September 2015 – Crop Market Update
Public Policy Department
Budget & Economic Analysis Team

September WASDE Reduces U.S. Corn Crop Estimates

Last month, the market was surprised by a bearish supply and demand estimates report that included bigger numbers for U.S. production of both corn and soybeans than the market was expecting. This month the report was surprisingly bullish.

The U.S. corn balance sheet included some positive adjustments to both the old and new crop figures. For 2014/15, food, seed and industrial use as well as exports were increased by a combined 40 million bushels. This increase in use pulled down 2014/15 carryover to 1.772 billion bushels. For 2015/16, the positive adjustments were on the supply side, with this year's yield estimate pulled down by 1.3 bushels from last month to 167.5 bushels per acre. Between the lower carry-in and the smaller production estimate, total corn supply for 2015/16 looks about 140 million bushels smaller than it did in last month's estimates. Reflecting this lower supply, the estimate of corn total use was shaved by 20 million bushels to 13.755 billion bushels. Despite the reduction, this will be – if this projection is realized – a record level of demand. Ending stocks for 2015/16 are now estimated at 1.592 billion bushels – well to the low side of pre-report expectations. This equates to a stocks-to-use ratio of 11.6 percent. This is not terribly tight by the standards of recent history, but it is likely tight enough to keep 2016 interesting. This is, of course, looking pretty far down the road, but it would not take too much of a hitch in next year's production to bring some real volatility back to the market.

Table 1. U.S. Corn Supply and Use

				2015/16	
	2012/13	2013/14	2014/15	August	September
Planted Acres	97.3	95.4	90.6	88.9	88.9
Harvested Acres	87.4	87.5	83.1	81.1	81.1
Yield (harv. ac.)	123.1	158.1	171.0	168.8	167.5
Beginning Stocks	989	821	1,232	1,772	1,732
Production	10,755	13,829	14,216	13,686	13,585
Imports	160	36	30	30	30
Total Supply	11,904	14,686	15,477	15,488	15,347
Feed & Residual	4,315	5,041	5,300	5,300	5,275
Ethanol	4,641	5,124	5,205	5,250	5,250
Other FSI	1,397	1,369	1,365	1,375	1,380
Exports	730	1,920	1,875	1,850	1,850
Total Use	11,083	13,454	13,745	13,775	13,755
Ending Stocks	821	1,232	1,732	1,713	1,592
Stocks:Use	7.4%	9.2%	12.6%	12.4%	11.6%
Avg. Price	$6.89	$4.46	3.68	$3.35 - $3.95	$3.45 - $4.05

Source: USDA World Agricultural Outlook Board

On the other hand (said the economist), it looks like the soybean market still has a pretty big hill to climb over the course of this marketing year. Contrary to expectations, this year's soybean yield estimate was actually raised this month, albeit only slightly (0.2 bushels per acre). This increase in yield was more than offset by an increase in old crop use that pulled carry-in down to 210 million bushels (compared to 240 million last month). On net, estimated 2015/16 ending stocks were brought down by 20 million bushels from last month. Still, ending stocks are projected at 450 million bushels – a stocks-to-use ratio of just over 12 percent and the highest level of soybean carryover since the record level of 574 million bushels (18.6 percent stocks-to-use) at the end of 2006/07. Again, this is pretty far down the road, but it looks like soybeans should have little trouble yielding some acres to corn (or something else) in 2016.

