

## 2021 Wheat/Soybean Double Cropped, Non-Irrigated Budget

	<u>Unit</u>	<u>Quantity</u>	<u>Price</u>	<u>Total</u>	<u>Your Farm</u>
<b>Revenue<sup>1</sup></b>			<b>Gross Revenue (\$/Acre)</b>		
Soybeans	Bu/acre	40	\$10.90	\$436.00	_____
Wheat	Bu/acre	70	\$6.20	\$434.00	_____
Government Payments	\$/acre	1	\$0.00	\$0.00	_____
Other Revenue	\$/acre	1	\$0.00	\$0.00	_____
			<b>Total Revenue \$870.00</b>		_____
<b>Variable Expenses</b>					
Seed, Soybeans	Thous.	140	\$0.40	\$56.00	_____
Seed, Wheat	Bu	2.5	\$13.50	\$33.75	_____
Fertilizer & Lime (Table 1) <sup>2</sup>	Acre	1	\$104.90	\$104.90	_____
Chemical (Table 2) <sup>3</sup>	Acre	1	\$134.44	\$134.44	_____
Crop Scout or Consultant	Acre	1	\$10.00	\$10.00	_____
Repair & Maintenance (Table 3) <sup>4</sup>	Acre	1	\$65.12	\$65.12	_____
Fuel, Oil & Filter (Table 3) <sup>4</sup>	Acre	1	\$25.16	\$25.16	_____
Operator Labor (Table 3) <sup>4</sup>	Acre	1	\$18.09	\$18.09	_____
Crop Insurance <sup>5</sup>	Acre	1	\$13.96	\$13.96	_____
Machinery Rental	Acre	0	\$0.00	\$0.00	_____
Custom Work	Acre	0	\$0.00	\$0.00	_____
Drying (Fuel/Electric)	Bu	40	\$0.00	\$0.00	_____
Other	Acre	1	\$0.00	\$0.00	_____
Other	Acre	1	\$0.00	\$0.00	_____
Other	Acre	1	\$0.00	\$0.00	_____
Operating Interest <sup>6</sup>	%	\$461.43	4.65%	\$10.73	_____
			<b>Total Variable Expenses \$472.15</b>		_____
			<b>Return Above Variable Expenses \$397.85</b>		_____
<b>Fixed Expenses</b>					
Machinery <sup>4</sup>					_____
Capital Recovery (Table 3)	Acre	1	\$173.73	\$173.73	_____
Other Fixed Machinery Costs	Acre	1	\$0.00	\$0.00	_____
Property Taxes	Acre	1	\$0.00	\$0.00	_____
Cash Rent <sup>7</sup>	Acre	1	\$97.00	\$97.00	_____
Insurance (Non-Machinery)	Acre	1	\$0.00	\$0.00	_____
Management Labor	Acre	1	\$18.00	\$18.00	_____
Other	Acre	1	\$0.00	\$0.00	_____
			<b>Total Fixed Expenses \$288.73</b>		_____
			<b>Total Expenses \$760.89</b>		_____
			<b>Return Above Specified Expenses \$109.11</b>		_____

### Breakeven Price for Selected Soybean Yield<sup>8</sup>

Yield (bu)	Variable Cost (\$/bu)	Total Specified Cost (\$/bu)
20	\$11.80	\$19.02
25	\$9.44	\$15.22
30	\$7.87	\$12.68
35	\$6.75	\$10.87
<b>40</b>	<b>\$5.90</b>	<b>\$9.51</b>
45	\$5.25	\$8.45
50	\$4.72	\$7.61
55	\$4.29	\$6.92
60	\$3.93	\$6.34

### Breakeven Yield for Selected Soybean Price<sup>8</sup>

Price (\$/bu)	Variable Cost (bu)	Total Specified Cost (bu)
\$8.90	27	43
\$9.40	25	40
\$9.90	24	38
\$10.40	23	37
<b>\$10.90</b>	<b>22</b>	<b>35</b>
\$11.40	21	33
\$11.90	20	32
\$12.40	19	31
\$12.90	18	29

### Breakeven Price for Selected Wheat Yield<sup>8</sup>

Yield (bu)	Variable Cost (\$/bu)	Total Specified Cost (\$/bu)
50	\$4.72	\$7.61
55	\$4.29	\$6.92
60	\$3.93	\$6.34
65	\$3.63	\$5.85
<b>70</b>	<b>\$3.37</b>	<b>\$5.43</b>
75	\$3.15	\$5.07
80	\$2.95	\$4.76
85	\$2.78	\$4.48
90	\$2.62	\$4.23

