

INVESTMENT COSTS FOR CORN SILAGE

GROWING AND HARVESTING

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November 1971

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The information shown is for 50 to 400 acres in increments of 50 acres. To handle 400 acres, ideal weather conditions would be necessary.

For a farmer who wants to raise less than 50 acres of corn silage, and does not have use for a 100 horsepower tractor elsewhere on the ranch, then some lower priced single row equipment could be used as well as a two row planter.

The costs of using single row equipment with less horsepower can be very costly because of the slowing down in harvest.

One suggestion would be owning a two row chopper and renting a 100 horsepower tractor to operate the machine. This would cut down on investment.

There is a cost breakdown sheet for every piece of equipment used in the operation.

A tracklayer with a dozer blade was not included in this study. A tracklayer could be rented from a neighbor or a commercial operator for pushing up the silage and packing.

A large rubber tired loader can also be used, and does an excellent job of packing.

Labor costs at \$3 per hour for skilled help, and \$2 per hour for seasonal labor was used.

Feeding equipment was not included in the summary on page 9.

35 Hp Wheel Diesel Tractor

Cost of 35 Hp WD Tractor (New)		\$4,500.00	
Life - 10 years			
Annual Overhead Costs			
Depreciation ¹		\$ 405.00	
Interest ²		173.25	
Other ³		90.00	
TOTAL		\$ 668.25	
Cash Operating Costs			
	Per hour	Total Per hour	
Fuel - 1.9 gal Diesel @ \$.18	\$.35	\$.35	
Repairs ⁴	.65	.65	
TOTAL		\$1.00	
Total Cost Per Hour at Varying Outputs			
	Cost Per Hour		
Hours	Overhead	Cash	Total
100	\$6.68	\$1.00	\$7.68
200	3.34	1.00	4.34
300	2.23	1.00	3.23
400	1.67	1.00	2.67
500	1.34	1.00	2.34
600	1.11 ⁵	1.00	2.11
700	.95	1.00	1.95
800	.84	1.00	1.84
900	.74	1.00	1.74
1000	.67	1.00	1.67

¹ \$4,500 less 10% salvage ÷ 10 years

² \$4,500 plus 10% salvage ÷ 2 = average x 7%

³ \$4,500 x 2% to cover taxes, insurance, and housing

⁴ Machinery Costs and Performance AXT-336, 1970

⁵ \$668.25 ÷ 600 hours yearly use.

COST OF PLANTING CORN

Cost of corn planter 4 row with fertilizer attachments	\$1,500.00
Furrowing out attachments 5 x \$30 each	150.00
Life - 10 years (probably last longer)	
TOTAL	\$1,650.00

Annual Overhead Costs	
Depreciation ¹	\$148.50
Interest ²	63.53
Other ³	33.00
TOTAL	\$245.03

Cash Operating Costs			
	Per hour	Acres Per hour	Per acre
Labor	\$3.00	1.9	\$ 1.58
Tractor ⁴ - 600 hours	1.00	1.9	.53
Repairs ⁵	1.00	1.9	.53
Seed - \$32 for 80,000 seeds			12.04
Miscellaneous ⁶			.52
TOTAL			\$15.20

Total Cost Per Acre at Varying Outputs			
	Cost per acre		
Acres	Overhead	Cash	Total
50	\$4.90	\$15.20	\$20.10
100	2.45 ⁷	15.20	17.65
150	1.63	15.20	16.83
200	1.23	15.20	16.43
250	.98	15.20	16.18
300	.82	15.20	16.02
350	.70	15.20	15.90
400	.61	15.20	15.81

¹\$1,650 less 10% salvage ÷ 10 years

²\$1,650 plus 10% salvage ÷ 2 = average x 7%

³\$1,650 x 2% to cover taxes, insurance, and housing

⁴Tractor cost based on 600 hours annual use

⁵From Machinery Costs and Performance, AXT-336, 1970

⁶Total of cash operating costs x 6% (Telephone, etc.)

