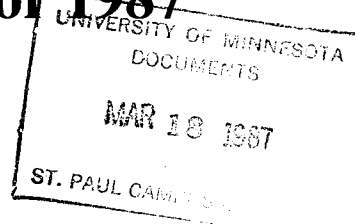


Minnesota Farm Machinery Economic Cost Estimates for 1987

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The data which follows is designed to aid in estimating farm machinery use or function costs for 1987. The estimates are determined by formula and represent an average farming industry cost for a specific machine or machine operation.

There are two types of costs associated with owning and operating a machine: Overhead costs are incurred whether or not the machine is used, provided it is owned. Overhead costs include depreciation, interest, insurance, housing, and taxes. Operating costs, which occur only when the machine is used, include fuel, lubrication, repairs, and labor.

Overhead Costs: Each machine is costed over 10 years. Salvage value at 10 years of life now ranges from 16 to 30 percent according to the 1984 Agricultural Engineer's Yearbook. Repair and maintenance calculations are based on the same source. Major purchases of new machinery are rare in 1987. Used equipment is more indicative of costs in many ways. Managers, striving for cost control, are sometimes buying a second item twinned to one now in current use.

Purchase cost, as shown here, is based on the list prices quoted by major machinery companies. According to a survey of Minnesota extension agents, new farm machinery can be purchased with a 15 to 22 percent discount off list price—with larger items having the larger discount. The tables are, therefore, based on a purchase price after these discounts. Interest and insurance rates are assumed to be 12.5 percent and .75 percent of new cost, respectively. Housing cost is assumed to be 75 cents per square foot of shelter space needed per year. There are no personal property taxes on farm machinery in Minnesota.

Formulas used to compute machinery overhead costs:

- Depreciation per year = $\frac{\text{purchase cost} - \text{salvage value}}{\text{years you will use machine}}$
- Interest per year = $\frac{\text{purchase cost} + \text{salvage value}}{2} \times \text{interest rate}$
- Insurance per year = $\frac{\text{purchase cost} + \text{salvage value}}{2} \times \text{rate}$
- Housing per year = price per square foot \times square feet shelter space required
- Taxes per year = 0 (no taxes on personal property in Minnesota)

Operating Costs: Fuel cost is calculated by multiplying the fuel consumption by the price of fuel, with fuel consumption assumed to be .06 gallons of diesel fuel per horsepower hour. The price of fuel is assumed to be 70 cents per gallon for diesel. All power units, tractors, combines, trucks, etc., are assumed to be diesel powered. An estimate of gasoline consumption can be made by multiplying the diesel fuel consumption by a factor of 1.36. Lubrication cost is assumed to be 10 percent of fuel cost.

The formulas for estimating the repair and maintenance costs estimate total accumulated repair costs according to the accumulated hours of use; the total costs are then broken down to a per hour cost estimate. The amount of annual use of a machine is an estimate of the number of hours a commercial farmer would use that particular machine in one year.

Labor is charged at an hourly wage rate, which includes 30 percent of benefits, of \$4.25 per hour for unskilled labor and \$7.00 per hour for skilled labor. Labor per acre for an operation such as plowing and disking is calculated by using the work rate on the implement instead of the tractor. Therefore, plows, and disks using the same tractor have different per acre labor requirements. Less labor per acre is used in a disking operation that covers more acres per hour than in a plowing operation.

Minimum tillage planters have been included, reflecting the current interest in minimum or reduced tillage practices in Minnesota.

Machine function or average cost per acre worked dropped from 1986 estimates. The following table compares the machinery function costs per acre for four selected items from 1984 to 1987.

Machine function	1984	1985	1986	1987
plow 6 - 16	\$13.72	\$14.47	\$12.48	\$ 9.55
corn planter 6 - 30	10.57	10.23	9.12	8.90
combine small grain	19.66	20.56	18.51	15.66
combine corn 6 - 30	30.34	30.42	27.42	23.38

These estimates are not necessarily representative of any one individual's cost, but can help plan the cropping operation if other data are not available. Differences in buying power, repair programs, average annual use, and overall replacement programs should be considered. Machinery costs are substantial; control of them is important. Custom charges are often based upon them. No one should do custom work unless the charge will cover operating costs including labor. Ideally all allocated per acre or hour overhead costs should also be covered by anyone offering to do custom work. The market for custom work usually does not cover all costs. The market is usually somewhere in between the operating costs and the total of operating and allocated overhead.

The following tables provide the 1987 machinery function costs broken down into several categories. Some relevant supporting data also are included.

Fuller is an extension economist, farm management; Dornbush is a graduate assistant in the Department of Agricultural and Applied Economics. Special thanks to Jack True, agricultural engineer, for his assistance, and the machinery companies and extension agents that participated in this project.

