Crops Marketing and Management Update

Grains and Forage Center of Excellence

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Topics in this Month's Update:

Topic 1. June 9th *WASDE* Update: Market Waits for June 30th *Acreage* Report

The June report tends to be a non-event as the market focuses on the June 30th *Acreage* report. This month's *WASDE* report lived up to the reputation of making minor changes to the old-crop and new-crop projections.

Table 1. U.S. Corn Supply and Use

	2014-15	2015-16	2016-17 Estimated	2017-18 Projected	Change from 16-17
Planted Area (million)	90.6	88	94.0	90.0	-4.0
Harvested Area (million)	83.1	80.8	86.7	82.4	-4.3
Yield (bushels/acre)	171	168.4	174.6	170.7	-3.9
	---------- Million Bushels ----------				
Beginning Stocks	1,232	1,731	1,737	2,295	+558
Production	14,216	13,602	15,148	14,065	-1,083
Imports	32	67	55	50	-5
Total Supply	15,479	15,401	16,940	16,410	-530
Feed and Residual	5,323	5,131	5,500	5,425	-75
Food, Seed & Industrial	6,560	6,635	6,920	7,000	+80
Ethanol and by-products	5,200	5,206	5,450	5,500	+50
Exports	1,864	1,898	2,225	1,875	-350
Total Use	13,748	13,664	14,645	14,300	-345
Ending Stocks	1,731	1,737	2,295	2,110	-185
Stocks/Use	12.6%	12.7%	15.7%	14.8%	-0.9%
Days of Stocks	46	46	57	54	-3
U.S. Marketing-Year Average Price ($/bu)	$3.70	$3.61	$3.35	$3.40	+$0.05

Source:June 2017 WASDE - USDA: WAOB.

The June report adjusted the 2016-17 U.S. Marketing-Year Average (MYA) price for corn by $0.05/bushel to $3.35 (Table 1).

The report did not adjust any of the supply or use projections for new-crop corn. USDA is currently projecting reduced area and trend yields that will potentially reduce supply by 530 million bushels. This smaller crop would then potentially allow stocks to marginally decline to 2.11 billion bushels with a U.S. MYA price of $3.40/bushel. If realized, this would be a $0.05/bushel increase over the 2016-17 MYA price (Table 1).

The June report reduced 2016-17 crush use by 15 million bushels, which increased old-crop soybean ending stocks to 450 million bushels (Table 2).

This increase in new-crop carry-in cascaded through the new-crop balance sheet resulting in a 15 million bushel projected increase in the 2017-18 soybean ending stocks to 495 million bushels (Table 2). USDA projects the U.S. farm-level MYA price at $9.30/bushel, which would be $0.25/bushel lower than the 2016-17 MYA price if realized.

Table 2. U.S. Soybean Supply and Use

	2014-15	2015-16	2016-17 Estimated	2017-18 Projected	Change from 16-17
Planted Area (million)	83.3	82.7	83.4	89.5	+6.1
Harvested Area (million)	82.6	81.7	82.7	88.6	+5.9
Yield (bushels/acre)	47.5	48	52.1	48.0	-4.1
	---------- Million Bushels ----------				
Beginning Stocks	92	191	197	450	+253
Production	3,927	3,926	4,307	4,255	-52
Imports	33	24	25	25	+0
Total Supply	4,052	4,140	4,528	4,730	+202
Crushings	1,873	1,886	1,910	1,950	+40
Exports	1,843	1,936	2,050	2,150	+100
Seed	96	97	104	101	-3
Residual	49	24	14	34	+20
Total Use	3,862	3,944	4,078	4,235	+157
Ending Stocks	191	197	450	495	+45
Stocks/Use	4.9%	5.0%	11.0%	11.7%	+0.7%
Days of Stocks	18	18	40	43	+2.4
U.S. Marketing-Year Average Price ($/bu)	$10.10	$8.95	$9.55	$9.30	-$0.25

Source:June 2017 WASDE - USDA: WAOB.

Table 3. U.S. Wheat Supply and Use

	2014-15	2015-16	2016-17 Estimated	2017-18 Projected	Change from 16-17
Planted Acres (million)	56.8	55	50.2	46.1	-4.1
Harvested Acres (million)	46.4	47.3	43.9	38.5	-5.4
Yield (bushels/acre)	43.7	43.6	52.6	47.3	-5.3
	---------- Million Bushels ----------				
Beginning Stocks	590	752	976	1,161	+185
Production	2,026	2,062	2,310	1,824	-486
Imports	149	113	117	130	+13
Total Supply	2,766	2,927	3,402	3,115	-287
Food	958	957	955	955	+0
Seed	79	67	61	66	+5
Feed and Residual	122	152	190	170	-20
Exports	854	775	1,035	1,000	-35
Total Use	2,014	1,952	2,241	2,191	-50
Ending Stocks	752	976	1,161	924	-237
Stocks/Use	37.3%	50.0%	51.8%	42.2%	-9.6%
Days of Stocks	136	183	189	154	-35
U.S. Marketing-Year Average Price ($/bu)	$5.99	$4.89	$3.90	$4.30	+$0.40

Source:June 2017 WASDE - USDA: WAOB.

The June report increased 2016-17 wheat imports by 2 million bushels, which pushed old-crop stocks to 1.16 billion bushels.

The projected new-crop wheat yield was raised 0.1 bushels per acre to 47.3 bushels/acre. This yield adjustment increased projected production by 4 million bushels to 1.182 billion bushels. The increase in beginning stocks, production, and imports sums to a 10 million bushel increase in projected supply for 2017-18 (Table 3).

The report did not adjust total use projections. USDA is projecting the 2017-18 ending stocks for wheat at 924 million bushels. If realized, total stocks could decline by 237 million bushels. The current projected farm price is $4.30/bushel up $0.40/bushel from 2016-17.

Topic 2. Corn and Soybean Planting and Emergence Progress – Comparing 2017 to Previous Years

Analysts' perspective of the 2017 corn and soybean crops depend on location. Production west of the Mississippi River experienced corn-planting progress ahead of the five-year average. For example, Iowa (+1%), Minnesota (+3%), North Dakota (+6%) and South Dakota (+2%) finished planting ahead of the average pace. Corn planting progress east of the river was behind the five-year pace in Indiana (-5%), Michigan (-3%), Ohio (-5%), and Pennsylvania (-8%). The 18-state region average pace was slightly behind the five-year average on June 4, 2017 – the last date USDA-NASS surveyed corn-planting progress (Table 4).

Similarly, corn east of the river is lagging the five-year average rate of emergence as of June 11, 2017. For instance, Illinois (-1%), Indiana (-8%), Michigan (-10%), Ohio (-5%), and Pennsylvania (-4%) are all behind their respective five-year average emergence. The 2017 corn emergence for the 18-state region is equal to the five-year average rate (Table 4).

The market always monitors crop progress and condition for weather concerns that may affect production. The current market discussion has focused on the potential for corn acres in the states lagging in planting to be abandoned or switched from corn to soybeans. The crop insurance late planting date varies by county and state. However, several Midwest states have a late planting date of May 31 or the first week in June. Table 5 uses the progress from June 4th with the March 31st *Prospective Plantings* report to estimate potential unplanted corn area. Of the states

surveyed, there are potentially 3 million acres of corn unplanted on June 4, 2017 (Table 5). The top five states with unplanted intended corn acres (Kansas, Indiana, Wisconsin, Ohio, and Iowa) potentially had 1.9 million intended acres unplanted on June 4th (Table 5).

The crop condition ratings on June 11 suggests that over 6 million corn acres might be in very poor or poor (VP&P) condition (Table 5). Again, states east of the Mississippi River have worse ratings than states west of the river. Illinois and Indiana may have 1.5 and 1.1 million acres, respectively, in VP&P condition (Table 5). North Dakota and South Dakotas have also experienced hot and dry weather, which is reducing the corn condition. These states may contribute over 300 and 900 thousand acres in North Dakota and South Dakota, respectively, to the VP&P rating.