⁷\$245.03 ÷ 100 acres yearly use

COST OF SPRAYING CORN FOR WEED CONTROL

Cost of side mounted sprayer 200 gal (spray at planting) Life - 10 years	\$ 750.00
TOTAL	\$ 750.00

Annual Overhead Costs

Depreciation ¹	\$ 75.00
Interest ²	26.25
Other ³	15.00
TOTAL	\$ 116.25

Cash Operating Cost

	Per Hour	Acres Per Hour	Per Acre
Labor	\$3.00	1.9	\$1.58
Tractor	1.00	1.9	.53
Repairs ⁴	1.00	1.9	.53
Atrazine - 2 lbs @ \$2.73			5.46
Miscellaneous			.49
TOTAL			\$8.59

Total Cost Per Acre at Varying Outputs

	Cost Per Acre		
	Overhead	Cash	Total
50	\$2.33	\$8.59	\$10.92
100	1.16 ⁵	8.59	9.75
150	.78	8.59	9.37
200	.58	8.59	9.17
250	.47	8.59	9.06
300	.39	8.59	8.98
350	.33	8.59	8.92
400	.29	8.59	8.88

¹ \$750 ÷ 10 years

² \$750 ÷ 2 = average x 7%

³ \$750 x 2% to cover taxes, insurance, and housing

⁴ Farm Machinery Costs and Performance AXT-336, 1970

⁵ \$116.25 ÷ 100 acres annual use

100 hp Wheel Diesel Tractor

Cost of 100 hp Wheel Diesel Tractor	\$9,000.00		
Life - 10 years			
Annual Overhead Costs			
Depreciation ¹	\$ 810.00		
Interest ²	346.50		
Other ³	180.00		
TOTAL	\$1,336.50		
Cash Operating Costs			
	Per Hour	Per Hour	
Fuel - 4.2 gal Diesel @\$.18 ⁴	\$.75	\$.75	
Repairs	1.30	1.30	
TOTAL		\$2.05	
Total Cost Per Hour at Varying Outputs			
Hours	Cost per Hour		
	Overhead	Cash	Total
500 ⁵	\$2.67	\$2.05	\$4.72
600	2.23	2.05	4.28
700	1.91	2.05	3.96
800	1.67	2.05	3.72
900	1.49	2.05	3.54
1000	1.34	2.05	3.39
1100	1.22	2.05	3.27
1200	1.11	2.05	3.16

¹\$9000 less 10% salvage ÷ 10 years

²\$9000 plus 10% salvage ÷ 2 = average x 7%

³\$9000 x 2% to cover taxes, insurance, and housing

⁴Machinery Costs and Performance AXT-336, 1970

⁵\$1336.50 ÷ 500 hours

COST OF CHOPPING CORN

Cost of pull type 2 row chopper with cornhead Life - 7 years		\$4,200.00	
Annual Overhead Cost			
Depreciation ¹		\$	540.00
Interest ²			161.70
Other ³			84.00
TOTAL		\$	785.70
Cash Operating Costs			
	Per Hour	Acres Per Hour	Per Acre
Labor - Skilled	\$3.00	.66	\$1.98
Tractor - 100 hp	2.05	.66	1.35
Repairs ⁴	1.20	.66	.79
Miscellaneous			.25
TOTAL			\$4.37
Total Cost Per Acre at Varying Outputs			
	Cost Per Acre		
	Overhead	Cash	Total
50	\$15.71	\$4.37	\$20.08
100	7.86 ⁵	4.37	12.23
150	5.24	4.37	9.61
200	3.93	4.37	8.30
250	3.14	4.37	7.51
300	2.62	4.37	6.99
350	2.24	4.37	6.61
400	1.96	4.37	6.33

¹\$4,200 less 10% salvage ÷ 7 years

²\$4,200 plus 10% salvage ÷ 2 = average x 7%

³\$4,200 x 2% to cover taxes, insurance, and housing

⁴From Machinery Costs and Performance AXT-336, 1970

⁵\$785.70 ÷ 100 acre use

COST OF HAULING CORN SILAGE

Cost of two used 14' flat bed trucks with hoist Life - 10 years	\$4,000.00
Annual Overhead Costs	
Depreciation ¹	\$ 360.00
Interest ²	154.00
Other ³	80.00
TOTAL	\$ 594.00