### Breakeven Yield for Selected Wheat Price<sup>8</sup>

Price (\$/bu)	Variable Cost (bu)	Total Specified Cost (bu)
\$4.20	56	91
\$4.70	50	81
\$5.20	45	73
\$5.70	41	67
<b>\$6.20</b>	<b>38</b>	<b>61</b>
\$6.70	35	57
\$7.20	33	53
\$7.70	31	49
\$8.20	29	46

## **FOOTNOTES**

1) Soybean price was estimated using weighted average futures prices from November 2021 to August 2022, adjusted by average monthly basis in Tennessee. Soybean yield is the predicted 2021 linear trend line yield for soybeans in Tennessee, adjusted for double cropping systems. Wheat price was estimated using weighted average futures prices from July 2021 to May 2022, adjusted by average monthly basis in Tennessee. Wheat yield is the predicted 2021 linear trend line yield for wheat in Tennessee, using state average yields from 2000-2020. If a market for straw is available, add an appropriate amount to other revenue (\$/acre) based on the expected yield and price of the straw, less harvest and marketing costs.

2) Lime is assumed to be applied once every four years at a rate of 2 tons per acre. Includes the cost of application. Fertilizer quantities and prices are shown in elemental lb. Check with farm suppliers for rebates, discounts and incentives for fertilizers, seed and chemicals. Substantial cost savings may be available. Substantial variation in prices for seed, chemical and fertilizer exist based on quantity purchased, product purchased and location of purchase.

3) Assumes a normal crop rotation with minimal weed infestation. Weed control chemicals should be selected for specific weed or grass problems that are present. Generic chemicals may be a cost-effective option. Contact your chemical supplier, qualified consultant or weed control specialist. Alternative weed control options are available in the University of Tennessee Weed Control Manual for Tennessee. Follow all labels, state and national regulations when using all chemicals. Check with farm suppliers for rebates, discounts and incentives for seed and chemicals. Substantial cost savings may be available. Seed treatments, such as some nematicide treatments, are optional and costs vary depending on product used. Additional seed treatment is to protect against Barley Yellow Dwarf Virus. Cost may vary depending on fungicide used and application rate per acre.

4) 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.

5) 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 soybean and wheat in Tennessee for the previous production year, as reported by USDA RMA's Summary of Business Report.

6) Operating interest is assumed to be charged on half of all variable expenses.

7) Cash rental rates are the 2020 USDA-NASS reported cash rental rates for irrigated cropland in Tennessee. Substantial differences may exist in cash rental rates reported by NASS and the prevailing rate in your location.

8) Estimated breakeven yields and prices assume that half of variable and total specified costs are incurred for each commodity. When estimating soybean breakeven, wheat yield/price are held constant at 69 bu/acre and \$5.40/bu. When estimating wheat breakeven, soybean yield and price are held constant at 40 bu/acre and \$9.60/bu.

Table 1. Fertilizer & Lime<sup>2</sup>

Fertilizer	Description	Quantity (lbs)	Price (\$)	Total (\$/Acre)	Your Farm (\$/Acre)
Nitrogen	Urea - Planting/Fall	30	\$0.39	\$11.71	
	UAN 32 - Post-Emerge/Spring	90	\$0.39	\$35.16	
Phosphorous	P <sub>2</sub> O <sub>5</sub>	60	\$0.37	\$22.27	
Potassium	K <sub>2</sub> O	60	\$0.29	\$17.10	
Boron		7	\$0.55	\$3.67	
Manganese		0	\$0.00	\$0.00	
Lime	Limestone	1,000	\$30.00	\$15.00	
Other		0	\$0.00	\$0.00	
<b>Total</b>				<b>\$104.90</b>	