Table 4. Corn Planting and Emergence Progress for 2017 with Comparison to the Five-Year Average.

	Planting Progress 6/4/2017	Change from 5-Year Average	Corn Emergence 6/11/2017	Change from 5-Year Average
Colorado	93%	-3%	89%	-2%
Illinois	98%	+0%	96%	-1%
Indiana	91%	-5%	86%	-8%
Iowa	98%	+1%	96%	+0%
Kansas	90%	-6%	88%	-6%
Kentucky	95%	+0%	92%	+0%
Michigan	91%	-3%	83%	-10%
Minnesota	99%	+3%	98%	+4%
Missouri	99%	+4%	98%	+4%
Nebraska	99%	+0%	98%	+1%
North Carolina	99%	+0%	99%	+0%
North Dakota	99%	+6%	94%	+8%
Ohio	91%	-5%	88%	-5%
Pennsylvania	82%	-8%	80%	-4%
South Dakoa	99%	+2%	98%	+4%
Tennessee	98%	-1%	97%	-1%
Texas	98%	+2%	96%	+1%
Wisconsin	91%	-1%	84%	-2%
18-State	96%	-1%	**94%**	**+0%**

Source: USDA-NASS: Crop Progres. June 12, 2017.

Table 5. 2017 Corn Potentially Unplanted Area and Potential Acres in Very Poor and Poor Condition

	Prospective Planting 3/31/17	Planting Progress 6/4/2017	Potential Acres Unplanted 6/4/2017	6/11/2017 Percent Very Poor and Poor	Potential Acres Very Poor and Poor
	1,000 Acres	%	1,000 Acres	%	1,000 Acres
Colorado	1,300	93%	91	1%	13
Illinois	11,300	98%	226	14%	1,582
Indiana	5,600	91%	504	20%	1,120
Iowa	13,300	98%	266	4%	532
Kansas	5,200	90%	520	7%	364
Kentucky	1,320	95%	66	3%	40
Michigan	2,300	91%	207	4%	92
Minnesota	8,000	99%	80	2%	160
Missouri	3,250	99%	33	9%	293
Nebraska	9,550	99%	96	2%	191
North Carolina	950	99%	10	5%	48
North Dakota	3,300	99%	33	10%	330
Ohio	3,550	91%	320	9%	320
Pennsylvania	1,370	82%	247	1%	14
South Dakoa	5,400	99%	54	18%	972
Tennessee	840	98%	17	3%	25
Texas	2,450	98%	49	4%	98
Wisconsin	4,000	91%	360	6%	240
18-State	82,980	96%	3,176	8%	6,432

Source: USDA-NASS: Crop Progres. June 12, 2017. USDA-NASS Prospective Planting, March 31, 2017

Table 6.Soybean Planting and Emergence Progress for 2017 with Comparison to the Five-Year Average.

	Planting Progress 6/11/2017	Change from 5-Year Average	Soybean Emergence 6/11/2017	Change from 5-Year Average
Arkansas	91%	+8%	84%	+9%
Illinois	93%	+5%	78%	+1%
Indiana	90%	-2%	68%	-12%
Iowa	98%	+8%	85%	+6%
Kansas	80%	+8%	60%	+8%
Kentucky	73%	+5%	51%	+1%
Louisiana	98%	+3%	96%	+7%
Michigan	88%	-7%	68%	-12%
Minnesota	99%	+7%	87%	+7%
Mississippi	95%	+2%	92%	+6%
Missouri	85%	+15%	65%	+10%
Nebraska	97%	+1%	86%	+2%
North Carolina	68%	+5%	57%	+7%
North Dakota	98%	+7%	84%	+16%
Ohio	90%	-4%	71%	-9%
South Dakota	99%	+6%	89%	+13%
Tennessee	74%	+5%	59%	+7%
Wisconsin	89%	+1%	63%	-8%
18-State	**92%**	**+5%**	**77%**	**+4%**

Source: USDA-NASS: Crop Progres. June 12, 2017.

The 2017 soybean crop is 5% ahead of the five-year planting average for the 18-state region (Table 6). Indiana, Michigan, and Ohio are running 2%, 7%, and 4%, respectively, behind their five-year average planting process. The rest of the states surveyed are ahead of the average planting progress (Table 6).

Likewise, soybean emergence for the 18-state region is 4% ahead of the five-year average emergence. Only Indiana (-12%), Michigan (-12%), Ohio (-9%), and Wisconsin (-8%) are behind their respective average rate of emergence (Table 6).

Kentucky is 5% ahead of their average planting rate and 1% ahead of the average rate of emergence (Table 6).

Table 7. 2017 Soybean Potentially Unplanted Area and Potential Acres in Very Poor and Poor Condition

	Prospective Planting 3/31/17	Planting Progress 6/11/2017	Potential Acres Unplanted 6/11/2017	6/11/2017 Percent Very Poor and Poor Condition	Potential Acres Very Poor and Poor Condition
	1,000 Acres	%	1,000 Acres	%	1,000 Acres
Arkansas	3,500	91%	315	5%	175
Illinois	10,200	93%	714	11%	1,122
Indiana	6,000	90%	600	12%	720
Iowa	10,100	98%	202	4%	404
Kansas	5,000	80%	1,000	2%	100
Kentucky	1,900	73%	513	5%	95
Louisiana	1,400	98%	28	4%	56
Michigan	2,350	88%	282	4%	94
Minnesota	8,250	99%	83	1%	83
Mississippi	2,250	95%	113	5%	113
Missouri	5,650	85%	848	6%	339
Nebraska	5,700	97%	171	2%	114
North Carolina	1,750	68%	560	5%	88
North Dakota	6,900	98%	138	11%	759
Ohio	5,000	90%	500	5%	250
South Dakota	5,400	99%	54	15%	810
Tennessee	1,750	74%	455	3%	53
Wisconsin	2,150	89%	237	3%	65
18-State	85,250	92%	6,811	6%	5,438

Source: USDA-NASS: Crop Progres. June 12, 2017. USDA-NASS Prospective Planting, March 31, 2017

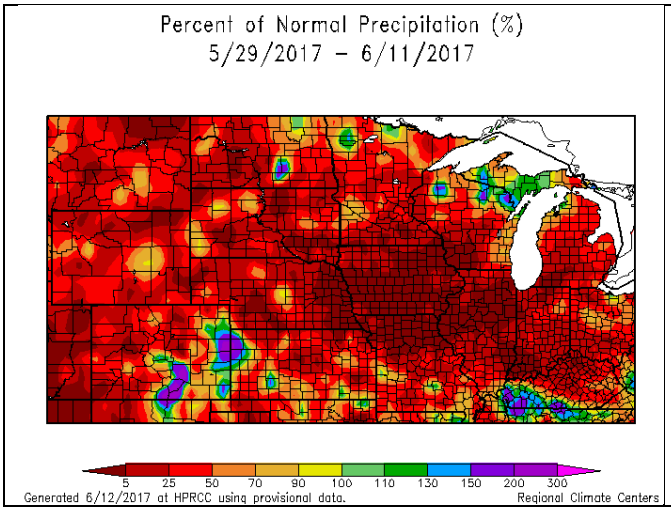
While the soybean planting pace is ahead of the five-year average, there are potentially 6.8 million acres unplanted in the 18-state region as of June 11, 2017. Most of the unplanted acres are likely intended double-crop soybeans which have averaged 7% of total soybean acres from 2012-2016. The past percentages of double-crop soybeans in the 18-state region suggest there may be 3 million acres intended to full-season soybeans unplanted as of June 11th.

