

2017 Corn, No-Till, Irrigated Budget

	<u>Unit</u>	<u>Quantity</u>	<u>Price</u>	<u>Total</u>	<u>Your Farm</u>
Revenue					
Corn ¹	Bu	225	\$3.65	\$821.25	_____
		Total Revenue		\$821.25	_____
Variable Expenses					
Seed ^{2,3}	Thous.	36	\$3.56	\$128.25	_____
Fertilizer & Lime (Table 1)	Acre	1	\$158.17	\$158.17	_____
Chemical (Table 2) ^{3,4}	Acre	1	\$38.93	\$38.93	_____
Crop Scout	Acre	1	\$6.00	\$6.00	_____
Repair & Maintenance (Table 3)	Acre	1	\$21.18	\$21.18	_____
Fuel, Oil & Filter (Table 3)	Acre	1	\$9.25	\$9.25	_____
Operator Labor (Table 3)	Acre	1	\$5.20	\$5.20	_____
Machinery Rental	Acre	0	\$0.00	\$0.00	_____
Custom Work	Acre	0	\$0.00	\$0.00	_____
Drying (Fuel/Electric)	Bu	225	\$0.00	\$0.00	_____
Irrigation Energy Cost (Diesel)	Ac-In	7	\$4.02	\$28.12	_____
Irrigation System R&M & Labor	Acre	1	\$15.09	\$15.09	_____
Other Irrigation Costs	Acre	1	\$0.00	\$0.00	_____
Cash Rent ⁵	Acre	1	\$165.00	\$165.00	_____
Crop Insurance ⁶	Acre	1	\$12.85	\$12.85	_____
Operating Interest ⁷	%	\$588.02	6.00%	\$17.64	_____
Other Variable Costs	Acre	1	\$0.00	\$0.00	_____
		Total Variable Expenses		\$605.66	_____
		Return Above Variable Expenses		\$215.59	_____
Fixed Expenses					
Machinery ⁸					
Capital Recovery (Table 3)	Acre	1	\$41.13	\$41.13	_____
Other Fixed Machinery Costs	Acre	1	\$0.00	\$0.00	_____
Capital Recovery (Irrigation Equipment) ⁹	Acre	1	\$85.15	\$85.15	_____
Other Fixed Irrigation Costs	Acre	1	\$0.00	\$0.00	_____
Property Taxes	Acre	1	\$0.00	\$0.00	_____
Insurance (Non-Machinery)	Acre	1	\$0.00	\$0.00	_____
Management Labor ¹⁰	Acre	2	\$15.00	\$30.00	_____
Other Fixed Costs	Acre	1	\$0.00	\$0.00	_____
		Total Fixed Expenses		\$156.28	_____
		Return Above All Specified Expenses		\$59.30	_____

Breakeven Price For Selected Yield

Yield (bu)	Variable Cost (\$/bu)	Total Specified Cost (\$/bu)
175	\$3.46	\$4.35
185	\$3.27	\$4.12
195	\$3.11	\$3.91
205	\$2.95	\$3.72
215	\$2.82	\$3.54
225	\$2.69	\$3.39
235	\$2.58	\$3.24
245	\$2.47	\$3.11
255	\$2.38	\$2.99
265	\$2.29	\$2.88
275	\$2.20	\$2.77

Breakeven Yield for Selected Price

Price (\$/bu)	Variable Cost (bu)	Total Specified Cost (bu)
\$2.40	252	317
\$2.65	229	288
\$2.90	209	263
\$3.15	192	242
\$3.40	178	224
\$3.65	166	209
\$3.90	155	195
\$4.15	146	184
\$4.40	138	173
\$4.65	130	164
\$4.90	124	155

Table 1. Fertilizer & Lime

Fertilizer	Description	Quantity (lbs)	Price (\$)	Total (\$/Acre)	Your Farm (\$/Acre)
Nitrogen	Urea	240	\$0.36	\$85.57	_____
Phosphorous	P ₂ O ₅	90	\$0.34	\$30.66	_____
Potassium	K ₂ O	90	\$0.26	\$23.70	_____
Lime	Limestone	1,000	\$36.50	\$18.25	_____
Other	0		\$0.00	\$0.00	_____
Total				\$158.17	_____