Table 2. Chemicals<sup>3</sup>

Chemical	Function	Description	Unit	Number of Apps.	Quantity	Price	Total (\$/Acre)	Your Farm (\$/Acre)
Herbicides-	Burndown	Gramoxone SL	oz.	1	40	\$0.28	\$11.20	
Wheat	Post-Emerge	Roundup	qt.	1	1	\$5.69	\$5.69	
		Harmony	oz.	1	0.75	\$14.03	\$10.52	
		Metrubuzin	oz.	1	3	\$0.86	\$2.58	
Herbicides-	Pre-Emerge	Surfactant	\$/acre	2	1	\$1.50	\$3.00	
Soybeans	Post-Emerge	Gramoxone SL	oz.	1	40	\$0.28	\$11.20	
		Prefix	qt.	1	1	\$14.63	\$14.63	
		Engenia	oz.	1	12	\$0.64	\$7.68	
Other		Flexstar	pt.	1	1	\$4.94	\$4.94	
Other		Surfactant	\$/acre	2	1	\$1.50	\$3.00	
Other				0	0	\$0.00	\$0.00	
Other				0	0	\$0.00	\$0.00	
Seed Treatment		Wheat-seed treatment	acre	1	1	\$12.00	\$12.00	
Other		Soybeans-seed treatment	acre	1	1	\$10.00	\$10.00	
Other				0	0	\$0.00	\$0.00	
Insecticides		Wheat-Foliar	acre	1	1	\$3.50	\$3.50	
Other		Soybeans-Foliar	acre	1	1	\$7.50	\$7.50	
Other				0	0	\$0.00	\$0.00	
Fungicides		Soybeans-Foliar	acre	1	1	\$14.50	\$14.50	
Other		Wheat-foliar	acre	1	1	\$12.50	\$12.50	
Other				0	0	\$0.00	\$0.00	
<b>Total</b>							<b>\$134.44</b>	

Table 3. Machinery<sup>4</sup>

Power Unit	Implement	Size	Capital Recovery	Repairs & Maintenance	Fuel, Oil & Filter	Labor	Total	Your Farm (\$/Acre)
Disk	Tandem Disk	29'	\$9.26	\$1.82	\$1.87	\$1.49	\$14.44	
Burndown	SP Boom Sprayer	90'	\$7.45	\$0.27	\$0.26	\$0.25	\$8.23	
Fertilize	Fertilize Spreader		\$4.21	\$1.53	\$1.70	\$1.35	\$8.79	
Plant	Grain Drill	20 ft	\$10.42	\$5.18	\$2.97	\$2.36	\$20.92	
Fertilize	Fertilize Spreader		\$4.21	\$1.53	\$1.70	\$1.35	\$8.79	
Weed Control	SP Boom Sprayer	90'	\$7.45	\$0.27	\$0.26	\$0.25	\$8.23	
Fungicide	SP Boom Sprayer	90'	\$7.45	\$0.27	\$0.26	\$0.25	\$8.23	
Insect Control	SP Boom Sprayer	90'	\$7.45	\$0.27	\$0.26	\$0.25	\$8.23	
Harvest	Combine	30 ft	\$22.48	\$23.14	\$4.45	\$1.96	\$52.03	
Haul	Grain Head		\$5.63	\$0.76	\$1.04	\$0.83	\$8.26	
Haul	Grain Cart		\$6.17	\$0.43	\$0.35	\$0.77	\$7.72	
Plant	Semi Tractor/Trailer	16-row	\$13.54	\$2.82	\$1.60	\$1.27	\$19.22	
Fertilize	Fertilize Spreader		\$4.21	\$1.53	\$1.70	\$1.35	\$8.79	
Weed Control	SP Boom Sprayer	90'	\$7.45	\$0.27	\$0.26	\$0.25	\$8.23	
Weed Control	SP Boom Sprayer	90'	\$7.45	\$0.27	\$0.26	\$0.25	\$8.23	
Weed Control	SP Boom Sprayer	90'	\$7.45	\$0.27	\$0.26	\$0.25	\$8.23	
Fungicide	SP Boom Sprayer	90'	\$7.45	\$0.27	\$0.26	\$0.25	\$8.23	
Harvest	Combine	30 ft	\$22.48	\$23.14	\$4.45	\$1.96	\$52.03	
Haul	Grain Head		\$5.63	\$0.76	\$1.04	\$0.83	\$8.26	
Haul	Grain Cart		\$6.17	\$0.43	\$0.35	\$0.77	\$7.72	
Other	Semi Tractor/Trailer		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Other			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Other			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
<b>Total</b>			<b>\$173.73</b>	<b>\$65.12</b>	<b>\$25.16</b>	<b>\$18.09</b>	<b>\$282.11</b>	