Table 2. U.S. Soybean Supply and Use

				2015/16	
	2012/13	2013/14	2014/15	August	September
Planted Acres	77.2	76.8	83.7	84.3	84.3
Harvested Acres	76.1	76.3	83.1	83.5	83.5
Yield (harv.ac.)	40.0	44.0	47.8	46.9	47.1
Beginning Stocks	169	141	92	240	210
Production	3,042	3,358	3,969	3,916	3,935
Imports	41	72	33	30	30
Total Supply	3,252	3,570	4,094	4,186	4,175
Crush	1,689	1,734	1,870	1,860	1,870
Exports	1,317	1,638	1,835	1,725	1,725
Seed	89	97	98	92	92
Residual	16	9	81	40	38
Total Use	3,111	3,478	3,884	3,717	3,725
Ending Stocks	141	92	210	470	450
S:U	4.5%	2.6%	5.4%	12.6%	12.1%
Avg. Price	$14.40	$13.00	$10.06	$8.40 - $9.90	$8.40 - $9.90

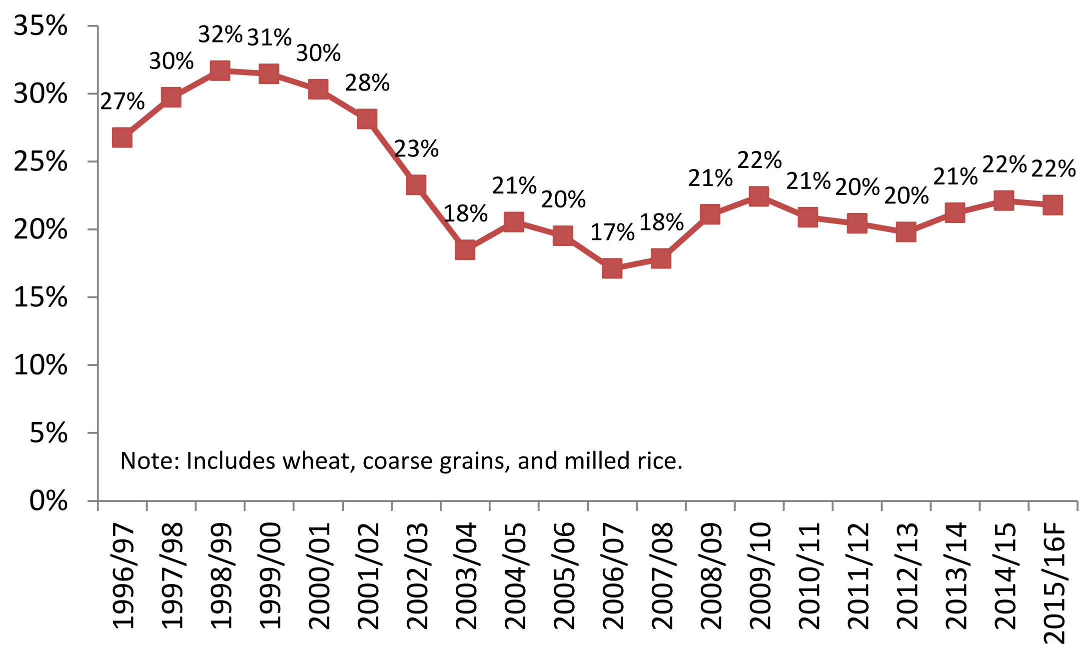
Source: USDA World Agricultural Outlook Board.

With respect to grains and oilseeds, the most positive feature of this month's report was probably not the adjustments to U.S. supply and use figures but rather adjustments to the world figures. Corn 2015/16 production estimates were reduced not only for the U.S. but also for the European Union. With this lower production, the projection of world 2015/16 ending stocks was lowered to 189.7 million metric tons (mmt). This is over 5 mmt below last month's estimate and was well outside the range of pre-report estimates. Likewise for soybeans, the projection of 2015/16 world ending stocks was dropped by almost 2 mmt, mainly as a result of smaller carry-in due to higher than anticipated current domestic use in Argentina. As with corn, this soybean carryover figure was below even the lowest private pre-report estimates.

While the reduction is world ending stocks provided a bit of a jolt to the market, the fact remains that world supplies of grains are – for the current marketing year anyway – at least adequate; and supplies of oilseeds are more than adequate.

