>	<u>950</u>	-235.0
Total Use	2,231	2,414	2,439	2,166	-273.0
Ending Stocks	743	718	583	540	-43.0
Avg. Farm Price	\$7.24	\$7.77	\$6.85	\$7.30	+\$0.45
Stocks-Use	33.3%	29.7%	23.9%	24.9%	+1.0%
Days of Ending Stocks	122	109	87	91	+3.8

Wheat stocks are projected to continue to shrink, but the impact of smaller stocks is off-set somewhat to weaker demand resulting in a slightly larger stocks-use ratio.

Cotton Outlook

The May report increased the old-crop production projections by 40,000 bales by increasing the projected yield by 15 pounds per acre which more than offset the reduction in harvested acres by 120 thousand acres. The report decreased exports by 300 thousand bales to 10.4 million bales, reflecting the recent decline in exports.

For the 2014 crop, production is projected to increase to 14.5 million bales based on increased harvested acres and a slightly larger yield. Overall cotton demand is projected to shrink from the 2013-14 crop year due to reduced export prospects off by 700 thousand bales. Ending-stocks are projected to increase to 3.9 million bales for the 2014-15 marketing-year which is an increase of 1.1 million bales. This increase in stocks will drive up the stocks-use ratio to 29 percent and the projected 2014-15 marketing-year average price is \$0.73 per pound.

U.S. Cotton Supply and Use					
	2011-12	2012-13	2013-14	2014-15	Change from
	Actual	Actual	May Forecast	May Forecast	2013-14
Million Acres					
Planted Acres	14.74	12.31	10.41	11.10	+0.69
Harvested Acres	9.46	9.37	7.54	8.45	+0.91
% Abandoned	-36%	-24%	-28%	-23.9%	+3.7%
Pounds per Acre					
Yield	790.0	887.0	821.0	824.0	+3.00
Million Bales					
Beginning Stocks	2.60	3.35	3.90	2.80	-1.10
Production	15.57	17.32	12.91	14.50	+1.59
Imports	<u>0.02</u>	<u>0.01</u>	<u>0.01</u>	<u>0.01</u>	<u>+0.00</u>
Total Supply	18.19	20.68	16.82	17.31	+0.49
Domestic Use	3.30	3.50	3.60	3.70	+0.10
Exports	<u>11.71</u>	<u>13.03</u>	<u>10.40</u>	<u>9.70</u>	-0.70
Total Use	15.01	16.53	14.00	13.40	-0.60
Unaccounted	-0.17	0.25	0.02	0.01	-0.01
Ending Stocks	3.35	3.90	2.80	3.90	+1.100
Avg. Farm Price	\$0.883	\$0.725	\$0.775	\$0.730	-\$0.0450
Stocks-Use	22.3%	23.6%	20.0%	29.1%	+9.1%
Days of Ending Stock	81	86	73	106	+33.2

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