



Large Scale Corn Silage Production Budget - 2008

Conservation Tillage Practices: N-Source - NH3

Author: Barry Ward, Leader Production Business Management

Updated: 5/19/2008

ITEM	EXPLANATION			YOUR PROD. NUMBERS	PRICE PER UNIT	YIELD (Ton/A) ¹			YOUR BUDGET
						13	17	21	25
RECEIPTS									
Corn Silage ¹					\$47.75 /ton	596.88	787.88	978.88	1,193.75
LDP ²		\$2.00	County Loan Price		\$0.00 /ton	0.00	0.00	0.00	0.00
		DP Yields							
Direct Payment ²	96.1	116.8	141.6	141.6	\$0.28	17.00	20.63	25.08	25.08
	29.75	36	44	44	\$0.44				
		CC Yields							
C.C. Payment ²	105.6	136.5	165.5	165.5	\$0.00	0.00	0.00	0.00	0.00
TOTAL RECEIPTS						613.87	808.51	1,003.95	1,218.83
VARIABLE COSTS									
Seed (kernels) ³	28000	32000	34000	34000	\$2.05 /1000	57.40	65.60	69.70	69.70
	Seed Cost Per Bag				\$164.00 /bag				
Fertilizer ⁴									
N (lbs.)	128.0	146.0	165.0	165.0	0.488 /lb	69.44	78.22	87.49	87.49
P ₂ O ₅ (lbs)	4.6	6.1	7.6	9.3	0.8654 /lb	4.00	5.28	6.56	8.00
K ₂ O(lbs)	3.4	4.5	5.5	6.8	0.4842 /lb	1.63	2.16	2.68	3.27
Lime(ton)		0.25		0.25	23.5 /ton	5.88	5.88	5.88	5.88
Chemicals ⁵									
Herbicide						26.86	26.86	26.86	26.86
Fungicide						0.00	0.00	0.00	0.00
Insecticide						0.00	0.00	0.00	0.00
Drying - Fuel & Electric only ⁶		\$2.00	/gal LP		0.11 /bu	1.38	1.82	2.26	2.75
Trucking - Fuel Only ⁷					\$0.09 /bu	1.13	1.49	1.85	2.25
Fuel, Oil, Grease ⁸						15.33	15.33	15.33	15.33
Repairs ⁹						12.36	12.36	12.36	12.36
Crop Insurance ¹⁰						15.00	15.50	17.00	19.00
Miscellaneous ¹¹						6.00	7.00	8.00	8.00
Int. on Oper. Cap. ¹²		7 mo.			9.00%	11.23	12.29	13.22	13.43
Hired Labor ¹³						0.00	0.00	0.00	0.00
TOTAL VARIABLE COSTS									
			-Per Acre			227.63	249.78	269.18	274.32
			-Per Ton			18.21	15.14	13.13	10.97
FIXED COSTS									
Labor Charge ¹⁴		5.5	hours		13.50 /hr	74.25	74.25	74.25	74.25
Mach. And Equip. Charge ¹⁵						85.61	85.61	85.61	85.61
Land Charge ¹⁶			Rent			95.00	124.00	157.00	200.00
Management Charge ¹⁷		5%	of gross revenue			30.69	40.43	50.20	60.94
TOTAL FIXED COSTS						285.55	324.29	367.06	420.80
TOTAL COSTS									
			-Per Acre			513.18	574.07	636.24	695.12
			-Per Ton			41.05	34.79	31.04	27.80
RETURN ABOVE VARIABLE COSTS						386.24	558.73	734.77	944.51
RETURN ABOVE TOTAL COSTS						100.69	234.44	367.72	523.71
RETURN TO LABOR AND MANAGEMENT¹⁸						205.63	349.12	492.16	658.90
RETURN TO LAND						195.69	358.44	524.72	723.71

Values highlighted in gold may be changed to assist in computing "Your Budget" Column using macros embedded within the spreadsheet.

Values highlighted in light blue are cells embedded with macros and will be calculated for the user based on data entered. These cells may be input manually, but macros will be overwritten!

Values highlighted in gray are stand alone cells that require direct input from the user.

¹ Yield is based on survey "Ohio Cropland Values and Cash Rents 2006-07" (with trend yield increases added) located at: <http://ohioline.osu.edu/ae-fact/pdf/cropland.pdf>

Price is based on 7.5 x the price of corn (grain) + \$5 handling charge =
7.5 x 5.7/bu + \$5 = \$47.75/ton

² LDP is calculated as loan rate minus market price. LDP is 0 if market price is greater than loan rate.

² Direct Payments (DP) are calculated by averaging the corn and soybean direct payment per acre.

Program yields displayed for both: First Line - corn; Second Line - soybeans.

Direct payments are calculated by multiplying DP Yields by 85% by the DP Price of \$0.44/bu. (soybeans) and \$0.28/bu. (corn).

(Direct payments are paid only on 85% of base acres.) Direct payment yields are calculated as 85%, 80%, and 80% of the Program Yields 113/bushels per acre (bpa), 146/bpa, and 177/bpa, respectively.

