

*Corn Techno-Fundamental Forecasts*

July 17, 2017

USDA changed a couple numbers in last week's reports! Some of these were known changes from the June 30 Grain Stocks and Acreage reports, while others were fresh estimates. These changes affect price potential for the remainder of the 2016 crop marketing year, and flow through to our 2017/18 expectations as well. The table below shows the July USDA estimates in the white columns, with red numbers representing changes from the June WASDE estimates. Anything with a yellow/orange or green background color is a Brugler estimate or derivative calculation.

<i>Brugler Corn S&amp;D Projections</i>	USDA	A	USDA		Best	
<i>7/17/2017</i>	July	July	July		Preliminary	
<i>Brugler Estimates</i>	2016/17	2016/17	2017/18	Low	2017/18	High
Planted Acres	94.0	94.0	90.9	90.6	90.9	91.0
Harvested Acres	86.7	86.7	83.5	82.5	83.1	82.8
Yield	174.6	174.6	170.7	165.0	168.0	172.0
Carryin (Sept 1)	1737	1737	2370	2356	2356	2356
Production	15148	15148	14255	13606	13963	14246
Imports	55	54	50	55	50	45
Total Supply	16940	16939	16675	16017	16369	16647
Feed & Residual	5425	5450	5475	5400	5450	5500
Food/Seed/Ind	6920	6920	7000	6900	6950	7000
Ethanol	5450	5450	5500	5400	5450	5500
Domestic Use	12345	12370	12475	12300	12400	12500
Exports	2225	2213	1875	1875	1900	1925
Total Use	14570	14583	14350	14175	14300	14425
Carryout	2370	2356	2325	1842	2069	2222
Stocks/Use	16.27%	16.2%	16.2%	13.0%	14.5%	15.4%
Farm Price	3.35	3.36	3.30	3.70	3.50	3.40
Fut % Avg. \$1.41 High	4.32	4.33	4.27	4.67	4.47	4.37
Fut % Avg. \$1.41 Low	2.92	2.92	2.86	3.26	3.06	2.96
Stocks/Use >10% High	4.16	4.18	4.12	4.52	4.32	4.22
Stocks/Use >10% Low	3.01	3.03	2.97	3.37	3.17	3.07
Appx Current Futures	3.76	3.76	3.89	3.89	3.89	3.89
MY High to Date	3.945	3.945	NA	NA	NA	NA
MY Low to Date	3.0175	3.0175	NA	NA	NA	NA
MY Range	0.9275	0.9275	NA	NA	NA	NA
Curr\$Percent of Range	65.0%	63.4%	80.0%	45.2%	62.6%	71.3%

USDA hiked cut old crop corn use for feed & residual by 75 million bushels to explain the higher June 1 corn stocks. Feed use might be running slower due to more domestic DDG feeding, or residual use reduction might mean the crop was a little bigger than shown in January. For corn, production estimates are rarely revised after January, other than in the 5 year review cycle. Residual use is the buffer. Ending stocks were hiked to 2.37 billion bushels for a 16.27% stocks/use ratio. The midpoint of the average cash price for the year was UNCH at \$3.35.

We computed the average annual cash price range for years with >10% stocks/use ratio back to 1980. That average range is \$1.15. Given the historical distribution of that range vs. the USDA cash average, we would expect nearby futures for the September 1 to August 31 period to trade \$3.02 to \$4.16 if this cash price turns out to be correct for the full year and we have an average range. The USDA cash average of \$3.35 would be 26 cents below last year, when the stocks/use was tighter at 12.7%.

The yellow column to the right of the USDA numbers shows our expectations, with smaller final exports but slightly higher feed & residual use. Our alternative scenario would put the expected range for the period at \$3.03 to \$4.18.

As you can see by the red numbers in the white 2017/18 column, USDA made quite a few changes to their outlook for new crop. One thing they did not change was average yield. They are sticking with weather adjusted trendline at 170.7 until they have NASS survey and objective yield plot data after August 1. Planted acreage was increased based on the June 30 report, with harvested also higher and production lifted proportionally. The crop would still be 265 mbu smaller than last year, even with the 170 yield. USDA raised feed & residual 50 million for next year, partly just as a function of crop size. With ending stock projected to grow to 2.325 billion bushels vs. the previous estimate, they cut the cash price midpoint 10 cents to \$3.30. That puts it below this year despite smaller production and a smaller ending stocks forecast. That is raising some eyebrows, but could be justified if prices are unusually low in October and January, the months with the highest weighting in the average annual price calculation. If \$3.30 is the final price, the expected 12 month futures range from September 2017 to August 2018 would be \$2.97 to \$4.12. The period doesn't start until September 1, but we evaluate Dec corn pricing opportunities against it. That is why we forward contracted a dab of corn with December above \$4.10.

