



Weekly Farm Economics: 2019 Crop Budgets Suggest Dismal Corn and Soybean Returns

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Due to lower soybean prices and higher costs, budgets suggest returns will be very low for corn and soybeans in 2019. Conserving cash, cutting investments, reducing costs, and renegotiating cash rents should be aggressively pursued. If prices do not increase, the budgets indicate it is unlikely that farmers will be able to generate profits on rented farmland in 2019.

2019 Crop Budgets

Each year, the University of Illinois releases crop budgets for three regions of Illinois: northern, central, and southern Illinois. Central Illinois is further divided into categories for high and low productivity farmland. A complete set of budgets is available in the management section of *farmdoc* (click [here](#) for a copy). All of these budgets are based on historical returns and costs from grain farms enrolled in Illinois Farm Business Farm Management Association (FBFM) program. Summaries of previous years' results are shown in *Revenue and Costs for Illinois Grain Crops* which is available for download in the management section of *farmdoc* (click [here](#) for a copy).

For each region, budgets are shown for corn-after-soybeans, corn-after-corn, soybeans-after-corn, and soybean-after-two-years-corn, and wheat. Central and southern Illinois budgets also include double-crop soybeans. Discussions will focus on the northern Illinois budgets shown in Table 1. The other regional budgets are shown in tables following the text.

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Table 1. 2019 Crop Budgets, Northern Illinois

	Corn- after- Soybeans	Corn- after- Corn	Soybeans- after- Corn	Soybeans- after-Two Years-Corn	Wheat
Yield per acre	209	199	58	60	85
Price per bu	\$3.60	\$3.60	\$8.50	\$8.50	\$4.20
Crop revenue	\$752	\$716	\$493	\$510	\$357
ARC/PLC	7	7	7	7	7
Crop insurance proceeds	0	0	0	0	0
Gross revenue	\$759	\$723	\$500	\$517	\$364
Fertilizers	\$135	\$145	\$33	\$33	\$76
Pesticides	60	66	36	36	27
Seed	114	114	73	73	50
Drying	25	24	0	0	1
Storage	8	8	3	3	1
Crop insurance	24	24	16	16	9
Total direct costs	\$366	\$381	\$161	\$161	\$164
Machine hire/lease	\$20	\$20	\$17	\$17	\$18
Utilities	6	6	5	5	7
Machine repair	27	27	23	23	33
Fuel and oil	17	17	17	17	20
Light vehicle	2	2	2	2	2
Mach. depreciation	65	65	56	56	49
Total power costs	\$137	\$137	\$120	\$120	\$129
Hired labor	\$20	\$20	\$18	\$18	\$16
Building repair and rent	9	9	4	4	3
Building depreciation	19	19	10	10	9
Insurance	12	12	12	7	5
Misc	10	10	10	10	10
Interest (non-land)	12	12	22	22	14
Total overhead costs	\$82	\$82	\$76	\$71	\$57
Total non-land costs	\$585	\$600	\$357	\$352	\$350
Operator and land return	\$174	\$123	\$143	\$165	\$14

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Revenue

Northern Illinois yields are 209 bushels per acre for corn-after-soybeans and 58 bushels per acre of soybeans-after-corn. These yields are trend yields for northern Illinois and are below the average yields for the last *three* years. Yields have been exceptional in Illinois for the past several years (see *farmdoc daily*, [September 5, 2018](#)). From 2016 to 2018, yields averaged 221 bushels per acre for corn and 63 bushels per acre for soybeans. Rather than building budgets with continuing exceptional yields, a longer-term trendline provides a more prudent prediction based on historical yields.

Prices used in budgets are \$3.60 per bushel for corn and \$8.50 per bushel for soybeans, close to current bids for 2019 grain. The \$3.60 corn price is near the average price received in the past three years. On the other hand, soybean prices are much lower. Soybean prices averaged \$9.18 in 2016, \$9.66 in 2016, and \$9.85 in 2017. Much lower soybean prices result in lower projections for soybean returns.

The budgets include \$7 per acre of ARC/PLC payments. These payments are based on corn prices being below the \$3.70 reference price, thereby generating Price Loss Coverage (PLC) payments. These payments assumes that a new farm bill or extension of the 2018 Farm Bill is passed, that the passed legislation allows the choice between Agricultural Risk Coverage (ARC) and PLC, and that most farmers

choose PLC for corn. This \$7 per acre estimated payment is applied to both corn and soybean acres as commodity title program payments are made on base acres, and not on planted acres.

