2001 Economies of Scale Corn Production Budget [1]
500, 1000, and 2000 Acres
130 Bushel/Acre Yield
No-Till Practices

ITEM	EXPLANATION	PRICE PER UNIT	ACRES [2] 500	1000	2000	YOUR BUDGET
RECEIPTS						
Corn		$1.92 /bu	$250	$250	$250	
	Yield	130 bu/A				
VARIABLE COSTS [3]						
Seed (kernels)	28,000 seed/acre	7% price adjust	33	31	29	
Fertilizer [4]						
N (lbs.)	140	10% price adjust	37	34	30	
P_2O_5(lbs)	45	10% price adjust	12	11	10	
K_2O(lbs)	50	10% price adjust	7	7	6	
Lime(lbs)	1000	10% price adjust	8	8	7	
Chemicals [5]		7% price adjust	34	32	30	
Drying - Fuel & electric only		0.18 /bu	23	23	23	
Trucking - Fuel Only		0.03 /bu	4	4	4	
Fuel, Oil, Grease [6]			4	4	4	
Repairs [7]			15	12	13	
Miscellaneous [8]			13	13	13	
Int. on Oper. Cap. [9]	6 mo.	9.0%	7	7	6	
Hired Labor [10]			0	0	0	
TOTAL VARIABLE COSTS	**-Per Acre**		198	184	174	
	-Per Bushel		1.52	1.42	1.34	
FIXED COSTS						
Labor Charge (hrs.) [10]	3.3 3.0 2.7	8.00 /hr	26	24	22	
Mach. And Equip. Charge [11]			74	51	42	
Land Charge	Rent		70	70	70	
Management Charge [12]	4% 5%	6% of gross revenue	10	12	15	
TOTAL FIXED COSTS			180	158	149	
TOTAL COSTS	**-Per Acre**		379	342	323	
	-Per Bushel		2.91	2.63	2.48	
RETURN ABOVE VARIABLE COSTS			51	65	76	
RETURN ABOVE TOTAL COSTS			(129)	(93)	(73)	
RETURN TO LABOR AND MANAGEMENT [13]			(93)	(56)	(36)	
TOTAL RETURN TO LABOR AND MANAGEMENT FOR OPERATION [14]			(46,306)	(56,065)	(72,990)	

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 corn 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 2000 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, continuous corn 3.8 O.M., 20 CEC, and soil test values of 25 ppm P/A and 150 ppm K/A.

5. Based on use of Roundup Ultra, 2-4D, Basis Gold, Banvel, and COC

6 See specific calculations in Machinery Inventory. Lubrications costs are assumed to be 15% of fuel costs

7 See specific calculations in Machinery Inventory.

8 Includes supplies, utilities, soil tests, small tools, crop insurance, etc…

9 Interest on all variable costs, except drying and trucking, for 6 months at 10% interest rate.

10 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.

11 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.

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

13 Return to labor and management is the revenue less total expenses except operator labor and management charge. It is a measure of the returns to the operator's labor and management.

14 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)	Repairs ($)	# of times used
1	Fertilizer Spreader	9,400	9,400	0.13	0.26	1
1	6 Row Planter	26,000	26,000	0.50	2.00	1
1	30 ft. Sprayer	4,500	4,500	0.20	0.28	2
1	Small Combine w/ Head	139,100	139,100	1.60	7.8	1
2	185 bu. Gravity Wagons	2,500	5,000	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	0
1	Pickup Truck (1/2)	12,500	12,500	0.10	0.05	1
		TOTAL	246,900	3.13	15.45	

Fixed Cost Expense Rate = 15%
Total Annual Fixed Costs = $37,035
Diesel Price ($/gal) = $1.00
Fixed Costs per Acre = $74

1000 Acres

Number in Inventory	Machine	Purchase Price ($)	Inventory Value ($)	Fuel (gal/A)	Repairs ($)	# of times used
1	Fertilizer Spreader	9,400	9,400	0.13	0.26	1
1	8 Row Planter	30,900	30,900	0.50	2.37	1
1	60 ft. Sprayer	6,000	6,000	0.20	0.22	2
1	Medium Combine w\ Head	157,100	157,100	1.60	4.13	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	91,400	91,400		3.84	1
1	Pickup Truck (1/2)	12,500	12,500	0.10	0.05	1
		TOTAL	342,500	3.13	12.43	

Fixed Cost Expense Rate = 15%
Total Annual Fixed Costs = $51,375
Diesel Price ($/gal) = $1.00
Fixed Costs per Acre = $51

2000 Acres

Number in Inventory	Machine	Purchase Price ($)	Inventory Value ($)	Fuel (gal/A)	Repairs ($)	# of times used
1	Fertilizer Spreader	9,400	9,400	0.13	0.26	1
1	12 Row Planter	53,600	53,600	0.50	4.12	1
1	60 ft. Sprayer	6,000	6,000	0.20	0.22	2
1	Large Combine w\ Head	199,500	199,500	1.60	3.77	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	57,300	114,600		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	564,600	3.13	12.58	

Fixed Cost Expense Rate = 15%
Total Annual Fixed Costs = $84,690
Diesel Price ($/gal) = $1.00
Fixed Costs per Acre = $42