What about those three green columns on the right, for 2017/18? Those are three different acreage and yield scenarios, from low production to high production.

Using the lower 82.5 million harvested acreage and a 165 bushel national average yield would put the total supply 923 million bushels below last year. Due to larger South American and Russian production, expected exports back off 350 mbu from last year, but match USDA's current number. That leaves us with a 1.84 billion bushel carryover, still well below this year. At a 13.0% s/u ratio we come up with \$3.70 cash average, or 35 cents per bushel above this year for our modestly tighter stocks scenario.

At the cash price of \$3.70, expected nearby futures from September 2017 to August 2018 would trade \$3.37 to \$4.52. While that pricing period doesn't begin until September 1, we use it as a rough gauge of value for December 2017 futures. They are trading \$3.88 today, in the lower half of the expected full year price range. If you think production can be that small or smaller, you don't sell more than token amounts here.

The Bear scenario is at the far right, with a 172 bpa national average yield. Harvested acres are a little lower than WASDE, with larger assumed Prevented Planting claims. USDA WILL have access to partial year PP data prior to the August report, and will release it to the public the same day as the crop report. Total stocks in that higher yield setup would be down 293 mbu from this year, with worse assumed exports. Ending stocks would be around 2.22 billion bushels, a little tighter than the current WASDE estimate for old crop. Our model would put the cash price @ \$3.40 midpoint), consistent with tighter

stocks. The projected futures range would be \$3.07 to \$4.22 in that more abundant supply scenario. and in that event current December futures are in the top third of the price range. You would still be expected to get a better opportunity between September 2017 and August 2018 to beat today's new crop price.

Our middle green column is what we think is most likely to occur given the information we have on July 17, 2017. The 168 bpa yield is simply an assumed return to trendline after an 'outperform' year in 2016. Our Brugler500 model actually suggests 166 bpa, but that is +/- 12 bushels per acre this early in the season and should not be relied upon. Total supply at 16.6 billion would be down 293 million or so from last year and offer potential for some price improvement. Consumption is slightly below the USDA figure, again being conservative. The cash average price would be 15 cents higher than last year, even with these conservative assumptions. An average futures range of \$3.17 to \$4.32 would be expected with that cash price and an average trading range. Current December futures would be in the top 40% of the expected full year range.

What do you do here?

Our goal is not to sell any cash grain in the lowest third of these price ranges. That is below \$3.55 front month futures in our middle forecast set for 2017/18. The objective for remaining old crop is \$3.90 September or higher. The only exceptions are "hardship" cash flow sales, fresh technical sell signals requiring short term hedging, or strong basis sales for hedgers who have other hedge gains to add on top of the sale (most of our AMP clientele). Basis has been problematic due to the extra bushels we are logging this year vs. last year at this time. In our AMP advice, the average Dec futures price for recommended cash forward sales to date is \$3.96, with 40% committed. The old crop average to date is \$3.79.

Cash only marketers should be looking to make scale up sales in the top half of the projected futures range, recognizing that not all years will have an "average" trading range. The smallest annual range since 1980 has been 44 cents, and we have exceeded that. Basis will also tend to get weaker as futures get into the upper end of the projected range, keeping cash prices from rising as much as the board might.

Selling call options in the upper third of the projected price range is appropriate to get paid for waiting, as a "light hedge" and as a trigger to force you into action as we reach those levels. This means selling 400, 410 or 420 September calls on rallies, and lightly selling Dec 420, 430 or 440 calls.

Selling puts under the market offsets time decay on long put positions, and can also be a way to back into lower priced corn ownership for feed use. It is best done when a chart low can be identified, as that maxes out the premium received. We do not advocate selling cash grain and re-owning with long calls or futures if that means selling the cash on a weaker than normal basis. As always, if you have sold more cash grain and wish to re-own, watch the Corn Feed advice for re-ownership opportunities.

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