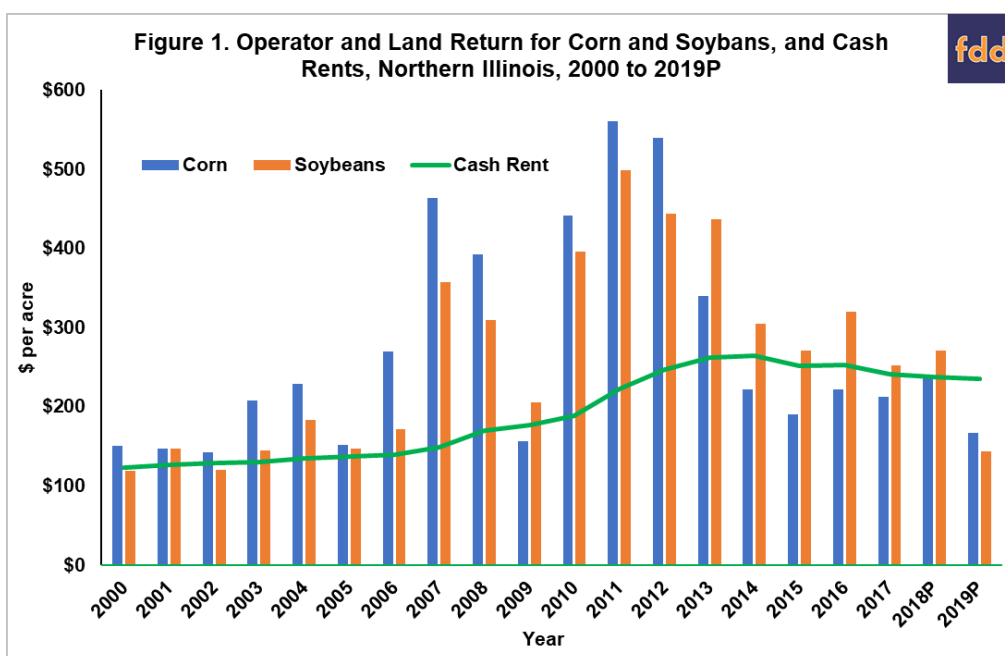
Revenue totals \$759 per acre for corn-after-soybeans and \$500 per acre for soybeans-after-corn.

Non-land Costs

Non-land costs are projected at \$585 per acre for corn-after-soybeans and \$357 per acre for soybeans-after-corn. Rising energy prices are leading to increases in some farm level costs (see *farmdoc daily*, [June 21, 2018](#)). Major cost items with increases include fertilizer, pesticides, fuel and oil. Also, interest costs are increasing due to higher interest rates.

Operator and Farmland Return

Operator and farmland returns are projected at \$174 per acre for corn-after-soybeans and \$143 per acre for soybeans-after-corn. For the first time since 2013, corn is projected to be more profitable than soybeans (see Figure 1), potentially leading to more corn planting in 2019.



Land charges need to be subtracted from operator and land returns to arrive at a return to the farmer. If farmland is cash rented, the cash rent must be below the operator and land return for the farmer to have positive returns. In 2018, cash rents in northern Illinois averaged \$238 per acre, well above the 2019 operator and land return projections of \$174 per acre for corn-after-soybeans and \$143 per acre for soybeans-after-corn.

Commentary

Projected returns for 2019 are very low. This return level is similar to return levels in 2005, more than ten years ago (see Figure 1). In 2005, average cash rent in northern Illinois was \$137 per acre, \$101 per acre lower than current cash rent levels.

Obviously, the fall of 2019 is far away and much can change. Higher prices would considerably help improve the outlook. Whether prices will rise is an open question, likely depending on whether tariff disputes are resolved. Without price increases, however, returns will be low. Even continued exceptional yields, like those in recent years, would still result in losses. For example, a 221 bushel per acre corn-after-soybean yield --- the last-three year average --- would result in an operator and land return of \$218 per acre, still below the \$238 per acre average cash rent.

While there is hope for a brightened outlook, current budgets indicate losses on rented land in 2019. Incomes in 2018 could be reasonable given exceptional yields and Market Facilitation Program payments (see *farmdoc daily*, [September 11, 2018](#)). Actively conserving cash from 2018 operations while cutting capital investments and other costs where possible seems prudent. Consider all possible options for lowering cash rents and moving to variable cash rents. Even given these measures, it seems unlikely that enough costs will be cut for farmers to have positive returns on rented farmland in 2019 without substantial positive movement in commodity prices.

Extreme caution seems the order of the day moving into 2019. Again, prices hopefully will improve thereby brightening a bleak situation.

