

1997 - Crop Inputs and Rotation Summaries - Dakota Lakes East Farm

Crop: W.Wheat Yield: 64.5 bu/ac Previous Crop: Field pea, Canola, Flax

Rotation: W.Wheat - Warm Season Grass - Broadleaf

Workload capability for this rotation is 1,800 acres.*

I. Detailed Operations Cost

Date	Machinery Or Input	Units Applied	Owner-ship	Oper-ating	Labor	Total Costs	Cost/Acre	Cost per Unit
07/19/96	Tractor 085 hp 3yr-3600 a	0.0 Hrs(1.0 Times)	0.48	0.23	0.61	1.33	1.33	0.021
	Sprayer PT 37.5' 3yr-3600		0.71	0.22	0.04	0.98	0.98	0.015
	Roundup Ultra RT	1.5 Pints				7.50	7.50	0.116
TOTAL Operation Cost						9.81	9.81	0.152
09/25/96	Tractor 110 hp DL 1800 ac	0.2 Hrs(1.0 Times)	2.92	1.16	2.06	6.14	6.14	0.095
	No-Till Drill,12.5'-600 A		6.71	0.40	0.15	7.26	7.26	0.113
	Wheat Seed-Karl 92	120.0 Pounds				14.40	14.40	0.223
	18-46-0 (DAP)	70.0 Pounds				8.40	8.40	0.130
	Vitavax-Thiram-Linda	3.0 Ounces				1.11	1.11	0.017
TOTAL Operation Cost						37.31	37.31	0.578
05/09/97	Tractor 085 hp 3yr-3600 a	0.0 Hrs(1.0 Times)	0.48	0.23	0.61	1.33	1.33	0.021
	Sprayer PT 37.5' 3yr-3600		0.71	0.22	0.04	0.98	0.98	0.015
	Bronate 2+2E	1.0 Pints				5.75	5.75	0.089
TOTAL Operation Cost						8.06	8.06	0.125
05/12/97	Tractor 085 hp 3yr-3600 a	0.0 Hrs(1.0 Times)	0.27	0.13	0.35	0.76	0.76	0.012
	Fertilizer Sprd. 37.5'-18		0.20	0.07	0.02	0.30	0.30	0.005
	46-0-0	180.0 Pounds				19.44	19.44	0.301
TOTAL Operation Cost						20.49	20.49	0.318
07/17/97	Combine 4420 3yr-1800 acr	0.2 Hrs(1.0 Times)	2.15	1.38	2.89	6.42	6.42	0.100
	Combine Head-Stripper 14'		2.05	0.24	0.19	2.48	2.48	0.038
TOTAL Operation Cost						8.90	8.90	0.138
07/18/97	Custom(add rate from I-O	0.0 Hrs(1.0 Times)	0.00	0.00	0.01	0.01	0.01	0.000
	Amort cost/1800 acre	1.0 Acres				6.86	6.86	0.106
TOTAL Operation Cost						6.87	6.87	0.107
TOTAL Machinery Cost						27.98	27.98	0.434
TOTAL Input Cost						63.46	63.46	0.984
TOTAL Budget Cost						91.44	91.44	1.418

Income or Expense Item	SubTotal	Total	Amount Per Acre	Amount Per Unit
1. Gross Revenues				
1.1 Wheat - Karl 92	193.50			
1.2 Total Crop Revenue		193.50	193.50	3.000
2. Machinery Cost				
2.1 Ownership Cost	16.70		16.70	0.259
2.2 Operating Cost	2.52		2.52	0.039
2.3 Total Machinery Cost		19.23	19.23	0.298
3. Materials Cost				
3.1 Materials	63.46		63.46	0.984
3.2 Fuel Cost	1.77		1.77	0.027
3.3 Labor Wages	6.98		6.98	0.108
3.4 Total Materials Cost		72.21	72.21	1.119
4. Capital Costs		7.37	7.37	0.114
5. Drying Costs		0.00	0.00	0.000
6. Land Charges		30.00	30.00	0.465
7. Management Fees		0.00	0.00	0.000
Gross Revenues		193.50	193.50	3.00
Total Costs		128.81	128.81	2.00
Net Profit or Loss		64.69	64.69	1.00

*Workload capability is based on a 12.5' drill or planter and seeding 6 acres/hour.
 6 acres/hour X 10 hours/day X 10 days/crop = 600 acres per crop type.