Focusing on grains for a minute, combined stocks of feed and food grains (i.e., wheat, rice, corn, grain sorghum, oats , barley and other coarse grains) are about as high as they have been at any time in the last decade. That is probably not as bearish as it sounds. Over the past decade, stocks have been low by longer-run historical standards. This is clear in Figure 1, which shows the stocks-to-use ratio over the past twenty years for feed and food grains.

Figure 1. Stocks-to-Use Ratio for World Feed and Food Grains

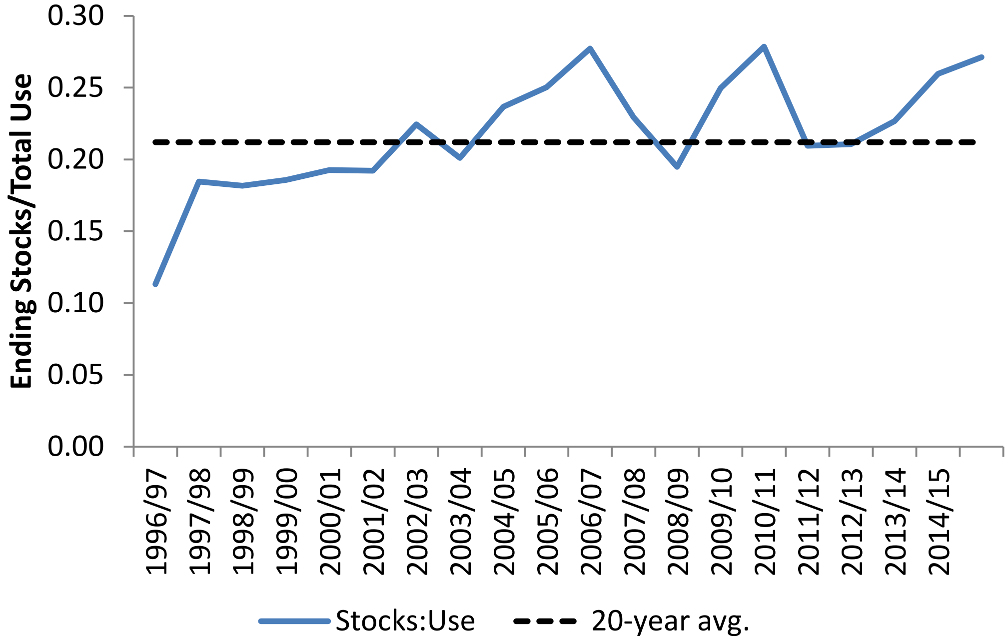


Source: USDA World Agricultural Outlook Board

This figure incorporates some very different supply fundamentals across different crops. For example, rice ending stocks are actually approaching the historic lows reached in the mid-2000s. The market reaction to this phenomenon has been muted by the fact that, by contrast, world wheat supplies are about as high as they have been at any time in the past 15 years. In the mid-2000s, tight wheat supplies coincided with tight rice stocks, leading to an exceptionally supportive environment for grain prices.

Now, shifting to soybeans, the supply situation is far less ambiguous than it is for grains. Soybean stocks are large however you look at it. Figure 2 presents the world soybean stocks-to-use ratio over the past twenty years. Current projections put 2015/16 ending stocks in the ballpark of the record carryover levels of 2010/11. One positive point to note here is that recent history shows that the soybean supply situation can change rather rapidly. Large stocks in 2006/07 and in 2010/11 were rapidly drawn down in subsequent years, so the current large stocks shouldn't be assumed to equate to chronic large stocks. The current environment for drawing down stocks is probably not as good as it has been in the recent past, though. In the mid-2000s, very tight wheat and corn supplies contributed to strong market incentives to shift acres from soybeans to wheat, providing a good opportunity to reduce soybean plantings and work down existing stocks. Also, the slowdown in China's economy may slow what has been strong growth in their soybean demand. In fact, for 2015/16 USDA Foreign Agricultural Service projects Chinese soybean imports to grow by a modest 2.0 mmt compared to the prior year. Last year, their soybean imports increased by 6.6 mmt over the previous year; the year before that, their soybean imports grew by 10 mmt, year-over-year.