Table 2. 2019 Crop Budgets, Central Illinois -- High Productivity Farmland

	Corn- after- Soybeans	Corn- after- Corn	Soybeans- after- Corn	Soybeans- after-Two Years-Corn	Wheat	Double- Crop Soybeans
Yield per acre	213	203	63	65	85	41
Price per bu	\$3.60	\$3.60	\$8.50	\$8.50	\$4.20	\$8.50
Crop revenue	\$767	\$731	\$536	\$553	\$357	\$349
ARC/PLC	7	7	7	7	7	0
Crop insurance proceeds	0	0	0	0	0	0
Gross revenue	\$774	\$738	\$543	\$560	\$364	\$349
Fertilizers	\$145	\$155	\$46	\$46	\$76	\$28
Pesticides	75	81	45	45	27	40
Seed	114	114	73	73	50	48
Drying	18	17	1	1	1	0
Storage	15	15	8	8	1	1
Crop insurance	24	24	16	16	9	4
Total direct costs	\$391	\$406	\$189	\$189	\$164	\$121
Machine hire/lease	\$13	\$13	\$14	\$14	\$18	\$11
Utilities	5	5	4	4	7	5
Machine repair	24	24	20	20	33	25
Fuel and oil	17	17	15	15	20	22
Light vehicle	1	1	1	1	2	2
Mach. depreciation	63	63	54	54	49	27
Total power costs	\$123	\$123	\$108	\$108	\$129	\$92
Hired labor	\$18	\$18	\$17	\$17	\$16	\$14
Building repair and rent	5	5	4	4	3	6
Building depreciation	12	12	11	11	9	5
Insurance	10	10	10	10	5	0
Misc	9	9	9	9	10	0
Interest (non-land)	18	18	15	15	14	11
Total overhead costs	\$72	\$72	\$66	\$66	\$57	\$36
Total non-land costs	\$586	\$601	\$363	\$363	\$350	\$249
Operator and land return	\$188	\$137	\$180	\$197	\$14	\$100

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Table 3. 2019 Crop Budgets, Central Illinois -- Low Productivity Farmland

	Corn- after- Soybeans	Corn- after- Corn	Soybeans- after- Corn	Soybeans- after-Two Years-Corn	Wheat	Double- Crop Soybeans
Yield per acre	197	187	60	55	81	41
Price per bu	\$3.60	\$3.60	\$8.50	\$8.50	\$5.00	\$8.50
Crop revenue	\$709	\$673	\$510	\$468	\$405	\$349
ARC/PLC	6	6	6	30	30	0
Crop insurance proceeds	0	0	0	0	0	0
Gross revenue	\$715	\$679	\$516	\$498	\$435	\$349
Fertilizers	\$145	\$155	\$40	\$40	\$26	\$74
Pesticides	75	81	46	46	29	37
Seed	120	120	62	62	41	50
Drying	20	20	1	1	1	0
Storage	12	12	5	5	1	1
Crop insurance	22	22	15	15	8	5
Total direct costs	\$394	\$410	\$169	\$169	\$106	\$167
Machine hire/lease	\$12	\$12	\$10	\$10	\$12	\$9
Utilities	6	6	5	5	5	5
Machine repair	25	25	21	21	19	19
Fuel and oil	14	14	14	14	13	13
Light vehicle	1	1	1	1	1	1
Mach. depreciation	64	64	55	55	45	35
Total power costs	\$122	\$122	\$106	\$106	\$95	\$82
Hired labor	\$15	\$15	\$14	\$14	\$11	\$11
Building repair and rent	5	5	4	4	2	6
Building depreciation	13	13	11	11	9	9
Insurance	10	10	10	10	8	0
Misc	8	8	8	8	7	0
Interest (non-land)	18	18	14	14	16	7
Total overhead costs	\$69	\$69	\$61	\$61	\$53	\$33
Total non-land costs	\$585	\$601	\$336	\$336	\$254	\$282
Operator and land return	\$130	\$78	\$180	\$162	\$181	\$67

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Table 4. 2019 Crop Budgets, Southern Illinois

	Corn- after- Soybeans	Corn- after- Corn	Soybeans- after- Corn	Soybeans- after-Two Years-Corn	Wheat	Double- Crop Soybeans
Yield per acre	167	157	50	48	68	41
Price per bu	\$3.65	\$3.65	\$8.50	\$8.50	\$4.20	\$8.50
Crop revenue	\$610	\$573	\$425	\$408	\$286	\$349
ARC/PLC	6	6	6	6	6	0
Crop insurance proceeds	0	0	0	0	0	0
Gross revenue	\$616	\$579	\$431	\$414	\$292	\$349
Fertilizers	\$134	\$144	\$40	\$40	\$98	\$28
Pesticides	78	84	55	55	29	40
Seed	106	106	64	64	41	48
Drying	7	7	0	0	1	0
Storage	6	6	4	4	1	1
Crop insurance	22	22	14	14	8	4
Total direct costs	\$353	\$369	\$177	\$177	\$178	\$121
Machine hire/lease	\$13	\$13	\$12	\$12	\$14	\$11
Utilities	7	7	7	7	7	5
Machine repair	28	28	26	26	31	22
Fuel and oil	18	18	19	19	16	14
Light vehicle	1	1	1	1	2	2
Mach. depreciation	69	69	66	66	47	27
Total power costs	\$136	\$136	\$131	\$131	\$117	\$81
Hired labor	\$28	\$28	\$25	\$25	\$15	\$14
Building repair and rent	7	7	4	4	6	6
Building depreciation	16	16	9	9	8	5
Insurance	12	12	12	12	9	0
Misc	10	10	10	10	7	0
Interest (non-land)	23	23	20	20	21	11
Total overhead costs	\$96	\$96	\$80	\$80	\$66	\$36
Total non-land costs	\$585	\$601	\$388	\$388	\$361	\$238
Operator and land return	\$31	-\$22	\$43	\$26	-\$69	\$111

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