



**2001 Economies of Scale Soybean Production Budget<sup>1</sup>**  
**500, 1000, and 2000 Acres**  
**40 Bushel per Acre Yield**  
**Conservation Tillage Practices**

ITEM	EXPLANATION	PRICE PER UNIT	ACRES <sup>2</sup>			YOUR BUDGET		
			500	1000	2000			
<b>RECEIPTS</b>								
Soybeans		\$5.40 /bu	\$216	\$216	\$216	_____		
	Yield	40 bu/A						
<b>VARIABLE COSTS<sup>3</sup></b>								
Seed	80 lbs.	7% price adjust	21	20	19	_____		
Fertilizer <sup>4</sup>								
P2O5(lbs)	30	10% price adjust	8	7	6	_____		
K2O(lbs)	75	10% price adjust	11	10	9	_____		
Lime(lbs)	750	10% price adjust	6	6	5	_____		
Chemicals <sup>5</sup>		7% price adjust	21	20	18	_____		
Trucking - Fuel Only		0.03 /bu	1	1	1	_____		
Fuel, Oil, Grease			5	5	5	_____		
Repairs			12	12	11	_____		
Miscellaneous <sup>6</sup>			12	13	14	_____		
Int. on Oper. Cap. <sup>7</sup>	5 mo.	9.0%	4	3	3	_____		
Hired Labor <sup>8</sup>			0	0	0	_____		
<b>TOTAL VARIABLE COSTS</b>	<b>-Per Acre</b>		102	98	92	_____		
	<b>-Per Bushel</b>		2.54	2.44	2.30	_____		
<b>FIXED COSTS</b>								
Labor charge (hrs.) <sup>8</sup>	2.9	2.6	2.3	7.50 /hr	21	20	18	_____
Mach. and Equip. Charge <sup>9</sup>					71	53	40	_____
Land Charge					70	70	70	_____
Management Charge <sup>10</sup>	4%	5%	6% of gross revenue		9	11	13	_____
<b>TOTAL FIXED COSTS</b>					171	153	141	_____
<b>TOTAL COSTS</b>	<b>-Per Acre</b>		272	251	233	_____		
	<b>-Per Bushel</b>		6.81	6.27	5.82	_____		
<b>RETURN ABOVE VARIABLE COSTS (ACRE)</b>			114	118	124	_____		
<b>RETURN ABOVE TOTAL COSTS (ACRE)</b>			(56)	(35)	(17)	_____		
<b>RETURN TO LABOR AND MANAGEMENT (ACRE)<sup>11</sup></b>			(26)	(5)	14	_____		
<b>TOTAL RETURN TO LABOR AND MANAGEMENT FOR OPERATION<sup>12</sup></b>			(13,088)	(4,642)	27,180	_____		

- <sup>1</sup> This budget is intended to provide an example of how size of operations can affect the costs and returns of a crop enterprise. It is only one of many possible scenarios and is not intended to provide the user with specific revenues, costs, or returns.
- <sup>2</sup> Acreage is total acres of soybeans produced. Does not include acreage of other crops produced on the same farm.
- <sup>3</sup> A price adjustment is included for some variable costs. This reflects the possible price difference of an input based on quantity purchased. The 1000 acre column is the base price, the 500 acre column pays base price plus price adjustment, the 2000 acre column pays base price less price adjustment. Some costs may not reflect adjustment due to rounding.
- <sup>4</sup> Assumes only maintenance application of fertilizer needed, soil test values of 20 ppm P/A and 125 ppm K/A.
- <sup>5</sup> Based on use of Canopy, Fusion, COC.
- <sup>6</sup> Includes supplies, utilities, soil tests, small tools, crop insurance, etc...
- <sup>7</sup> Interest on all variable costs, except trucking, for 5 months at 9% interest rate.
- <sup>8</sup> Part or all of labor may be a variable cost if paid labor varies with acres farmed. It's a fixed cost if labor costs do not change with acres farmed. Labor required per acre is increased 10% for 500 acres and decreased 10% for 2000 acres.
- <sup>9</sup> Machinery charge includes depreciation, interest, insurance, and housing. Machinery is assumed to be 100% owned and recently purchased. Tractors and implements increase in size and number as acreage of operation increases. All machinery is assumed to be used only on operator's farm, no custom work included. The following page shows the machinery inventory for each size operation.
- <sup>10</sup> Management charges are greater for more acres due to the likelihood of having more fields/farms to manage and more transporting of equipment.
- <sup>11</sup> Estimated return that the operator will receive for supplying labor and management skills to the operation.
- <sup>12</sup> Total return that can be expected for the entire operation. (Total Returns = return per acre x number of acres)