Figure 2. Stocks-to-Use Ratio for World Soybeans



Source: USDA Foreign Agricultural Service, PSD Online

World Cotton Market Fundamentals Improve; Still a Long Way to Go

USDA modestly revised their estimates of U.S. cotton supply and use this month. The estimate of harvested acreage was raised by 280,000 acres this month to 8.17 million acres. Partially offsetting this increase in harvested acreage was a 6 pound per acre reduction is projected yield per acre. On balance, the estimate of the 2015 crop went up from 13.08 million bales last month to 13.43 million bales this month. After a couple of tweaks to exports (up 200 thousand bales) and the residual, the higher production estimate pulled ending stocks up slightly to 3.2 million bales. The full U.S. balance sheet for cotton is reported in Table 3.

Of course, the U.S. balance sheet is far from being the driving force in the cotton market, despite the fact that the United States is the world's number three cotton producing country. The real story – and the real challenge – for the cotton market remains world supplies, particularly supplies in China. In terms of the world supply, the situation facing the cotton market is expected to improve somewhat this year.

Table 3. U.S. Cotton Supply and Use

				2015/16	
	2012/13	2013/14	2014/15	August	September
Planted Acres	12.26	10.41	11.04	8.90	8.56
Harvested Acres	9.32	7.54	9.35	7.89	8.17
Yield (harv. ac.)	892	821	838	795	789
Beginning Stocks	3.35	3.80	2.35	3.70	3.70
Production	17.31	12.91	16.32	13.08	13.43
Imports	0.01	0.01	0.01	0.01	0.01
Total Supply	20.67	16.72	18.68	16.79	17.14
Domestic Use	3.50	3.55	3.58	3.70	3.70
Exports	13.03	10.53	11.25	10.00	10.20
Total Use	16.53	14.08	14.82	13.70	13.90
Unaccounted	0.35	0.29	0.16	-0.01	0.04
Ending Stocks	3.80	2.35	3.70	3.10	3.20
Stocks:Use	23.0%	16.7%	25.0%	22.6%	23.0%
Avg. Price (¢/lb)	$72.50	$77.90	$60.50	58.00-72.00	56.00-68.00

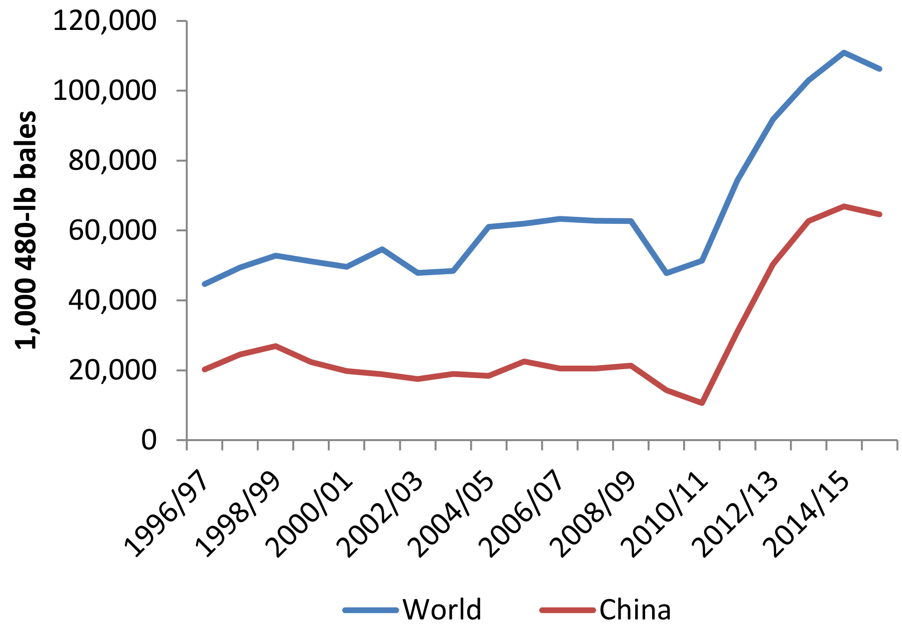
Notes: Yield in lbs/harvested acre; supply and use numbers in million 480-pound bales; prices in cents per pound.
Source: USDA World Agricultural Outlook Board.