1997 - Crop Inputs and Rotation Summaries - Dakota Lakes East Farm

Crop: Corn

Yield: 127 bu/ac

Previous Crop: W.Wheat

Rotation: W.Wheat - Warm Season Grass - Broadleaf

Workload capability for this rotation is 1,800 acres.*

I. Detailed Operations Cost

Date	Machinery Or Input	Units Applied	Owner-ship	Oper-ating	Labor	Total Costs	Cost/Acre	Cost per Unit
10/05/96	Tractor 085 hp 3yr-3600 a	0.0 Hrs(1.0 Times)	0.48	0.23	0.61	1.33	1.33	0.010
	Sprayer PT 37.5' 3yr-3600		0.71	0.22	0.04	0.98	0.98	0.008
	Roundup Ultra RT	1.0 Pints				5.00	5.00	0.039
	2,4-D 5.7E	0.4 Pints				0.87	0.87	0.007
	Atrazine 90DF	1.0 Pounds				2.75	2.75	0.022
	TOTAL Operation Cost					10.93	10.93	0.086
05/15/97	Tractor 085 hp 3yr-3600 a	0.0 Hrs(1.0 Times)	0.48	0.23	0.61	1.33	1.33	0.010
	Sprayer PT 37.5' 3yr-3600		0.71	0.22	0.04	0.98	0.98	0.008
	Roundup Ultra RT	1.3 Pints				6.25	6.25	0.049
	TOTAL Operation Cost					8.56	8.56	0.067
05/22/97	Tractor 110 hp DL 1800 ac	0.2 Hrs(1.0 Times)	2.97	1.18	2.09	6.23	6.23	0.049
	Planter NT 10-15 DL 1200		4.38	0.58	0.15	5.11	5.11	0.040
	Corn Seed, Pio 3751	25.0 Thousands				27.75	27.75	0.219
	10-50-0	100.0 Pounds				12.00	12.00	0.094
	TOTAL Operation Cost					51.09	51.09	0.402
05/30/97	Tractor 085 hp 3yr-3600 a	0.0 Hrs(1.0 Times)	0.27	0.13	0.35	0.76	0.76	0.006
	Fertilizer Sprd. 37.5'-18		0.20	0.07	0.02	0.30	0.30	0.002
	46-0-0	180.0 Pounds				19.44	19.44	0.153
	TOTAL Operation Cost					20.49	20.49	0.161
06/28/97	Tractor 085 hp 3yr-3600 a	0.0 Hrs(1.0 Times)	0.48	0.23	0.61	1.33	1.33	0.010
	Sprayer PT 37.5' 3yr-3600		0.71	0.22	0.04	0.98	0.98	0.008
	Accent 75DF	0.5 Ounces				13.50	13.50	0.106
	Crop Oil Concentrate	0.2 Gallons				0.64	0.64	0.005
	28-0-0	0.5 Gallons				0.38	0.38	0.003
	TOTAL Operation Cost					16.82	16.82	0.132
07/12/97	Custom(add rate from I-O	0.0 Hrs(1.0 Times)	0.00	0.00	0.01	0.01	0.01	0.000
	Custom Asana 5.8oz/A	1.0 Acres				9.44	9.44	0.074
	TOTAL Operation Cost					9.45	9.45	0.074
09/08/97	Custom(add rate from I-O	0.0 Hrs(1.0 Times)	0.00	0.00	0.01	0.01	0.01	0.000
	Amort cost/1800 acre	1.0 Acres				6.86	6.86	0.054
	TOTAL Operation Cost					6.87	6.87	0.054
10/10/97	Combine 4420 3yr-1800 acr	0.3 Hrs(1.0 Times)	3.23	2.06	4.34	9.63	9.63	0.076
	Combine Hd Corn 10-15"-1		5.58	0.58	0.28	6.45	6.45	0.051
	TOTAL Operation Cost					16.08	16.08	0.127
	TOTAL Machinery Cost					35.42	35.42	0.279
	TOTAL Input Cost					104.87	104.87	0.826
	TOTAL Budget Cost					140.29	140.29	1.105