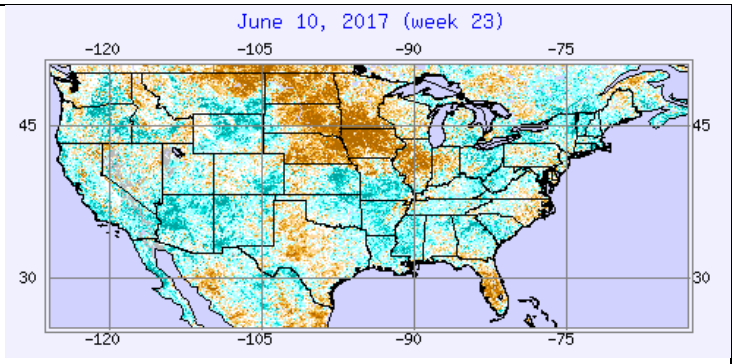
USDA estimates that Illinois, Indiana, North Dakota and South Dakota have 11%, 12%, 11%, and 15% of soybean acres in VP&P condition as of June 11th. The survey suggests a potential of 3.4 million acres are in the VP&P condition in those states. USDA estimates that over 5 million soybean intended acres are in the VP&P condition as of June 11, 2017, for the 18-state region (Table 7).

Topic 3. Crop Moisture, Vegetative Index, and Weather Outlook Maps

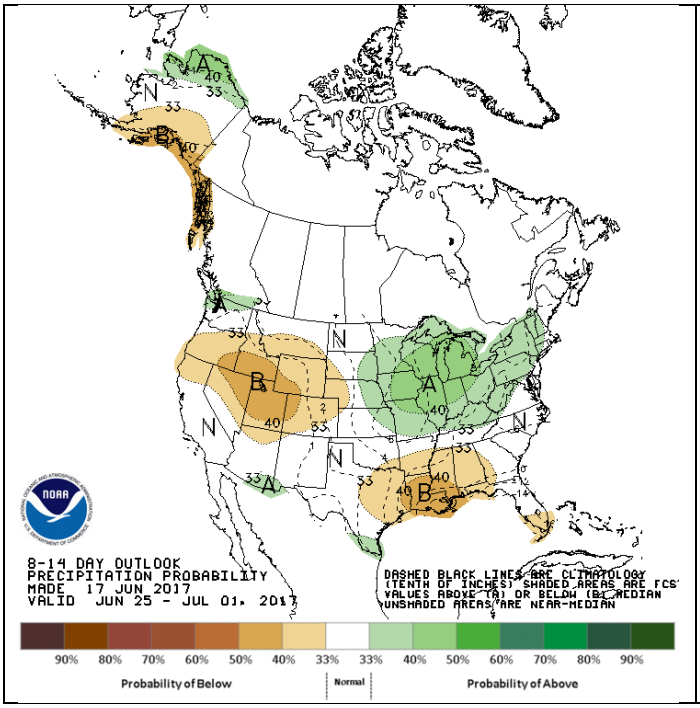
Let us look at the weather that has been affecting the corn and soybean markets. The colorful map shows the percent of normal precipitation (left) from May 29 to June 11. Recall that last month's newsletter showed the Eastern Corn Belt experiencing over 150% of normal rainfall. This month's percentage of normal precipitation map shows several counties in Iowa, Illinois, and Indiana receiving 5% to 15% of normal rainfall (Left map).

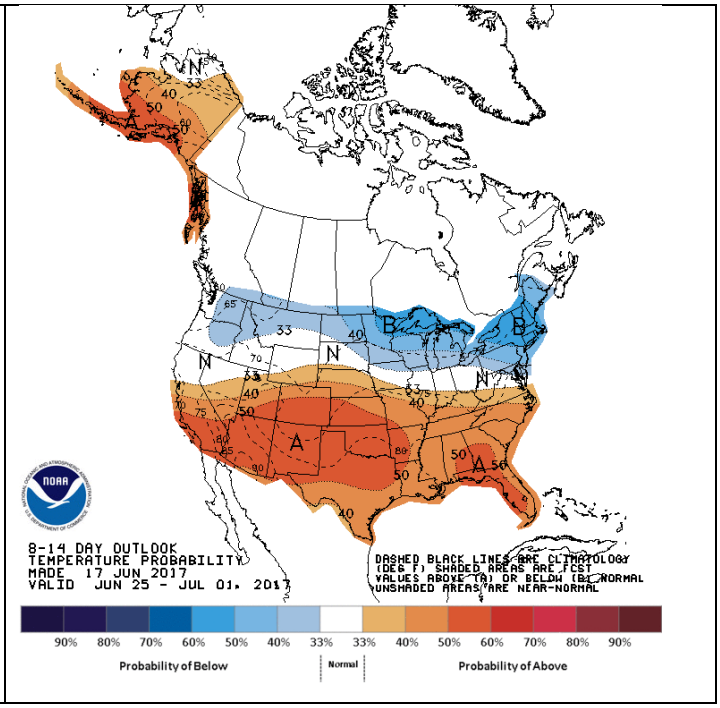
The map on the right shows the year-to-year change in the vegetative index as calculated by NOAA. This index is a measure of relative greenness and can be used to gauge how changes in temperature and precipitation may be affecting plant growth and development. The brown spots on the vegetative index reflect less greenness than last year. Compare the two maps and notice how the below normal precipitation is causing plant stress to corn and soybeans. Like economics, the interpretation of these maps is not a perfect science. The map does indicate areas where the market will monitor throughout the growing season to indicate the potential for below-trend corn and soybean yields.





The 8-14 day forecast released by NOAA on June 17, 2017, calls for states throughout much of the Corn Belt to receive above average precipitation (Left) with temperatures for much of the United States to be above normal. The most northern tier states have the probability of below-normal temperatures. If the precipitation forecasts are accurate, there is potential for crops under stress in the Midwest to find some relief.





Topic 4. 2017 Corn and Soybean Risk Management Opportunities

Table 8 and Table 9 compare the effectiveness of using a cash forward contract, hedging with futures, or put options in protecting revenue that covers total input costs and cash rent for corn and soybeans before harvest.

Table 8 presents risk management alternatives for Western Kentucky corn production for 2017. The table provides several yield projections to illustrate the yield needed to find profitable pricing opportunities. The analysis compares three risk management alternatives. A cash-forward-contract (CFC) at $3.90/bushel is based on DTN bids for Western Kentucky locations. The second marketing alternative is to hedge with commodity futures, or Hedge to Arrive (HTA) contracts, that would lock in an expected cash price at $3.92/bushel assuming a -$0.10/bushel harvest-time basis. The third alternative is to establish a price floor at $3.65/bushel by buying a put option with a $4 strike price that costs $0.247 (Table 8).

Table 8 reminds managers that the corn market continues to lack risk management opportunities for the 2017 crop unless the farm routinely harvests corn yields of 170 bushels, as hedging with futures may lock in a positive return over input costs and rent of $0.37/bushel (Table 8).

Table 8. Risk Management Alternatives for 2017 Western Kentucky Corn for Various Yield Objectives.

Yield	140	150	160	170	180	190
TVC+Rent ($/acre)	$639	$639	$639	$639	$639	$639
TVC+Rent ($/bu)	$4.56	$4.26	$3.99	$3.76	$3.55	$3.36
CFC @ $3.90	-$0.66	-$0.36	-$0.09	+$0.14	+$0.35	+$0.54
Hedge @ $4.02 + -$0.10 basis = $3.92	-$0.64	-$0.34	-$0.07	+$0.16	+$0.37	+$0.56
Put: $4 strike @$0.247 = $3.65 floor	-$0.91	-$0.61	-$0.34	-$0.11	+$0.10	+$0.29
Strategies Evaluated on:	June 16, 2017					

Those farms that routinely produce 170-bushel corn may be able to lock-in a profit above input costs and cash rent. Farms with lower expected yields do not have profitable risk management opportunities at current prices (Table 8).

Table 9. Risk Management Alternatives for 2017 Western Kentucky Soybeans for Various Yield Objectives.