Let's start with world cotton production. Cotton production in 2015 is projected to be down about 8.5 percent from last year. This will be the fourth straight year of lower world production. Particularly large declines are forecast for the United States (down 17.7 percent) and China (down 13.3 percent). Incidentally, while China's production is expected to decline markedly in 2015, India's production is expected to decline by less than 2 percent. This leads to a milestone of sorts: in 2015, for the first time, India is expected to be the world's largest cotton producer.

While world production is declining, world use of cotton is expected to increase slightly. World consumption of cotton for the 2015/16 marketing year is forecast at 113.37 million bales. This will be an increase of about 1.5 percent from last year and will mark the fourth consecutive year of higher world cotton use. With lower production and higher use, it is anticipated that world cotton stocks will be drawn down over the course of the marketing year. Right now, USDA projects a 4.65 million bale decline (- 4.2 percent) in world cotton ending stocks – the first year-over-year decline in world stocks since 2009/10.

This year's modest decline in cotton supplies is not likely to have much impact on the market. Cotton stocks have grown dramatically over the last five years, driven by China's wildly successful efforts to build up their supplies. The turn to declining world stocks is a welcome development, but it could take a while to work off current inventories. Figure 3 shows cotton ending stocks (world total and China) over the past 20 years. This year's decline in stocks shows up, of course, but this graph illustrates very clearly the magnitude of the challenge facing the industry.

Figure 3. Cotton Ending Stocks: China and World Total, 1996/97 through 2015/16(F)



Source: USDA Foreign Agricultural Service, PSD Online

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Potential for Rail Service Disruptions

Back in 2008, Congress passed the Rail Safety Improvement Act of 2008 (RSIA), which mandated Positive Train Control (PTC) be put in place by rail companies in order to prevent certain types of accidents from occurring. Congress gave the rail companies a deadline of Dec. 31, 2015 to finish installing the new technology, which at the time must have seemed like plenty of time. You will be unsurprised to learn that installing the technology is more difficult than Congress expected and as a result the rail companies aren't even close to meeting the Dec. 31 deadline.

