

2017 Soybean, No-Till, Irrigated Budget

	<u>Unit</u>	<u>Quantity</u>	<u>Price</u>	<u>Total</u>	<u>Your Farm</u>
Revenue					
Soybeans ¹	Bu	60	\$9.80	\$588.00	_____
			Gross Revenue (\$/Acre)		
				Total Revenue \$588.00	_____
Variable Expenses ²					
Seed ^{3*}	Thous.	140	\$0.43	\$60.00	_____
Fertilizer & Lime (Table 1) ⁴	Acre	1	\$38.26	\$38.26	_____
Chemical (Table 2) ^{5,6,7,8,9,10**}	Acre	1	\$96.50	\$96.50	_____
Crop Scout	Acre	1	\$6.00	\$6.00	_____
Repair & Maintenance (Table 3) ¹¹	Acre	1	\$18.33	\$18.33	_____
Fuel, Oil & Filter (Table 3) ¹¹	Acre	1	\$8.49	\$8.49	_____
Operator Labor (Table 3) ¹¹	Acre	1	\$5.10	\$5.10	_____
Machinery Rental	Acre	0	\$0.00	\$0.00	_____
Custom Work	Acre	0	\$0.00	\$0.00	_____
Drying (Fuel/Electric)	Bu	60	\$0.00	\$0.00	_____
Irrigation Energy Cost (Diesel)	Ac-In	4.5	\$4.02	\$18.09	_____
Irrigation System R&M & Labor	Acre	1	\$15.09	\$15.09	_____
Other Irrigation Costs	Acre	1	\$0.00	\$0.00	_____
Cash Rent ¹²	Acre	1	\$165.00	\$165.00	_____
Crop Insurance ¹³	Acre	1	\$7.94	\$7.94	_____
Operating Interest ¹⁴	%	\$438.81	6.00%	\$13.16	_____
Other Variable Costs	Acre	1	\$0.00	\$0.00	_____
			Total Variable Expenses \$451.98		_____
			Return Above Variable Expenses \$136.02		_____
Fixed Expenses					
Machinery ¹¹					
Capital Recovery (Table 3)	Acre	1	\$47.33	\$47.33	_____
Other Fixed Machinery Costs	Acre	1	\$0.00	\$0.00	_____
Capital Recovery (Irrigation Equipment) ¹⁵	Acre	1	\$85.15	\$85.15	_____
Other 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 ¹⁶	Acre	2	\$15.00	\$30.00	_____
Other Fixed Costs	Acre	1	\$0.00	\$0.00	_____
			Total Fixed Expenses \$162.48		_____
			Return Above All Specified Expenses -\$26.46		_____

Breakeven Price For Selected Yield

Yield (bu)	Variable Cost (\$/bu)	Total Specified Cost (\$/bu)
40	\$11.30	\$15.36
45	\$10.04	\$13.65
50	\$9.04	\$12.29
55	\$8.22	\$11.17
60	\$7.53	\$10.24
65	\$6.95	\$9.45
70	\$6.46	\$8.78
75	\$6.03	\$8.19
80	\$5.65	\$7.68

Breakeven Yield for Selected Price

Price (\$/bu)	Variable Cost (bu)	Total Specified Cost (bu)
\$7.80	58	79
\$8.30	54	74
\$8.80	51	70
\$9.30	49	66
\$9.80	46	63
\$10.30	44	60
\$10.80	42	57
\$11.30	40	54
\$11.80	38	52

Table 1. Fertilizer & Lime ⁴

Fertilizer	Description	Quantity (lbs)	Price (\$)	Total (\$/Acre)	Your Farm (\$/Acre)
Nitrogen	Urea	0	\$0.36	\$0.00	_____
Phosphorous	P ₂ O ₅	20	\$0.47	\$9.48	_____
Potassium	K ₂ O	40	\$0.26	\$10.53	_____
Lime ⁴	Limestone	1,000	\$36.50	\$18.25	_____
Other		0	\$0.00	\$0.00	_____
Total				\$38.26	_____