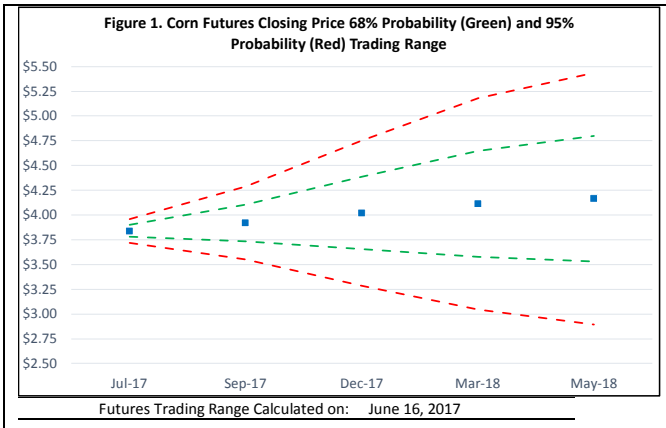
Yield	25	35	45	55	65
TVC+Rent ($/acre)	$486	$486	$486	$486	$486
TVC+Rent ($/bu)	$19.44	$13.89	$10.80	$8.84	$7.48
CFC @ $9.29	-$10.15	-$4.60	-$1.51	+$0.45	+$1.81
Hedge @ $9.50 + -$0.10 basis = $9.40	-$10.04	-$4.49	-$1.40	+$0.56	+$1.92
Put: $9.40 strike @$0.367 = $8.93 floor	-$10.51	-$4.95	-$1.87	+$0.10	+$1.46
Strategies Evaluated on:	June 16, 2017				

The largest projected returns for soybeans are from using hedging. CFC provides a lower return. Those managers seeking to place a floor on price may be able to lock in a minimum return of $1.46/bushel protected with put options with 65-bushel yields (Table 9).

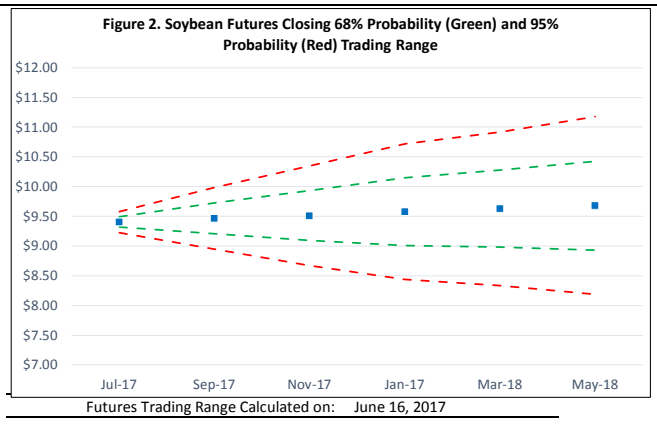
Topic 5. Projected Corn, Soybean, and Wheat Futures Trading Ranges to May 2018

Understanding the probabilistic trading ranges based on current futures market volatility will help managers gauge the likelihood of reaching their pricing objectives. Figures 1 – 3 provide the projected futures price trading range, by futures contract month, based on the contracts' volatility for the previous 21-day period. The green lines represent the range that describes the 68% probability of the projected trading range with the red line representing 95% likelihood of the expected trading range. Notice how these projections fan out for the contracts that will expire later this year or in 2018. That is because there is more time until expiration; thus, there is a wider potential trading range for these deferred futures contracts.

Figure 1 provides the probabilistic trading range for the corn futures contracts from July 2017 to May 2018. There is a 68% probability that the December 2017 corn contract will trade between $3.65 and $4.39 and a 95% probability that the December 2017 corn contract will trade between $3.29 and $4.75 (Figure 1). Looking at the potential to hedge stored corn from the 2017 harvest, the 68% trading range for the March 2018 corn contract is $3.58 to $4.65 (Figure 1).

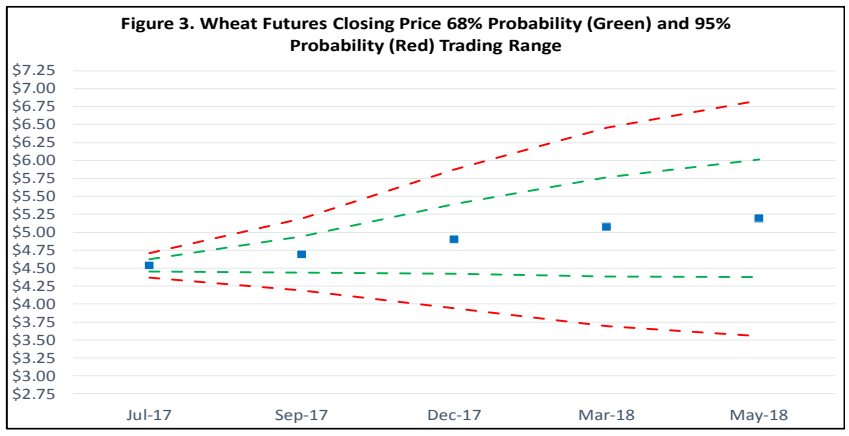


Trading range calculated on June 16, 2017, using the average volatility of the previous 21-day period. The 68% probability range is the closing futures price on June 16, 2017, plus and minus one standard deviation. The 95% probability range is the closing price plus and minus two standard deviations.



Trading range calculated on June 16, 2017, using the average volatility of the previous 21-day period. The 68% probability range is the closing futures price on June 16, 2017, plus and minus one standard deviation. The 95% probability range is the closing price plus and minus two standard deviations.

Figure 2 provides the probabilistic trading range for soybean futures contracts from July 2017 to May 2018. The November 2017 soybean futures have a 68% probability of trading between $9.09 to $9.91 with a 95% likelihood of trading between $8.67 and $10.33 (Figure 2). For hedging stored 2017 soybeans, the March 2018 soybean contract has a 68% probability trading range of $8.98 to $10.27 (Figure 2).



Trading range calculated on June 15, 2017, using the average volatility of the previous 21-day period. The 68% probability range is the closing futures price on June 15, 2017, plus and minus one standard deviation. The 95% probability range is the closing price plus and minus two standard deviations.

Figure 3 provides the probabilistic trading range for wheat futures contract from July 2017 to May 2018 contracts. The July 2017 futures contract has a 68% probability of trading from $4.45 to $4.62 (Figure 3). The 95% probability trading range is $4.37 to $4.71 (Figure 3).

While not shown, the July 2018 wheat futures closed at $5.27/bushel on June 16, 2017. Those planning to sell winter wheat in June 2018 should monitor this market for pricing opportunities either through HTA contracts or with CFC to price a percentage of planned 2018 production above budgeted input and land cost.

Topic 6. Past Performance of Corn Price Risk Management Tools

As discussed in previous newsletters, the December corn futures contract tends to decline from June into October as any production risk premium is removed once the market is confident that the crop has developed and supply risk is reduced. Managers have the challenge of deciding if it is beneficial to implement price risk management before harvest given this seasonal tendency for lower harvest-time prices. This decision is further complicated by deciding what tool works best – hedging (or hedge-to-arrive contracts), forward cash contracts, or using put options to create a price floor.

Table 10 – 12 compares the past performance of the corn price risk management tools for decisions implemented in June, July, August, and September. Each table provides the average values for the years analyzed along with the probability of the risk tool providing a benefit (or positive value) and the expected value when the risk tools worked as planned. Sometimes the corn market rallies into harvest and using these price tools was not profitable. The tables also report the probability of the tools being unprofitable and the expected value of the loss incurred due to risk management.

Table 10. Value of Hedging DEC Corn Futures Contract in June, July, August, and September with October Offset -- Summary Statistics for 1994-2016.