TILLAGE EQUIPMENT

MACHINE	TRACTOR HP	PURCHASE COST	ESTIMATED ACRES/HR	ANNUAL ACRES USE	TOTAL COST/ACRE	TOTAL COST/HOUR	OPERATING COST/ACRE	PER ACRE COST			DIESEL FUEL GAL/ACRE
								TRACTOR	IMPLEMENT	LABOR	
MB PLOW 2-16	40	1403.	1.16	139.	10.97	12.73	4.34	5.16	2.07	3.73	2.07
MB PLOW 3-16	60	3185.	1.75	209.	10.51	18.34	3.39	4.91	3.11	2.48	2.06
MB PLOW 4-16	75	5746.	2.33	279.	10.60	24.66	3.09	4.55	4.19	1.86	1.93
MB PLOW 5-16	100	6718.	2.91	349.	10.43	30.30	2.64	5.00	3.93	1.49	2.06
MB PLOW 6-16	120	7555.	3.49	454.	9.55	33.34	2.39	4.74	3.56	1.24	2.06
MB PLOW 7-16	140	9043.	4.07	529.	9.45	38.48	2.24	4.73	3.65	1.06	2.06
MB PLOW 8-16	160	11586.	4.65	605.	9.57	44.53	2.25	4.56	4.07	.93	2.06
MB PLOW 9-18	225	13584.	5.89	884.	9.31	54.82	2.11	4.99	3.57	.74	2.29
MB PLOW 10-18	225	14969.	6.55	982.	8.70	56.96	2.02	4.49	3.54	.66	2.06
MB PLOW 12-18	275	16624.	7.85	1178.	8.74	68.64	1.81	4.90	3.28	.55	2.10
CHISEL PLOW 10 FT	75	1868.	4.36	436.	4.33	18.89	1.16	2.42	.91	.99	1.03
CHISEL PLOW 15 FT	120	2778.	6.55	655.	4.06	26.56	.82	2.53	.86	.66	1.10
CHISEL PLOW 17 FT	140	3173.	7.42	742.	4.06	30.08	.75	2.60	.87	.58	1.13
CHISEL PLOW 20 FT	160	6706.	8.73	873.	4.41	38.46	.79	2.43	1.47	.50	1.10
CHISEL PLOW WING 24	225	8595.	10.47	1047.	4.74	49.64	.73	2.81	1.51	.41	1.29
CHISEL PLOW WING 29	250	9860.	12.65	1265.	4.48	56.70	.64	2.70	1.43	.34	1.19
CHISEL PLOW WING 35	300	11093.	15.27	1527.	4.38	66.96	.56	2.77	1.33	.28	1.18
FIELD CULTIVATOR 12	75	1867.	6.06	727.	3.00	18.16	.81	1.74	.53	.72	.74
FIELD CULTIVATOR 18	100	3686.	8.73	1047.	2.85	24.89	.63	1.66	.69	.50	.69
FIELD CULTIVATOR 28	160	7244.	13.58	1629.	2.72	36.87	.49	1.56	.83	.32	.71
FIELD CULTIVATOR 37	225	8969.	17.94	2153.	2.42	43.37	.17	1.64	.77	.00	.75
FIELD CULTIVATOR 50	250	12832.	24.24	2909.	2.40	58.14	.35	1.41	.81	.18	.62
DISK CHISEL 9 FT	100	5233.	3.82	382.	7.19	27.44	1.38	3.80	2.24	1.14	1.57
DISK CHISEL 11 FT	120	5445.	4.91	638.	5.74	28.16	1.12	3.37	1.48	.88	1.47
DISK CHISEL 14 FT	140	6566.	6.00	1200.	5.05	30.28	1.04	3.21	1.11	.72	1.40
DISK 10 FT	60	4195.	4.85	485.	4.10	19.90	1.05	1.77	1.44	.89	.74
DISK 16 FT	75	5709.	7.76	776.	3.16	24.52	.69	1.36	1.23	.56	.58
DISK 17 FT	75	8051.	8.24	824.	3.41	28.10	.70	1.28	1.60	.53	.55
DISK 20 FT	100	8781.	9.70	970.	3.45	33.46	.61	1.50	1.50	.45	.62
DISK 21 FT	100	9010.	10.18	1018.	3.31	33.72	.59	1.43	1.46	.43	.59
DISK 24 FT	120	11574.	11.64	1164.	3.42	39.79	.55	1.42	1.62	.37	.62
DISK 28 FT	140	14090.	13.58	1358.	3.43	46.51	.51	1.42	1.68	.32	.62
DISK 32 FT	160	16077.	15.52	1552.	3.33	51.59	.47	1.37	1.67	.28	.62
DISK 40 FT	180	23347.	19.39	1939.	3.44	66.75	.44	1.28	1.93	.22	.56
DISK OFFSET 14 FT	140	8251.	6.11	611.	6.11	37.31	.95	3.15	2.24	.71	1.38
DISK OFFSET 16 FT	160	8990.	6.98	698.	5.80	40.52	.85	3.04	2.14	.62	1.38