IX. Net Returns Calculations

Income or Expense Item	SubTotal	Total	Amount Per Acre	Amount Per Unit
1. Gross Revenues				
1.1 Corn Grain	254.00			
1.2 Total Crop Revenue		254.00	254.00	2.000
2. Machinery Cost				
2.1 Ownership Cost	20.23		20.23	0.159
2.2 Operating Cost	3.69		3.69	0.029
2.3 Total Machinery Cost		23.91	23.91	0.188
3. Materials Cost				
3.1 Materials	104.87		104.87	0.826
3.2 Fuel Cost	2.29		2.29	0.018
3.3 Labor Wages	9.22		9.22	0.073
3.4 Total Materials Cost		116.37	116.37	0.916
4. Capital Costs		7.35	7.35	0.058
5. Drying Costs		0.00	0.00	0.000
6. Land Charges		30.00	30.00	0.236
7. Management Fees		0.00	0.00	0.000
Gross Revenues		254.00	254.00	2.00
Total Costs		177.63	177.63	1.40
Net Profit or Loss		76.37	76.37	0.60

*Workload capability is based on a 12.5' drill or planter and seeding 6 acres/hour.
 6 acres/hour X 10 hours/day X 10 days/crop = 600 acres per crop type.

1997 - Crop Inputs and Rotation Summaries - Dakota Lakes East Farm

Crop: Chickpea Yield: 1650 lbs/ac Previous Crop: Corn

Rotation: W.Wheat - Warm Season Grass - Broadleaf

Workload capability for this rotation is 1,800 acres.*

I. Detailed Operations Cost

Date	Machinery Or Input	Units Applied	Owner-ship	Oper-ating	Labor	Total Costs	Cost/ Acre	Cost per Unit
05/08/97	Tractor 110 hp DL 1800 ac	0.2 Hrs(1.0 Times)	2.97	1.18	2.09	6.23	6.23	0.004
	Planter NT 10-15 DL 1200		4.38	0.58	0.15	5.11	5.11	0.003
	Garbanzo Seed-Sanfor	145.0 Pounds				87.00	87.00	0.053
	Inoculant, Chickpeas	2.4 Bushels				2.40	2.40	0.001
	11-52-0	50.0 Pounds				7.50	7.50	0.005
	46-0-0	65.0 Pounds				7.02	7.02	0.004
TOTAL Operation Cost						115.26	115.26	0.070
05/09/97	Tractor 085 hp 3yr-3600 a	0.0 Hrs(1.0 Times)	0.48	0.23	0.61	1.33	1.33	0.001
	Sprayer PT 37.5' 3yr-3600		0.71	0.22	0.04	0.98	0.98	0.001
	Roundup Ultra RT	1.3 Pints				6.25	6.25	0.004
TOTAL Operation Cost						8.56	8.56	0.005
05/15/97	Tractor 085 hp 3yr-3600 a	0.0 Hrs(1.0 Times)	0.48	0.23	0.61	1.33	1.33	0.001
	Sprayer PT 37.5' 3yr-3600		0.71	0.22	0.04	0.98	0.98	0.001
	Sencor 75DF	0.3 Pounds				6.31	6.31	0.004
	Pursuit 70DG	0.8 Ounces				11.98	11.98	0.007
TOTAL Operation Cost						20.60	20.60	0.012
09/08/97	Custom(add rate from I-0	0.0 Hrs(1.0 Times)	0.00	0.00	0.01	0.01	0.01	0.000
	Amort cost/1800 acre	1.0 Acres				6.86	6.86	0.004
TOTAL Operation Cost						6.87	6.87	0.004
09/19/97	Combine 4420 3yr-1800 acr	0.4 Hrs(1.0 Times)	3.88	2.48	5.20	11.56	11.56	0.007
	Combine Head-Stripper 14'		3.69	0.42	0.34	4.46	4.46	0.003
TOTAL Operation Cost						16.01	16.01	0.010
TOTAL Machinery Cost						31.98	31.98	0.019
TOTAL Input Cost						135.32	135.32	0.082
TOTAL Budget Cost						167.30	167.30	0.101