	June		July	
	$/bushel	% Change	$/bushel	% Change
Average Hedge Value	+$0.237	5%	+$0.124	2%
Probability Profitable Hedge	70%	70%	61%	61%
Expected Value of Profitable Hedge	$0.66	16%	$0.44	11%
Probability of Unprofitable Hedge	30%	30%	39%	39%
Expected Value of Unprofitable Hedge	$0.73	-20%	$0.37	-12%

	August		September	
	$/bushel	% Change	$/bushel	% Change
Average Hedge Value	+$0.096	1%	+$0.042	0%
Probability Profitable Hedge	57%	57%	57%	57%
Expected Value of Profitable Hedge	$0.42	10%	$0.26	7%
Probability of Unprofitable Hedge	43%	43%	43%	43%
Expected Value of Unprofitable Hedge	$0.32	-10%	$0.25	-8%

Note: Hedge value calculated by selling the average monthly value of the December corn futures contract in June, July, August and September with the offsetting transaction in October. Monthly average values calculated using the daily closing futures price. The hedge was analyzed for 1994 to 2016 crop years. Commissions are not included in the analysis. Hedging strategy is naive where managers do not lift unprofitable hedges. Margin calls are not calculated but would occur for the unprofiable hedges.

The value of hedging with the December corn contract from 1994 to 2016 is reported in Table 10. The value of hedging is calculated using average monthly futures price and comparing the returns to selling a contract in June, July, August or September and buying back at harvest (October). The average value of the hedge in June is worth +$0.24/bushel but declines to +$0.10/bushel if managers wait until August to hedge corn for harvest delivery (Table 10).

Hedging corn in June was beneficial in 70% of the years analyzed with the expected value of a beneficial hedge of $0.66/bushel (Table 10). The 30% of the years when hedging was not profitable cost an average of -$0.73/bushel for each bushel hedged. Table 10 shows that the opportunities from hedging declines after June, which coincides with the crop's development post-pollination and removal of a price risk premium into harvest (Table 10).

Table 11. Value of Cash Forward Contract for Western Kentucky Corn in June, July, August, and September with October Offset. Summary Statistics for 2000-2016.

	June		July	
	$/bushel	% Change	$/bushel	% Change
Average Value	+$0.245	4%	+$0.137	2%
Probability of Profitable Contract	71%	71%	59%	59%
Expected Value of Profitable Contract	$0.75	18%	$0.57	14%
Probability of Unprofitable Contract	29%	29%	41%	41%
Expected Value of Unprofitable Contract	$0.97	-27%	$0.47	-16%

	August		September	
	$/bushel	% Change	$/bushel	% Change
Average Value	+$0.106	1%	+$0.039	0%
Probability of Profitable Contract	53%	53%	59%	59%
Expected Value of Profitable Contract	$0.54	13%	$0.28	7%
Probability of Unprofitable Contract	47%	47%	41%	41%
Expected Value of Unprofitable Contract	$0.38	-13%	$0.31	-11%

Note: Cash Market Data provided by the Kentucky Farm Bureau Federation. The value of Cash Forward Contract is measured as the average forward contract bid in June, July, August, and September for Western Kentucky markets compared to the harvest spot price in October. A profitable contract is one where the forward bid is greater than the harvest-time price.

The value of protecting price with a cash forward contract (CFC) is reported in Table 11. Using data provided by the Kentucky Farm Bureau Federation, the average spot price at October harvest is compared to the average forward contract bids in June, July, August, or September for 2000 to 2016.

By definition, the results in Table 11 very closely mirror those in Table 10. The most profitable time to forward contract is in June with the average value declining in July and August (Table 11)

The seasonal tendency of the December corn contract is to decrease from June to October in 70% of the years analyzed. Hedging and forward contracts lock in the futures and cash price, respectively. Managers wanting to place a

price floor could purchase put options to create a floor while maintaining the flexibility to benefit if prices rally into harvest.

Table 12 is more detailed than the previous tables reflecting the flexibility of put options creating more outcomes that are possible. The put's intrinsic value reflects the value when the futures price in October is below the price floor created by the option. During 1994 to 2016, buying a put that is closest to the average futures price in June created a price floor that was valuable, after paying for the put, about 52% of the years analyzed. The average value of buying a put in June was $0.47/bushel. After June, the likelihood of the put providing a positive intrinsic value declined from 39% of the years analyzed in July to about 26% of the years if purchased in September (Table 12). The average intrinsic value of the price floor also declined after June.

A put also provides value because of the upside potential, which is the benefit of being able to capture value from higher futures prices in October. The second row in Table 12 shows that buying a put option in June provided upside potential (after paying for the put) about 26% of the years analyzed. The value of this upside potential in June averaged $0.68/bushel (Table 12). Buying a put in June was profitable about 78% of the years analyzed.

There is no silver bullet in risk management and buying a put in June was unprofitable 22% of the years analyzed. The unprofitable years are those years when the futures market did not trade low enough for the option to have intrinsic value to pay for the cost of the option. Alternatively, the option was not profitable because the futures contract did not rally enough for the upside potential to pay for the option.

Table 12. Value of a Just-Out-of-the-Money Put on December Corn from 1994-2016 Assuming Purchase at June, July, August and September with Comparison to the Futures Price in October.

	June	July	August	September
Probability of Put's Intrinsic Value net of Premium being Positive	52%	39%	35%	26%
Put's Expected Value	+$0.47	+$0.36	+$0.27	+$0.23
Probability of Put's Upside Potential Value net of Premium being Positive	26%	30%	39%	43%
Put's Expected Value	+$0.68	$0.36	$0.25	$0.19
Probability of Put's Intrinsic Value net of Premium being Negative	17%	13%	17%	22%
Put's Expected Value	-$0.14	-$0.20	-$0.01	-$0.07
Probability of Put's Upside Potential Value net of Premium being Negative	4%	17%	9%	9%
Put's Expected Value	-$0.23	-$0.19	-$0.02	-$0.04
Average Value of Put Option	+$0.39	+$0.19	+$0.19	+$0.13

Note: The value of a put option is measured by buying the nearest to the money put in June, July, August and September. The intrinsic value of the option net of premium cost is the value of the option when it is in-the-money and has a greater value than the option's cost. The upside potential is when the option does not have intrinsic value but could be exercised and immediate profit captured in the futures market. Negative intrinsic value or negative upside potential means that the options value or upside potential wasn't large enough to compensate for the put's premium.

Table 12 continues the theme that the greatest value of buying a closest to the money put option on the December futures contract is in June. While options become cheaper throughout the summer, the risk management protection also declines. The last row in Table 12 is a weighted average of the benefits and the loss of buying a put from June to September. The average value of purchasing a put in June is +$0.39/bushel compared to +0.19/bushel for July or August for the 1994 to 2016 crop years (Table 12).

Topic 7. Past Performance of Soybean Price Risk Management Tools

Seasonality of the November soybeans futures contract is also important as managers consider protecting soybean price before harvest. Price protection is of particular importance for bushels sold off the combine as harvest-time prices tend to be lower than earlier in the growing season.

Tables 13 reports the value of hedging (or HTA contracts) using the November soybeans futures contract in June, July, August, or September and offsetting the hedge in October. The average monthly prices of the November soybeans contract from 1994 to 2006 are used to calculate the value of this hedge.

The average value of hedging soybeans in June is a positive return of $0.40/bushel. Hedging in June was profitable 65% of the years analyzed with the average benefit of +$1.20/bushel. For the 35% of the years when the hedge was not profitable, the average loss was -$1.08/bushel. Table 13 illustrates that the overall value of hedging declines after June as the crop develops and yield uncertainty is removed from the market.

Table 13. Value of Hedging NOV Soybeans Futures Contract in June, July, August, and September with October Offset -- Summary Statistics for 1994-2016.