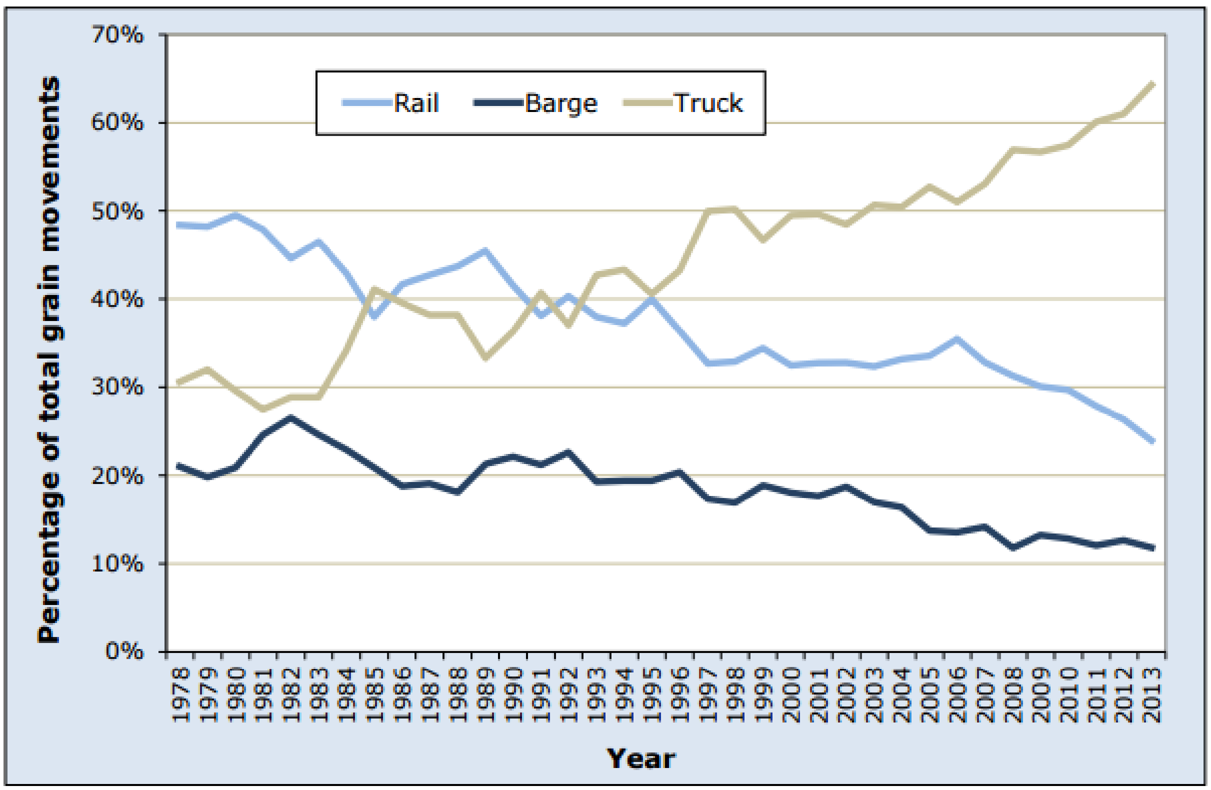
First, a brief description of PTC: PTC is a set of highly advanced technologies designed to prevent train-to-train collisions; derailments caused by excessive speed; unauthorized incursions by trains onto sections of track where maintenance activities are taking place; and movement of a train through a track switch left in the wrong position. In essence, the technology allows trains to "talk" to one another and lets the technology take over when the operator fails. Sounds expensive, right? It is. But, while the railroads grumbled about it back in 2008, they've accepted their fate and have been making whole-hearted efforts to meet their deadline. So what's the holdup? In one word – permitting. For one, any route crossing Indian (Native American) reservation lands requires permitting with each tribe involved. Secondly, the Federal Communications Commission (FCC) has been slow to issue permits and licenses for tower siting, which are necessary for the technology to work. A classic story of the left hand not knowing what the right hand is doing. Congress mandated that the technology be implemented, but didn't give FCC enough resources of staff and time to get the job done.

Where does that leave us? Politico reports that railroad companies will begin telling customers over the next couple months that that they have to start looking for new modes of transportation if Congress doesn't extend a Dec. 31 deadline for them to finish installing PTC. Many say they won't risk transporting anhydrous ammonia, a volatile but key component of fertilizer that's essential for farming. And BNSF Railway has said it will go further, shutting down all freight movement – including corn, soybean and wheat shipments.

This would be a huge deal for U.S. agriculture. According to a Modal Share Analysis released by USDA in June 2015, rail accounted for 24 percent of all U.S. grain movement in 2013. Through the 2000s that share was even higher – normally hovering around one third, but rate and service delays over the last few years have shrunk rail's share. Rail is even more important for grain transported for export – some 35 percent of all exported grain was transported via rail in 2013. The chart below is from USDA's modal share report, which can be found here: http://www.ams.usda.gov/sites/default/files/media/ModalJune2015.pdf.

The chart

Figure 5: U.S. grain modal shares, 1978-2013



The bottom line – our own Andrew Walmsley put it best. Rail disruption at the magnitude that could result from an unmoved PTC deadline "would be utter chaos." It's time for this issue to be elevated so that some consensus on how to extend the deadline to install PTC can be found. The rail companies are asking for the deadline to be extended to 2018, in order to complete all facets of installation and testing.

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