Table 2. Chemicals ^{5,6,7,8,9,10**}

Chemical	Function	Description	Unit	Number of Apps.	Quantity	Price	Total (\$/Acre)	Your Farm (\$/Acre)
Herbicides	Burndown	Roundup Power Max	qt.	1	1	\$4.49	\$4.49	_____
		Clarity 4EC	pt.	1	1	\$11.48	\$11.48	_____
	Pre-Emerge	Valor	oz.	1	2	\$6.11	\$12.22	_____
		Gramoxone SL	oz.	1	40	\$0.14	\$5.50	_____
	Post-Emerge	Boundary	pt.	1	2	\$10.26	\$20.52	_____
		Flexstar GT	pt.	1	3	\$4.10	\$12.30	_____
		Roundup Power Max	qt.	1	1	\$4.49	\$4.49	_____
Insecticides			acre	1	1	\$5.00	\$5.00	_____
Insecticide/Fungicides		Seed Treatment	acre	1	1	\$8.50	\$8.50	_____
Fungicides			acre	1	1	\$12.00	\$12.00	_____
Total							\$96.50	_____

Table 3. Machinery ¹¹

Plant	Power Unit	Implement	Size	Capital Recovery	Repairs & Maintenance	Fuel, Oil & Filter	Labor	Total	Your Farm (\$/Acre)
Burndown	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	_____
Weed Control	SP Boom Sprayer		90'	\$4.19	\$0.24	\$0.20	\$0.16	\$4.79	_____
Weed Control	SP Boom Sprayer		90'	\$4.19	\$0.24	\$0.20	\$0.16	\$4.79	_____
Fungicide	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	Grain Head	30 ft	\$11.11	\$9.80	\$3.45	\$1.23	\$25.59	_____
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	_____
Total				\$47.33	\$18.33	\$8.49	\$5.10	\$79.26	_____

FOOTNOTES

- 1) Soybean price was estimated using weighted average futures prices from November 2017 to July 2018 on December 30, 2016, adjusted by average monthly basis in Tennessee.
 - 2) Assumes a normal crop rotation with minimum weed infestation. A continuous soybean system may require additional expenses for chemicals and/or land preparation.
 - 3) Seed price includes technology fee.
 - 4) Assumes 2 tons of lime applied every four years.
 - 5) Seed treatments, such as some nematicide treatments, are optional and costs vary depending on product used.
 - 6) Weed control chemicals should be selected for specific weed or grass problems that are present. Check with farm suppliers for rebates, discounts, and incentives for seed and chemicals. Substantial cost savings may be available.
 - 7) The addition of Dicamba @ 8oz./acre is necessary to manage Glyphosate resistant horseweed. This adds an additional \$5.50/acre to the burndown spray cost.
 - 8) Due to prevalence of Glyphosate resistant weeds, if weeds are not controlled, hand chopping may be necessary.
 - 9) For an alternate control, use Gramoxone SL @1.25 quarts/acre plus a surfactant.
 - 10) Several other versions of Glyphosate, the active ingredient in Roundup Power Max, are available. Check label for concentration rates and registration on Roundup Ready Soybeans.
 - 11) 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.
 - 12) 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.
 - 13) 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 soybeans in Tennessee for the previous production year as reported by USDA RMA's Summary of Business Report.
 - 14) Operating interest is assumed to be charged on half of all variable expenses.
 - 15) 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.
 - 16) Management labor for irrigated acreage is assumed to be double that of dryland acres.
- * For Xtend soybeans seed prices may be \$6-15 per unit higher.
- ** Xtend soybeans require alternative chemical applications and should be used according to product specifications. Additional costs for applicator training may be required. Cost estimates are provided in the Preliminary 2017 Soybean, Roundup Ready 2 Xtend, No-Till, Non-Irrigated Budget.