	June		July	
	$/bushel	% Change	$/bushel	% Change
Average Hedge Value	+$0.404	3%	+$0.316	2%
Probability Profitable Hedge	65%	65%	57%	57%
Expected Value of Profitable Hedge	+$1.20	12%	+$1.14	11%
Probability of Unprofitable Hedge	35%	35%	43%	43%
Expected Value of Unprofitable Hedge	-$1.08	-14%	-$0.76	-11%

	August		September	
	$/bushel	% Change	$/bushel	% Change
Average Hedge Value	+$0.198	1%	+$0.172	1%
Probability Profitable Hedge	52%	52%	57%	57%
Expected Value of Profitable Hedge	+$0.89	9%	+$0.63	6%
Probability of Unprofitable Hedge	48%	48%	43%	43%
Expected Value of Unprofitable Hedge	-$0.56	-8%	-$0.42	-6%

Note: Hedge value calculated by selling the average monthly value of the November soybeans futures contract in June, July, August and September with the offsetting transaction in October. Monthly average values calculated using the daily closing futures price. The hedge was analyzed for 1994 to 2016 crop years. Commissions are not included in the analysis. Hedging strategy is naive where managers do not lift unprofitable hedges. Margin calls are not calculated but would occur for the unprofiable hedges.

If managers wait until July, the average value of the soybean hedge is +$0.31/bushel. The hedge in July was profitable about 57% of the years analyzed.

The analysis assumes no managerial input once the hedge is implemented. For example, the average loss from hedging implemented in June was over $1/bushel. Managers actively engaged in price risk management would likely not continue this hedge due to margin calls and potential liquidity problems encountered in paying the margin calls.

The value of forward contracting soybeans in June, July, August, and September is reported in Table 14. The Kentucky Farm Bureau Federation provides daily market prices for several markets in Western Kentucky. This data are used in evaluating the risk management tools. By definition, the benefits from forward contracting closely mirror those of hedging, as the only difference is that forward contracting fixes the futures price and the basis.

Table 14. Value of Cash Forward Contract for Western Kentucky Soybeans in June, July, August, and September with October Offset. Summary Statistics for 2000-2016.

	June		July	
	$/bushel	% Change	$/bushel	% Change
Average Value	+$0.413	2%	+$0.384	2%
Probability of Profitable Contract	71%	71%	59%	59%
Expected Value of Profitable Contract	$1.26	12%	$1.30	13%
Probability of Unprofitable Contract	29%	29%	41%	41%
Expected Value of Unprofitable Contract	$1.62	-21%	$0.93	-13%

	August		September	
	$/bushel	% Change	$/bushel	% Change
Average Value	+$0.259	1%	+$0.166	1%
Probability of Profitable Contract	59%	59%	59%	59%
Expected Value of Profitable Contract	$0.96	10%	$0.65	7%
Probability of Unprofitable Contract	41%	41%	41%	41%
Expected Value of Unprofitable Contract	$0.74	-11%	$0.52	-7%

Note: Cash Market Data provided by the Kentucky Farm Bureau Federation. The value of Cash Forward Contract is measured as the average forward contract bid in June, July, August, and September for Western Kentucky markets compared to the harvest spot price in October. A profitable contract is one where the forward bid is greater than the harvest-time price.

The average value of forward contracting in June from 2000 to 2016 was +$0.41/bushel with the average value of forward contracting in July +$0.38/bushel. Notice that forward contracting was profitable 70% of the years when done in June and 60% of the years when implemented in July through September.

When contracting was not profitable, the average loss was -$1.62/bushel in June (Table 14). That year represents prices that increased 21% from June to harvest in October.

The value of buying the nearest to the money put option for the November soybeans futures contract is reported in Table 15. The analysis is the same as for buying an option for corn, so the full explanation will not be repeated. Please refer to the previous topic to review how an option provides value through intrinsic value and the benefit of the flexibility to receive a higher futures price at harvest.

Table 15 is formatted the same as Table 12 with the first two rows reporting the profitability from buying a put option (net of the option's cost) with row 3 and row 4 reporting the loss when an option is purchased. The last row in the table reports the overall value of buying an option in June, July, August or September. Notice that the overall value of purchasing a put option in July is larger than the average value of buying a put option in June for the 1994 to 2016 crops (Table 15).

Table 15. Value of a Just-Out-of-the-Money Put on November Soybeans from 1994-2016 Assuming Purchase at June, July, August and September with Comparison to the Futures Price in October.

	June	July	August	September
Probability of Put's Intrinsic Value net of Premium being Positive	39%	48%	39%	43%
Put's Expected Value	+$1.11	+$1.05	+$0.68	+$0.47
Probability of Put's Upside Potential Value net of Premium being Positive	26%	30%	26%	26%
Put's Expected Value	+$0.96	$0.65	$0.68	$0.47
Probability of Put's Intrinsic Value net of Premium being Negative	26%	9%	17%	13%
Put's Expected Value	-$0.20	-$0.42	-$0.22	-$0.12
Probability of Put's Upside Potential Value net of Premium being Negative	9%	13%	17%	17%
Put's Expected Value	-$0.27	-$0.06	-$0.18	-$0.19
Average Value of Put Option	+$0.61	+$0.66	+$0.37	+$0.28

Note: The value of a put option is measured by buying the nearest to the money put in June, July, August and September. The intrinsic value of the option net of premium cost is the value of the option when it is in-the-money and has a greater value than the option's cost. The upside potential is when the option does not have intrinsic value but could be exercised and immediate profit captured in the futures market. Negative intrinsic value or negative upside potential means that the options value or upside potential wasn't large enough to compensate for the put's premium.

Buying a nearest to the money put option in July was profitable about 78% of the years analyzed. The floor created by the put had a value about 48% of the years with an average benefit of +$1.05/bushel. Also, the upside potential was beneficial 30% of the years analyzed with the average benefit of +$0.65/bushel (after paying for the option).

Buying a put option in July was not profitable in 22% of the years analyzed. Those years did not have significant price movement to overcome the options' cost.

Topic 8. What is the Potential for Corn and Soybean Pre-Harvest Risk Management in June 2017?

Topic 6 and Topic 7 reminds managers that there is not one silver bullet that will successfully protect prices every year. The challenge is to marry expectations of harvest time price with the risk protection provided by the various tools. Managers should consider how the December 2017 corn and November 2017 soybean contract could react to the upcoming *Acreage* report as well as weekly crop progress and condition surveys. The following discussion provides probabilistic forecasts of harvest-time futures prices to help managers develop risk management and marketing opinions. The probabilistic forecasts are then used in evaluating the potential risk protection from using futures, forward contracts, and put options at current prices to protect the 2017 corn and soybean crops.

Table 16 uses the historical relationship in the futures contract price in October with the same contract's price in June (Column B). While not a perfect predictor, the average price of the December corn contract in June explains about 68% of the variability of the price in October. The other column is the probability distribution associated with the volatility for the previous 21-day trading period (from Topic 5). The prices in Column B can be viewed as a pessimistic outlook for corn in a market that follows the typical seasonal pattern of lower prices into harvest. The prices in Column C are interpreted as a neutral outlook for corn that would continue to trade in a sideways pattern into harvest.

If your expectations are for lower prices into harvest (Column B), there is a 50% probability that the DEC corn contract price in October will be $3.82/bushel or lower (Table 16-Column B). If the December corn futures contract follows a typical seasonal pattern, then there is a 25% chance of being above $4.11 and 25% chance being below $3.30 (Table 16, Column B). In contrast, if the December contract continues to trade sideways (Table 16, Column C), there is a 50% probability that the price in October is $4.02 with a 25% chance of being below $3.86 and a 25% chance of being above $4.18 (Table 16, Column C). Given current market fundamentals, the 21-day historical volatility seems reasonable if the expected reduction in acreage and weather limits production, which might keep the market from following the seasonal pattern.

Table 18 provides similar probability distribution forecasts for the November 2017 soybean contract harvest-time price. Column B in Table 18 is the probability forecast based on the futures price relationship from June to October. While not a perfect predictor of price in October, the average price of the November contract in June explains 74% of the price in October. Because of the seasonal pattern, the forecast in Column B in Table 18 is bearish. There is a 50% probability that the harvest-time futures price is $8.93/bushel with a 25% likelihood of the futures price at $8.27/bushel or less and a 25% chance of the futures price at $9.64/bushel or more (Table 18, Column B).

