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## Revision of 2020 Corn and Soybean Budgets

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Budgets for 2020 have been revised and are now available on *farmdoc*. Revised budgets use a corn price of \$3.90 per bushel and soybean price of \$9.10 per bushel, both of which are an increase in price expectations following what appears to be softening of trade difficulties between China and the U.S. Even at those prices, returns are projected at negative levels for 2020. Before 2020 returns are positive, yields must be well above trend or Market Facilitation Program payments must continue in 2020.

### Corn Returns

Table 1 shows 2018 actual returns for both corn and soybeans grown on high-productivity farmland in central Illinois. These values are summarized from farms enrolled in Illinois Farm Business Farm Management (FBFM). Table 1 also shows 2019 values, which still are projections because FBFM financial statements have not been summarized. Also shown are projections for 2020.

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**Table 1. Corn and Soybean Returns for High-Productivity Farmland in Central Illinois**

	Corn			Soybeans		
	2018	2019P	2020P	2018	2019P	2020P
Yield per acre	237	195	211	74	55	63
Price per bu	\$3.60	\$3.90	\$3.90	\$8.85	\$9.10	\$9.10
LDP per bu						
Crop revenue	\$853	\$761	\$823	\$655	\$501	\$573
ARC/PLC	0	10	0	0	10	0
Other gov't payments	1	82	0	122	82	0
Crop insurance proceeds	2	10	0	4	5	0
<b>Gross revenue</b>	<b>\$856</b>	<b>\$863</b>	<b>\$823</b>	<b>\$781</b>	<b>\$598</b>	<b>\$573</b>
Fertilizers	131	125	145	42	42	43
Pesticides	76	75	75	46	45	45
Seed	115	116	116	73	73	73
Drying	14	40	18	1	1	1
Storage	15	15	15	8	8	8
Crop insurance	22	22	22	14	14	14
<b>Total direct costs</b>	<b>\$373</b>	<b>\$393</b>	<b>\$391</b>	<b>\$184</b>	<b>\$183</b>	<b>\$184</b>
Machine hire/lease	14	14	14	10	10	10
Utilities	5	5	5	4	4	4
Machine repair	25	24	24	18	20	19
Fuel and oil	18	17	17	13	15	15
Light vehicle	2	2	2	1	1	1
Mach. depreciation	64	63	63	56	54	54
<b>Total power costs</b>	<b>\$128</b>	<b>\$125</b>	<b>\$125</b>	<b>\$102</b>	<b>\$104</b>	<b>\$103</b>
Hired labor	19	19	19	18	18	18
Building repair and rent	5	5	5	4	4	4
Building depreciation	12	12	12	10	10	10
Insurance	10	10	10	10	10	10
Misc	10	10	10	10	10	10
Interest (non-land)	17	18	18	15	16	16
<b>Total overhead costs</b>	<b>\$73</b>	<b>\$74</b>	<b>\$74</b>	<b>\$67</b>	<b>\$68</b>	<b>\$68</b>
<b>Total non-land costs</b>	<b>\$574</b>	<b>\$592</b>	<b>\$590</b>	<b>\$353</b>	<b>\$355</b>	<b>\$355</b>
<b>Operator and land return</b>	<b>\$282</b>	<b>\$271</b>	<b>\$233</b>	<b>\$428</b>	<b>\$243</b>	<b>\$218</b>
Land costs	274	274	270	274	274	270
<b>Farmer return</b>	<b>\$8</b>	<b>-\$4</b>	<b>-\$37</b>	<b>\$154</b>	<b>-\$32</b>	<b>-\$52</b>

<sup>1</sup>Results for 2013 through 2018 are summarized from grain farms enrolled in Illinois Farm Business Farm Management. Projections are made for 2019 and 2020.