² Counter Cyclical Payments (CCP) are calculated and included when market price + DP is less than the Target Price of \$2.63/bu. Calculation of the CCP is based on Counter Cyclical (CC) Yield multiplied by 85% multiplied by the CCP Rate ((Target Price - (Mkt Price + DP)). CC Yield assumed to be 93.5% of Program Yield (113, 146 and 177 bpa).

³ Seed price based on traited seed corn at \$164/bag (\$205/bag retail minus 20% in discounts). 80,000 kernals/bag. Includes seed treatment at low level.

⁴ Assumes only maintenance application of fertilizer needed, corn-soybean rotation, 3.8 O.M., 20 CEC, and soil test values of 25 ppm P/A and 150 ppm K/A. Prices were quoted in Fall 2007. Fertilizer prices vary over time and by area. Check with local sources for current prices. N cost includes N-serve. Assumes NH3(82-0-0): 800 /ton MAP(11-52-0): 900 /ton Potash(0-0-60): 581 /ton N cost includes cost of N-Serve.

⁵ Based on use of Bicep II Magnum (Pre) plus dicamba (post). Consult the "2007 Weed Control Guide for Ohio and Indiana"

⁶ Drying costs are based on 2.5% moisture removed (0.02 gal of LP per % point of moisture removed). An additional \$0.01 is added per bushel for electricity

⁷ Trucking set at 0.09/bushel based on "12 miles or less" field to market.

⁸ See table below for specific calculations. Lubrications costs are assumed to be 10% of fuel costs

⁹ See table below for specific calculations.

¹⁰ Crop Insurance cost is based on CRC Insurance at 70% coverage level and 100% Price Protection Level. 2007 Cost Estimates.

¹¹ Includes supplies, utilities, soil tests, small tools, software/hardware, transport of supplies and equipment, etc...

¹² Interest on all variable costs, except drying and trucking, for 7 months at 8.5% interest rate.

¹³ 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.

¹⁴ Labor rate includes cash wages plus benefits.

Reflects 1500 acres, conservation tillage corn/no-till RR soybean rotation. See table below for specific calculations.

¹⁵ Reflects 1500 acres, conservation tillage corn/no-till RR soybean rotation. See table below for specific calculations.

¹⁶ Average based on 2007-2008 data.

<http://aede.osu.edu/resources/docs/pdf/UDSIO6SG-9315-IQAW-X7QLG33KLHMNAZZ6.pdf>

Land Charges vary throughout the state, check your local rates

¹⁷ Management Charge is calculated as 5% of Total Receipts.

¹⁸ Return to labor and management is the revenue less total expenses except operator labor and management. It is a measure of the returns to the operator's labor and management.

Machinery Inventory									
	Number times used	Machinery Cost	Acres per Year	Cost per Acre	Acres/ Hr	Fuel* (gal/A)	Hours/ Year	Repairs (\$/A)	
15 ft. Chisel Plow	1	\$15,800	750	\$2.86	8.5	0.60	88.24	0.57	
23 ft. Field Cultivator	1	\$29,400	750	\$5.33	16.6	0.32	45.21	0.57	
50 ft. Boom Sprayer	2	\$18,900	1,500	\$1.71	25.6	0.20	117.14	0.72	
8 Row Planter	1	\$28,400	750	\$4.79	9.3	0.34	80.39	0.99	
SP Forage Harvester	1	\$203,000	750	\$38.02	-----	-----	221.24	4.54	
Corn Head	1	\$17,900	750	\$3.24	3.4	1.49	221.24	0.40	
Semi-Trailer	1	\$49,000	750	\$8.88	-----	-----	-----	1.75	
Anhydrous Applic. 21'	1	\$9,920	750	\$1.80	11.2	0.66	66.96	0.21	
Fertilizer Spreader	1	\$11,550	1,500	\$2.09	25.6	0.12	58.59	0.24	
200 HP Tractor	5	\$142,000	1,500	\$12.69	-----	-----	339.39	2.14	
75 HP Tractor	2	\$32,000	1,500	\$2.76	-----	-----	117.14	0.18	
Pickup Truck (1/2)**	1	\$16,000	1,500	\$1.45	-----	0.21	-----	0.05	
Machinery and Equipment Charge per Acre						Fuel	13.94	Repairs	12.36
						F&L	15.33		

Price of Diesel Fuel = \$3.50

Machinery cost estimates, fuel estimates and cost calculations based on information from the "Farm Machinery Cost Estimates March 2008". See the reference online at:

<http://www.extension.umn.edu/distribution/businessmanagement/DF6696.pdf>

Machinery and Equipment charge =

Cost per Acre = Machinery Cost (New Cost) Assumes 8 Year Useful Life using Straight Line Depreciation, 6.0% Interest on Average Value, 0.5% Insurance Cost on Average Value and 1.0% Housing Cost on Average Value. Salvage Values are based on ASAE formulas.

Machines are all assumed to be new and in the first year of use (Except for Semi Tractor Trailer and Pickup Truck).

*Fuel calculations are based on the implement plus tractor.

**Semi Tractor Trailer and Pickup Truck are assumed to be used equipment.

***Fuel for Semi is included in Budget as Trucking - Fuel Only