Table 2. Chemicals^{3,4}

Chemical	Function	Description	Unit	Number of Apps.	Quantity	Price	Total (\$/Acre)	Your Farm (\$/Acre)
Herbicides ³	Burndown	Gramoxone SL	oz.	1	40	\$0.14	\$5.50	_____
	Pre-Emerge	Surfactant	pt.	1	0.2	\$3.52	\$0.70	_____
		Atrazine 4L	qt.	1	1	\$3.33	\$3.33	_____
	Post-Emerge	Gramoxone SL	oz.	1	40	\$0.14	\$5.50	_____
		Halex GT	pt.	1	3.6	\$5.25	\$18.90	_____
		Atrazine 4L	qt.	1	1.5	\$3.33	\$5.00	_____
Insecticides						\$0.00	\$0.00	_____
						\$0.00	\$0.00	_____
						\$0.00	\$0.00	_____
						\$0.00	\$0.00	_____
Fungicides ⁴						\$0.00	\$0.00	_____
Total						\$0.00	\$38.93	_____

Table 3. Machinery⁸

Plant	Power Unit	Implement	Size	Capital Recovery	Repairs & Maintenance	Fuel, Oil & Filter	Labor	Total	Your Farm (\$/Acre)
Weed Control	Tractor, 215 hp	Planter	16-row	\$6.46	\$3.71	\$1.07	\$0.79	\$12.03	_____
Weed Control	SP Boom Sprayer		90'	\$4.19	\$0.24	\$0.20	\$0.16	\$4.79	_____
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Weed Control	SP Boom Sprayer		90'	\$4.19	\$0.24	\$0.20	\$0.16	\$4.79	_____
Fertilize	Tractor, 215 hp	Fertilize Spreader	900#	\$1.65	\$2.03	\$1.13	\$0.84	\$5.66	_____
Harvest	Combine	Corn Head	8-row	\$13.30	\$13.13	\$4.60	\$1.64	\$32.67	_____
Haul	Tractor, 215 hp	Grain Cart		\$2.31	\$1.06	\$0.69	\$0.52	\$4.57	_____
Haul	Semi Tractor/Trailer		800 bu	\$4.83	\$0.52	\$1.16	\$0.93	\$7.44	_____
Other									_____
Other									_____
Total				\$41.13	\$21.18	\$9.25	\$5.20	\$76.75	_____

FOOTNOTES

- 1) Corn price was estimated using weighted average futures prices from September 2017 to July 2018 on December 30, 2016, adjusted by average monthly basis in Tennessee.
- 2) Assumes a bag of seed costs \$285 and contains 80,000 seeds (\$3.56/thousand seeds). Seeding rate of 36,000 seeds/acre. Seed treatment is included in the price.
- 3) Check with farm suppliers for rebates, discounts, and incentives for seed and chemicals. Substantial cost savings may be available.
- 4) A foliar fungicide application may be used in some cropping systems at a cost of \$15/acre plus application cost. Cost will vary depending on the fungicide used and the application rate.
- 5) Cash rental rates are the 2016 USDA-NASS reported cash rental rates for cropland in Tennessee. Substantial differences may exist in cash rental rates reported by NASS and the prevailing rate in your location.
- 6) Crop insurance is an estimate and will vary by policy, county, and coverage election. The estimate provided is the average premium paid per insured acre of corn in Tennessee for the previous production year as reported by USDA RMA's Summary of Business Report.
- 7) Operating interest is assumed to be charged on half of all variable expenses.
- 8) Machinery expenses will vary dramatically by operation, financial resources, and land base. The machinery cost estimates provided in Table 3 are provided as an estimate of cost of ownership and operation for specified pieces of machinery that would be available to a "representative" row-crop farm in Tennessee. To estimate machinery costs for a specific set of equipment, interested parties can utilize the Excel version of the budgets and modify the Machinery Assumptions Table.
- 9) Center-pivot irrigation costs are estimated using the following assumptions: purchase price and installation cost of \$80,000; useful life of 20 years; and an irrigated acreage of 125 acres. Irrigation rates should be adjusted to meet commodity- and farm-specific applications.
- 10) Management labor for irrigated acreage is assumed to be double that of dryland acres.