Income or Expense Item	SubTotal	Total	Amount Per Acre	Amount Per Unit
1. Gross Revenues				
1.1 Chickpeas-Kabuli	198.00			
1.2 Total Crop Revenue		198.00	198.00	0.120
2. Machinery Cost				
2.1 Ownership Cost	17.31		17.31	0.010
2.2 Operating Cost	3.31		3.31	0.002
2.3 Total Machinery Cost		20.62	20.62	0.012
3. Materials Cost				
3.1 Materials	135.32		135.32	0.082
3.2 Fuel Cost	2.26		2.26	0.001
3.3 Labor Wages	9.10		9.10	0.006
3.4 Total Materials Cost		146.68	146.68	0.089
4. Capital Costs		9.40	9.40	0.006
5. Drying Costs		0.00	0.00	0.000
6. Land Charges		30.00	30.00	0.018
7. Management Fees		0.00	0.00	0.000
Gross Revenues		198.00	198.00	0.12
Total Costs		206.70	206.70	0.13
Net Profit or Loss		-8.70	-8.70	-0.01

*Workload capability is based on a 12.5' drill or planter and seeding 6 acres/hour.
6 acres/hour X 10 hours/day X 10 days/crop = 600 acres per crop type.

1997 Production Costs were calculated using “Cost And Return Estimator (CARE)”. CARE calculates ownership, operating, labor, and fuel costs for each field operation. CARE also calculates capital costs (interest on materials), drying costs, and land charges.

1997 costs include:

<u>ITEM</u>	<u>AMOUNT/ACRE</u>
Land Charges	\$30.00
Insecticide Treatment on Corn & Sunflower Acres	\$ 9.45
Amortized Costs ⁵	
Three Year Rotation – 1,800 Acres	\$ 6.87
Four Year Rotation – 2,400 Acres	\$ 5.15

⁵ Amortization Cost For Dakota Lakes Research Farm

Items amortized include:

<u>Item</u>	<u>Value</u>
Semi-tractor	\$ 7,000
Grain trailer	\$15,300
Bins w/dryers	\$20,000
Grain Cart	<u>\$ 7,700</u>
TOTAL	\$50,000

Overhead costs include semi-tractor, grain trailer, grain cart, grain bins and Operation and Maintenance (O&M) cost of this equipment. Semi-tractor, trailer, and grain cart costs are amortized over 10 years and 10% interest. The cost of the grain bins and drying facilities are amortized over 20 years and 10% interest. The yearly amortized cost is then divided by the potential number of acres that could be farmed in a given rotation.

Semi-tractor, grain trailer, grain cart = \$30,000 O&M = \$3,000.
 Amortization Factor for 10 years @ 10% interest is .163.
 Yearly amount = \$7,890

Grain bins and drying facilities = \$20,000 O&M = \$2,141.
 Amortization Factor for 20 years @ 10% interest is .117.
 Yearly amount = \$4,481

Total Annual Amortized Cost for the above equipment = \$12,371

Prices used for income (1993-1997) calculations are as follows:

<u>Crop</u>	<u>\$/Unit</u>
Corn	2.00 per bushel
Winter Wheat	3.00 per bushel
Spring Wheat	3.20 per bushel
Flax	4.20 per bushel
Soybeans	5.00 per bushel
Field Peas	4.50 per bushel
Sunflower	9.00 per CWT
Popcorn	0.12 per pound
Chickpea	0.12 per pound
Lentils	0.14 per pound

Government Farm Program Benefits Were NOT Included As Income.