Across FBFM farms, farmer return for corn averaged \$8 per acre in 2019. In 2019, the average yield was 237 bushels per acre, and the price averaged \$3.60 per bushel. Total non-land costs of \$574 per acre include all financial costs of producing corn. Land costs also are subtracted. The \$274 per acre land costs represent an average cash rent for high-productivity farmland in central Illinois. Share rent and owned land will differ from cash rent, and generally be lower than cash rent costs.

Farmer return was -\$4 in 2019, about the same as the 2018 level of \$8 per acre. Yields were lower in 2019: 196 per acre in 2019 as compared to 237 bushels per acre in 2018. Offsetting yield declines are

\$82 per acre in MFP payment, an increase from the \$1 level in 2018. Corn returns would have been very negative had not MFP payments occurred.

For 2020, farmer returns are projected at -\$37 per acre, down from the -\$4 return in 2019. In 2020, MFP payments are not included, thereby reducing corn revenue by \$82 per acre. Partially offsetting no projected MFP payments are higher yields. The 2020 corn yield is projected at 211 bushels per acre, 16 bushels higher than the 195 bushels per acre yield in 2019. Prices used in return calculations are \$3.90 per bushel for both 2019 and 2020. Given the same price, the 2020 crop revenue of \$823 per acre is \$62 higher than the \$761 revenue in 2019.

There are possibilities for positive returns in 2020. Yields could again be above trend yields like in 2013 through 2018. If corn yields are at 230 bushels per acre, farmer return would be \$37 per acre, with that increase assuming that the corn price remains at \$3.90 per bushel, not a likely occurrence as high yields would lead to more corn supplies, which typically leads to lower corn prices. Another possibility for positive returns is another round of MFP payments in 2020.

### **Soybean Returns**

Farmer returns for soybeans were at \$154 per acre in 2018 (see Table 1). Two items contribute to relatively high returns in 2018. One was a very high soybean yield of 74 bushels per acre. Even at a low soybean price of \$8.85 per bushel, crop revenue was \$655 per acre, higher than projected crop revenue in 2019 and 2020. The second was an MFP payment in 2018. In 2018, MFP payments for soybeans equaled a \$1.65 per bushel MFP rate times production (The rate was \$.005 for corn production). Production of 74 bushels per acre times \$1.65 MFP rate resulted in an MFP payment of \$122 per acre.

Farmer return in 2019 is at -\$32 per acre, a \$186 per acre decline from \$154 per acre level in 2018. Even though the 2019 price of \$9.10 is higher than the \$8.85 price in 2018, 2019 crop revenue is lower at \$501 per acre, \$154 less than 2018 revenue. The 2019 projected yield is 55 bushels per acre, down from 74 bushels per acre yield in 2018. Also, MFP revenue for soybeans is \$82 per acre, down by \$40 per acre from the 2018 level of \$122 per acre.

Farmer return for 2020 is projected at -\$52 per acre, down by \$20 from the -\$32 level in 2019. Crop revenue is expected higher in 2020, \$573 per acre in 2020, \$72 higher than the \$501 crop revenue in 2019. Higher projected yields contribute to increased revenue projections. The 63 bushels per acre projection for 2020 is a trend line projection.

Similar to corn, there are possibilities of higher returns in 2020. Above trend yields without a price decline would result in a higher return. For example, a higher yield of 70 bushels per acre results in farmer return of \$12 per acre, given that price does not decline from \$9.10 per bushel. A continuation of MFP payments could lead to higher returns as well.

### **Summary and Commentary**

On many Illinois farms, incomes will be much lower in 2019 as compared to 2018. Illinois was hard hit by wet weather and delayed planting, which contributed to lower yields. Without MFP payments in 2019, returns would have been very low.

The 2019 returns in Table 1 are for high productivity farmland in central Illinois. Northern and southern Illinois will have much lower yields than central Illinois, resulting in much lower income projections for these areas of Illinois (projections are shown [here](#)).

Again, projections are for a low return year in 2020. Higher incomes could result if 1) above-trend yields occur with no decline in prices or 2) another round of MFP payments are made on 2020 production. Time will tell if either happens.