Cash Operating Costs			
	Per Hour	Acres Per Hour	Per Acre
Labor - 2 men at \$2	\$4.00	.66	\$2.64
Fuel - Gas 2 gal @ \$.22/gal		.66	.29
Repairs - 2 mile haul @ \$.05/mile			.30
Miscellaneous			.19
TOTAL			\$3.42

Total Cost Per Acre at Varying Outputs			
	Cost Per Acre		
Acres	Overhead	Cash	Total
50	\$11.88	\$3.42	\$15.30
100	5.94 ⁴	3.42	9.36
150	3.96	3.42	7.38
200	2.97	3.42	6.39
250	2.38	3.42	5.80
300	1.98	3.42	5.40
350	1.70	3.42	5.12
400	1.49	3.42	4.91

¹\$4,000 less 10% salvage ÷ 10 years

²\$4,000 plus 10% salvage ÷ 2 = average x 7%

³\$4,000 x 2 to cover taxes, insurance, and housing

⁴\$594 ÷ 100 acres

COST OF FEEDING EQUIPMENT

1 Feed wagon with heavy duty running gear	\$3,400.00
1 Front end loader to fit 35 hp tractor	1,600.00
Life - 10 years	
Annual Overhead Costs	
Depreciation ¹	\$ 450.00
Interest ²	192.50
Other ³	100.00
TOTAL	\$ 742.50

Cash Operating Costs			
	Per Hour	Tons Per Hour	Per Ton
Labor	\$3.00	9	\$.33
Tractor - Based on 600 hours use yearly	1.00	9	.11
Repairs ⁴			.03
Miscellaneous			
TOTAL			\$.47

Total Cost Per Ton at Varying Outputs			
	Cost Per Ton		
Tons	Overhead	Cash	Total
1,500	\$.50	\$.47	\$.97
3,000	.25 ⁵	.47	.72
4,500	.17	.47	.64
6,000	.12	.47	.59
7,500	.10	.47	.57
9,000	.08	.47	.55
10,500	.07	.47	.54
12,000	.06	.47	.53

¹\$5,000 less 10% salvage ÷ 10 years

²\$5,000 plus 10% salvage ÷ 2 = average x 7%

³\$5,000 x 2% to cover cost of taxes, insurance, and housing

⁴\$100 per year ÷ 3,000 tons

⁵\$742.50 ÷ 3,000 tons of use

SUMMARY PER ACRE
100 Acres - 30 Tons Per Acre

Machinery Cost Per Acre

Operation	Overhead	Cash	Total
Planting Corn - 4 rows	\$ 2.45	\$ 9.18	\$11.63
Spray corn at time of planting	1.16	8.59	9.75
Cost of chopping corn - 2 rows	7.86	4.37	12.23
Cost of hauling corn silage to pit	5.94	3.42	9.36
TOTAL	\$17.41	\$25.56	\$42.97

Machinery cost per ton of silage at 30 tons per acre \$ 1.43

Equipment Investment

100 hp Diesel Tractor	\$ 9,000.00
35 hp Diesel Tractor	4,500.00
4 row corn planter with furrowing out tools	1,650.00
Saddle tank 200 gallon sprayer to spray for weeds	750.00
2 row pull type chopper with corn head	4,300.00
2 used 14' flatbed trucks with hoist	4,000.00
1 feed wagon with heavy duty running gear	3,400.00
1 front end loader to fit 35 hp tractor high lift	<u>1,600.00</u>
Total	\$29,100.00

Investment per ton for 100 acres of 30 tons per acre of corn \$ 9.70

Investment per acre for 50 acres	\$ 582.00
Investment per acre for 100 acres	291.00
Investment per acre for 150 acres	194.00
Investment per acre for 200 acres	145.50
Investment per acre for 250 acres	116.40