**Machinery Inventory**

500 Acres						
Number in Inventory	Machine	Purchase Price (\$)	Inventory Value (\$)	Fuel (gal/A)	Repair Costs (\$)	# times used
1	Fertilizer Spreader	9,400	9,400	0.13	0.26	1
1	11 ft. Chisel plow	5,200	5,200	1.10	0.34	1
1	18 ft. Cultivator	9,000	9,000	0.60	0.25	1
1	25 ft. drill	25,300	25,300	0.35	1.19	1
1	30 ft. Sprayer	4,500	4,500	0.10	0.28	2
1	Small Combine w/ 15 ft.head	129,200	129,200	1.60	4.87	1
1	185 bu. Gravity Wagons	2,500	2,500	0.60	0.84	1
1	Small Tractor	23,200	23,200		1.94	1
1	Medium Tractor	27,200	27,200		2.28	1
0	Large Tractor	106,600	0			
1	Pickup Truck (1/2)	12,500	12,500	0.10	0.05	1
TOTAL			235,500	4.48	12.30	

Fixed Cost Expense Rate = 15% Diesel Price (\$/gal) = \$1.00  
 Total Annual Fixed Costs = \$35,325  
**Fixed Costs per Acre = \$71**

1000 Acres						
Number in Inventory	Machine	Purchase Price (\$)	Inventory Value (\$)	Fuel (gal/A)	Repair Costs (\$)	# times used
1	Fertilizer Spreader	9,400	9,400	0.13	0.26	1
1	19 ft. Chisel Plow	11,700	11,700	1.10	1.03	1
1	28 ft. Cultivator	14,200	14,200	0.60	0.25	1
1	30 ft. Drill	31,900	31,900	0.35	1.25	1
1	60 ft. Sprayer	6,000	6,000	0.20	0.22	2
1	Medium Combine	136,100	136,100	1.60	3.86	1
2	240 bu. Gravity Wagons	4,000	8,000	0.69	0.23	1
0	Small Tractor	23,200	0		0	0
1	Medium Tractor	27,200	27,200		1.14	1
1	Large Tractor	106,600	106,600		3.84	1
1	Pickup Truck (1/2)	12,500	12,500	0.10	0.05	1
TOTAL			354,200	4.77	12.13	

Fixed Cost Expense Rate = 15% Diesel Price (\$/gal) = \$1.00  
 Total Annual Fixed Costs = \$53,130  
**Fixed Costs per Acre = \$53**

2000 Acres						
Number in Inventory	Machine	Purchase Price (\$)	Inventory Value (\$)	Fuel (gal/A)	Repair Costs (\$)	# times used
1	Fertilizer Spreader	9,400	9,400	0.13	0.26	1
1	30 ft.Chisel Plow	18,600	18,600	1.10	0.44	1
1	40 ft. Cultivator	14,700	14,700	0.60	0.18	1
1	30 ft Drill	31,900	31,900	0.35	1.26	1
1	60 ft. Sprayer	6,000	6,000	0.20	0.22	2
1	Large Combine	169,700	169,700	1.60	3.21	1
4	240 bu. Gravity Wagons	4,000	16,000	0.69	0.23	1
2	Small Tractor	23,200	46,400		0.49	1
2	Medium Tractor	57,300	114,600		2.4	1
1	Large Tractor	106,600	106,600		2.24	1
1	Pickup Truck (1/2)	12,500	12,500	0.10	0.05	1
TOTAL			537,000	4.77	10.98	

Fixed Cost Expense Rate = 15% Diesel Price (\$/gal) = \$1.00  
 Total Annual Fixed Costs = \$80,550  
**Fixed Costs per Acre = \$40**