2001 Economies of Scale Soybean Production Budget[1]
500, 1000, and 2000 Acres
40 Bushel per Acre Yield
No-Tillage Practices

ITEM	EXPLANATION			PRICE PER UNIT	ACREAGE [2] 500	1000	2000	YOUR BUDGET
RECEIPTS								
Soybeans				$5.40 /bu	$216	$216	$216	
	Yield			40 bu/A				
VARIABLE COSTS [3]								
Seed	80 lbs.		7%	price adjust	21	20	19	
Fertilizer [4]								
P_2O_5(lbs)	30		10%	price adjust	8	7	6	
K_2O(lbs)	75		10%	price adjust	11	10	9	
Lime(lbs)	750		10%	price adjust	6	6	5	
Chemicals [5]			7%	price adjust	25	23	21	
Trucking - Fuel Only				0.03 /bu	1	1	1	
Fuel, Oil, Grease					3	3	3	
Repairs					13	12	10	
Miscellaneous [6]					12	13	14	
Int. on Oper. Cap. [7]	5 mo.			9.0%	4	4	3	
Hired Labor [8]					0	0	0	
TOTAL VARIABLE COSTS	**-Per Acre**				104	99	93	
	-Per Bushel				2.60	2.47	2.31	
FIXED COSTS								
Labor Charge [8]	1.8	2.0	2.2	8.00 /hr	14	16	18	
Mach. and Equip. Charge [9]					68	52	36	
Land Charge					70	70	70	
Management Charge[10]	4%	5%	6%	of gross revenue	9	11	13	
TOTAL FIXED COSTS					161	149	137	
TOTAL COSTS	**-Per Acre**				265	248	229	
	-Per Bushel				6.63	6.19	5.73	
RETURN ABOVE VARIABLE COSTS (ACRE)					112	117	123	
RETURN ABOVE TOTAL COSTS (ACRE)					(49)	(32)	(13)	
RETURN TO LABOR AND MANAGEMENT (ACRE)[11]					(26)	(5)	17	
TOTAL RETURN TO LABOR AND MANAGEMENT FOR OPERATION [12]					(13,016)	(4,914)	34,781	

[1] 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.

[2] Acreage is total acres of soybeans produced. Does not include acreage of other crops produced on the same farm.

[3] 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 1000 acre column pays base price less price adjustment. Some costs may not reflect adjustment due to rounding.

[4] Assumes only maintenance application of fertilizer needed, soil test values of 20 ppm P/A and 125 ppm K/A.

[5] Based on use of Roundup Ultra, Canopy, Select, & COC.

[6] Includes supplies, utilities, soil tests, small tools, crop insurance, etc…

[7] Interest on all variable costs, except trucking, for 5 months at 9% interest rate.

[8] 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.

[9] 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.

[10] Management charges are greater for more acres due to the likelihood of having more fields/farms to manage and more transporting of equipment.

[11] Estimated return that the operator will receive for supplying labor and management skills to the operation.

[12] Total return that can be expected for the entire operation. (Total Returns = return per acre x number of acres)

500 Acres

Number in Inventory	Machine	Purchase Price ($)	Inventory Value ($)	Fuel (gal/A)	Repair Costs ($)	# times used
1	Fertilizer Spreader	9,400		0.13	0.26	1
1	15 ft. No-Till Drill	28,000	28,000	0.35	2.2	1
1	30 ft. Sprayer	4,500	4,500	0.20	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		0	
1	Pickup Truck (1/2)	12,500	12,500	0.10	0.05	
		TOTAL	227,100	2.98	12.72	

Fixed Cost Expense Rate =	15%	Diesel Price ($/gal) =	$1.00
Total Annual Fixed Costs =	$34,065		
Fixed Costs per Acre =	**$68**		

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	20 ft. No-Till Drill	40,800	40,800	0.35	2.4	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	0.60	0.42	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	346,600	2.98	12.19	

Fixed Cost Expense Rate =	15%	Diesel Price ($/gal) =	$1.00
Total Annual Fixed Costs =	$51,990		
Fixed Costs per Acre =	**$52**		

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. No-Till Drill	60,400	60,400	0.35	2.37	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	0.60	0.23	1
2	Small Tractor	23,200	46,400		0.49	1
2	Medium Tractor	27,200	54,400		1.2	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	481,400	2.98	10.27	

Fixed Cost Expense Rate =	15%	Diesel Price ($/gal) =	$1.00
Total Annual Fixed Costs =	$72,210		
Fixed Costs per Acre =	**$36**		