The price forecast based on the 21-day historical volatility implicitly (Table 18, Column C) assumes that the November 2017 soybean contract trades sideways from now until October. Under that scenario, the median price is $9.50 with a 25% probability of the futures contract trading above $9.72 and 25% probability below $9.28 (Table 18, Column C). Given current fundamentals, the price forecast from the seasonal futures contract (Column B) seems

reasonable given the large acreage and potential for another large crop. Those managers that think the market is oversold might consider Column C under an assumption that the market has already discounted price in anticipation of large production (Table 18).

Table 16. Forecasted Percentile of Harvest-Time Corn Futures Contact Prices Based on Seasonal Tendencies and Historic Volatility.

Col. A	Col. B	Col. C
	Forecast: DEC Corn Futures in October	
Percentile	Seasonal Tendency	21-Day Volatility
10%	$3.01	$3.71
15%	$3.11	$3.77
20%	$3.26	$3.81
25%	$3.30	$3.86
30%	$3.45	$3.89
35%	$3.60	$3.93
40%	$3.68	$3.96
45%	$3.73	$3.99
50%	$3.82	$4.02
55%	$3.93	$4.05
60%	$4.00	$4.08
65%	$4.03	$4.11
70%	$4.07	$4.15
75%	$4.11	$4.18
80%	$4.16	$4.22
85%	$4.20	$4.27
90%	$4.30	$4.33

Note: Column A is the percentile of forecasted futures price for December corn at harvest in October 2017. A percentile is the probability of the futures price being at this level or lower. Column B is a price forecasts based on the historic relationship between the futures price in June and the futures price in October using monthly futures average closing price from 1981 to 2016. The relationship between the June and October futures prices explains 62% of the variability in the Corn Futures Price. Column C is a price forecast using the 21-day historical volatility of the December corn futures contract to develop price forecasts for futures prices in October. The price forecast based on the seasonal tendency (Column B) has a lower median price (50th percentile) as price tends to decline from June to October. The price forecast based on historic volatility (Column C) has a median price (50th percentile) equal to the price on June 16, 2017. The price forecasts in Column B can be characterized as bearish while the forecast in Column C can be characterized as more neutral.

Forecasts generated on: June 16, 2017

Table 18. Forecasted Percentile of Harvest-Time Soybean Futures Contact Prices Based on Seasonal Tendencies and Historic Volatility.

Col. A	Col. B	Col. C
	Forecast: NOV Soybean Futures in October	
Percentile	Seasonal Tendency	21-Day Volatility
10%	$6.78	$9.07
15%	$7.70	$9.16
20%	$7.87	$9.22
25%	$8.27	$9.28
30%	$8.43	$9.33
35%	$8.57	$9.37
40%	$8.64	$9.42
45%	$8.78	$9.46
50%	$8.93	$9.50
55%	$9.17	$9.54
60%	$9.22	$9.58
65%	$9.38	$9.63
70%	$9.40	$9.67
75%	$9.64	$9.72
80%	$9.79	$9.78
85%	$9.86	$9.84
90%	$10.15	$9.93

Note: Column A is the percentile of forecasted futures price for November soybeans at harvest in October 2017. A percentile is the probability of the futures price being at this level or lower. Column B is a price forecasts based on the historic relationship between the futures price in June and the futures price in October using monthly futures average closing price from 1981 to 2016. The relationship between the June and October futures prices explains 74% of the variability in the Soybean Futures Price. Column C is a price forecast using the 21-day historical volatility of the November soybeans futures contract to develop price forecasts for futures prices in October. The price forecast based on the seasonal tendency (Column B) has a lower median price (50th percentile) as price tends to decline from June to October. The price forecast based on historic volatility (Column C) has a median price (50th percentile) equal to the price on June 16, 2017. The price forecasts in Column B can be characterized as bearish while the forecast in Column C can be characterized as more neutral.

Forecasts generated on: June 16, 2017

While the forecasts in Table 16 and Table 18 may be academically interesting, managers could use these projections to evaluate risk management tools at current prices with expectations of potential harvest prices. Table 17 uses the probability forecasts in Table 16 to evaluate the utilization of an HTA contract, put option and CFC for corn for the Bearish outlook (Table 16, Column B) and the Neutral outlook (Table 16, Column C). Managers expecting a neutral corn outlook (Table 16, Column C) are not surprised that the price risk tools show limited benefit to price (Table 17). Managers with expectations similar to the Neutral Outlook may want to wait for better pricing opportunities. Those with a bearish outlook ought to consider HTA contracts or CFC contracts as there is a larger expected value, +$0.28/bushel and +$0.33/bushel, respectively, than using a put option. The cost of the put option limits the benefit for corn (Table 17).

Table 17. Comparison of Price Risk Management Strategies for Corn based on Seasonal Tendency of Futures Price Change to Harvest and Prices based on Historical Volatility

	Forecast from Seasonal Tendency (Bearish)			Forecast from Historical Volatility (Neutral)		
	HTA Corn	Put Option	CFC Corn	HTA Corn	Put Option	CFC Corn
	$4.02	$4 Put @ $0.247	$3.90	$4.02	$4 Put @ $0.247	$3.90
Average	$0.28	$0.13	$0.33	$0.00	-$0.16	$0.05
Probablity of Loss	37%	54%	29%	50%	86%	43%
Average Loss	-$0.29	-$0.22	-$0.34	-$0.20	-$0.20	-$0.22
Probability of Gain	63%	46%	71%	50%	14%	57%
Average Gain	+$0.62	+$0.53	+$0.61	+$0.20	+$0.14	+$0.25

Note: Strategies evaluated using the seasonal tendency price forecasts are a bearish forecast for corn. Strategies evaluated using historical volatility are a neutral forecast for corn.

Strategies evaluated on: June 16, 2017

The author's expectation is biased towards the neutral price forecast (Table 16, Column C). However, those with limited working capital and tight credit should consider how price risk management tools might protect limited working capital.

The price forecast probabilities for the November 2017 soybean futures contract from Table 18 are used to evaluate the effectiveness of the price risk tools for soybeans. If soybeans follow the seasonal pattern, then the HTA

and the CFC provide the largest potential benefit (Table 19). Those with a neutral outlook find limited benefit from implementing price risk management.

Table 19. Comparison of Price Risk Management Strategies for Soybeans based on Seasonal Tendency of Futures Price Change to Harvest and Prices based on Historical Volatility

	Forecast from Seasonal Tendency (Bearish)			Forecast from Historical Volatility (Neutral)		
	HTA Soybeans	Put Option	CFC Soybeans	HTA Soybeans	Put Option	CFC Soybeans
	$9.50	$9.40 Put @ $0.367	$9.29	$9.50	$9.40 Put @ $0.367	$9.29
Average	$0.66	$0.53	$0.66	$0.00	-$0.15	$0.00
Probablity of Loss	28%	45%	28%	50%	85%	50%
Average Loss	-$0.70	-$0.21	-$0.71	-$0.28	-$0.22	-$0.31
Probability of Gain	72%	55%	72%	50%	15%	50%
Average Gain	+$1.18	+$1.15	+$1.20	+$0.27	+$0.20	+$0.32

Note: Strategies evaluated using the seasonal tendency price forecasts are a bearish forecast for soybeans. Strategies evaluated using historical volatility are a neutral forecast for soybeans.

Strategies evaluated on: June 16, 2017

Unless there is a production problem, the November 2017 soybean contract is facing stronger headwinds than the December 2017 corn contract. Managers should budget the price protection being offered in the market and evaluate the benefit of protecting margins.

Topic 9. Risk Management Game Plans for 2017 Corn and Soybeans: June Update

A major theme of this month's newsletter has been that of understanding the seasonality of futures and the impact on the effectiveness of price risk management tools (Topic 6 and Topic 7). Topic 8 evaluates the price tools based on a bearish forecast and a neutral market forecast. This newsletter concludes with an update on the risk pre-harvest risk management initially described in the January 2017 newsletter.

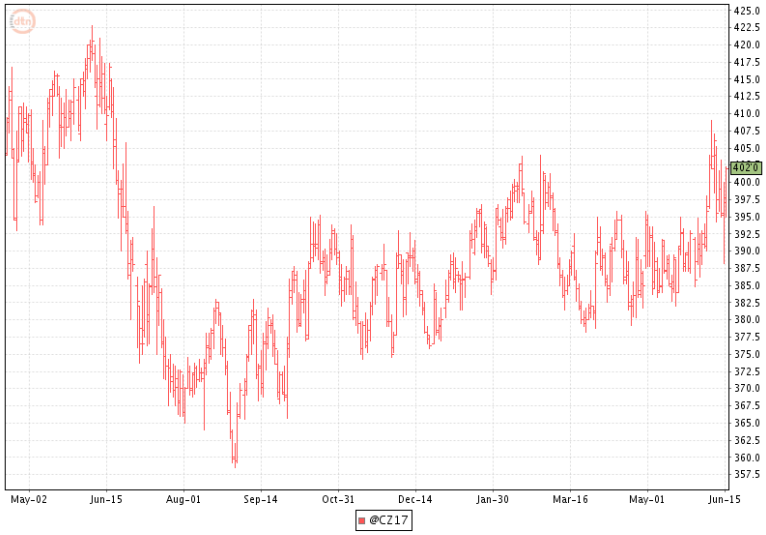


Figure 4. December 2017 Corn Futures Contract Chart (as of June 16, 2017)

The December 2017 corn futures contract briefly flirted with prices last reached last summer and closed at $4.02, which was last reached in February 2017.

If the corn market could breach the $4.05 price level, then the upside resistance may be at the $4.15 to $4.20 price levels. Support seems to be at the $3.80 to $3.85 level.

The market has been content to trade in a sideways channel since last fall. A break higher above $4.10 and approaching $4.20 would be significant. This critical time of crop development may gin up a weather concern that provides a pricing opportunity.

Table 20. 2017 Corn Risk Management Game Plan as of June 16, 2017.

Expected Corn Production (bushels/acre)		175
Date Priced	Priced Realized	Bushels Priced
2/15/17	$4.02	17.5
6/7/17	$4.02	17.5
Revised Objective	$4.10	17.5
Revised Objective	$4.20	17.5
Revised Objective	$4.40	17.5
Bushels Priced		87.5
Average Price	$4.15	

Note: RP Insurance at the 80% coverage level will be purchased. This assumes an APH yield of 175 bu/acre and a Projected Price of $3.96/bu. The expected revenue protection is $554/acre which is $77/acre greater than the budgeted corn production cost. The RP insurance protection will protect 140 bushels/acre to be forward contracted or contracted with Hedge-to-Arrive contracts (HTA). This is a conservative strategy on the quantity priced. There is some hope involved that the corn market can break higher to these prices.

Plan Updated on: June 16, 2017

Table 20 defines the pricing objectives, bushels priced, and date priced as part of the pre-harvest risk plan. The DEC 2017 contract closed at 4.02 ¾ on Feb 15 and June 7. The corn game plan has revised pricing objectives in reaction to the range-bound trading. The plan is still to price 50% of expected production before harvest. The remaining pricing objectives are $4.10, $4.20 and $4.40 that would price 10% each time.

If all of the pricing objectives are obtained, the average price pre-harvest is $4.15/bushel, which is about a $4.03/bushel cash price assuming an average harvest-time basis. The budgeted break-even price to pay for production costs and cash rent is $3.66/bushel so these pricing targets would provide an expected return of $0.37/bushel to contribute to paying overhead, family living, and principal and interest payments due. Managers that are more aggressive might consider pricing objectives at $4.15 and $4.25/bushel instead of $4.10/$4.20.

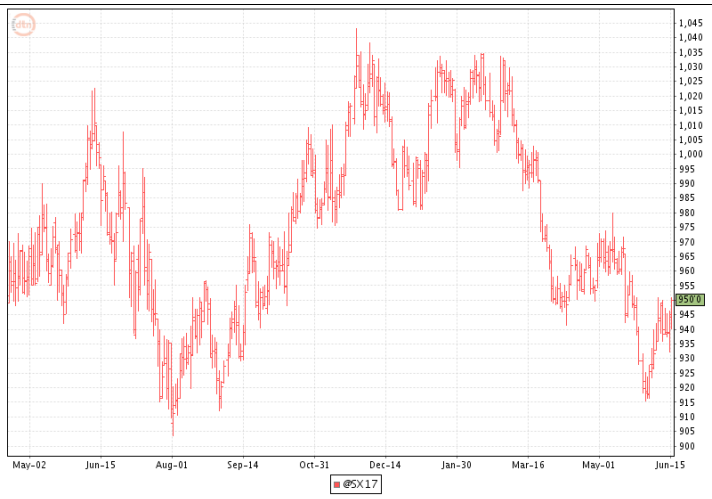


Figure 5. November 2017 Soybean Futures Contract Chart (as of June 16, 2017)

The November 2017 soybean contract traded lower from $9.60/bushel on May 15th to $9.17 ¾ per bushel on June 1. The June 16 close at $9.50 reflects a $0.32 ¼ per bushel recovery.

Support remains in the $9.10 to $9.15 per bushel, which seems more relevant given recent activity. Another support might be at $9 before the contract heads towards the basement.

Resistance levels are scattered starting at $9.50, and again at the $9.60 to $9.65 per bushel range. The November 2017 chart shows significant headwinds for the price to reach $9.70 – the closing price on May 1st.

The 2017 soybean game plan is revised in response to the decline in the November 2017 futures contract and the headwinds in the soybean market (Table 21). The NOV 2017 soybean futures contract closed at $10.12 on Feb 1 and $10.28 on Feb 8 (green shade). The remaining objectives are revised to $9.65, $9.80 and $9.99. The remaining objectives might only be met using hedging or hedge-to-arrive contracts. The plan is to sell 10% of expected production at each pricing objective.

If the soybean risk plan is achieved, the average pre-harvest price will be $9.97 for 50% of expected production. Assuming an average harvest-time basis, the realized pre-harvest price would provide a per bushel return of $1/bushel over production costs and cash rent.

Table 21. 2017 Soybean Risk Management Game Plan as of June 16, 2017.

Expected Soybean Production (bushels/acre)		55
Date Priced	Priced Realized	Bushels Priced
2/1/17	$10.12	5.5
2/8/17	$10.28	5.5
Revised Objective	$9.65	5.5
Revised Objective	$9.80	5.5
Revised Objective	$9.99	5.5
Bushels Priced		27.5
Average Price	$9.97	

Note: RP Insurance at the 75% coverage level will be purchased. This assumes an APH yield of 55 bu/acre and a Projected Price of $10.19/bu. The expected revenue protection is $420/acre which is $109/acre greater than the budgeted soybean production cost. The RP insurance protection will protect 41.25 bushels/acre to be forward contracted or contracted with Hedge-to-Arrive contracts (HTA). This is an aggressive strategy reflecting a belief that the soybean market faces limited upside potential unless there is a strong change in fundamentals.

Plan Updated on: June 16, 2017

This exercise is to help managers think about what they might do to take advantage of pricing opportunities that are available before harvest. The market will react to fundamentals, primarily weather, that could push prices temporarily higher to a profitable pricing point. A risk management plan will help guide pre-harvest pricing and risk management without being swept up in the emotion of the market and giddiness of waiting for even higher than expected prices.

Topic 10. How Do I Get on the Email Distribution List to Receive this Newsletter?

If you would like to receive each month's newsletter by email, send an email to todd.davis@uky.edu and request to be added to the email distribution list. The *Crops Marketing and Management Update* is published monthly usually after the release of the USDA: *WASDE* report. You can find this issue and past issue on the UK Agricultural Economics Department's website at http://www.uky.edu/Ag/AgEcon/extcmmu.php

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