MACHINE	TRACTOR HP	PURCHASE COST	ESTIMATED ACRES/HR	ANNUAL ACRES USE	TOTAL COST/ACRE	TOTAL COST/HOUR	OPERATING COST/ACRE	PER ACRE COST			DIESEL FUEL GAL/ACRE
								TRACTOR	IMPLEMENT	LABOR	
DISK OFFSET 18 FT	180	9669.	7.85	785.	5.77	45.31	.77	3.16	2.05	.55	1.38
DISK-WING OFFSET 21	225	10838.	9.16	916.	5.63	51.55	.69	3.21	1.94	.47	1.47
DISK-WING OFFSET 23	225	14386.	10.04	1004.	5.69	57.15	.69	2.93	2.33	.43	1.35
LANDPLANE 45-12 FT	180	6800.	6.40	480.	7.23	46.29	1.00	3.88	2.63	.72	1.69
LANDPLANE 55-14 FT	225	14586.	8.00	600.	8.58	68.62	1.06	3.68	4.32	.57	1.69
LANDPLANE 70-14 FT	225	15470.	7.47	560.	9.54	71.25	1.17	3.94	4.99	.61	1.81
SPRINGTOOTH DRAG 30	60	1912.	16.00	480.	1.44	23.01	.31	.54	.61	.29	.22
SPRINGTOOTH DRAG 48	75	2380.	27.93	977.	.96	26.87	.18	.38	.41	.16	.16

TRACTORS AND COMBINES (WITHOUT HEADS)

TRACTOR	HP	PURCHASE COST	ANNUAL HOURS USE	ANNUAL OVERHEAD \$	OVERHEAD COST/HR	OPERATING COST/HOUR	ANNUAL OPERATING COST	ANNUAL TOTAL COST	TOTAL COST/HOUR	REPAIR + MAINT. COST/HR	FUEL USE PER HOUR
40 HP		12458.	500.	1695.	3.39	2.60	1298.	2993.	5.99	.75	2.4
60 HP		17514.	500.	2375.	4.75	3.82	1911.	4286.	8.57	1.05	3.6
75 HP		21485.	500.	2909.	5.82	4.75	2377.	5286.	10.57	1.29	4.5
100 HP		31801.	550.	4291.	7.80	6.72	3695.	7987.	14.52	2.10	6.0
120 HP		35355.	550.	4767.	8.67	7.88	4333.	9100.	16.55	2.33	7.2
140 HP		41048.	550.	5551.	10.09	9.18	5047.	10599.	19.27	2.71	8.4
160 HP		46530.	600.	6284.	10.47	10.74	6445.	12729.	21.22	3.35	9.6
180 HP		55692.	600.	7508.	12.51	12.33	7395.	14904.	24.84	4.01	10.8
225 HP 4WD		59395.	500.	8020.	16.04	13.36	6682.	14702.	29.40	2.97	13.5
250 HP 4WD		70818.	500.	9546.	19.09	15.09	7545.	17091.	34.18	3.54	15.0
275 HP 4WD		80717.	500.	10869.	21.74	16.74	8370.	19239.	38.48	4.04	16.5
300 HP 4WD		88979.	500.	11973.	23.95	18.31	9154.	21127.	42.25	4.45	18.0
320 HP 4WD		95682.	500.	12869.	25.74	19.57	9784.	22653.	45.31	4.78	19.2
350 HP 4WD		100824.	500.	13556.	27.11	21.21	10606.	24161.	48.32	5.04	21.0
SML COMBINE		53939.	300.	7600.	25.33	26.29	7888.	15488.	51.63	21.67	6.0
MED COMBINE		62319.	300.	8798.	29.33	30.58	9175.	17973.	59.91	25.04	7.2
LRG COMBINE		71400.	300.	10994.	33.65	35.39	10616.	20711.	69.04	28.69	8.7
JMB COMBINE		82790.	300.	11704.	39.01	42.51	12752.	24456.	81.52	33.27	12.0

PLANTING EQUIPMENT

MACHINE	TRACTOR HP	PURCHASE COST	ESTIMATED ACRES/HR	ANNUAL ACRES USE	TOTAL COST/ACRE	TOTAL COST/HOUR	OPERATING COST/ACRE	PER ACRE COST			DIESEL FUEL GAL/ACRE
								TRACTOR	IMPLEMENT	LABOR	
CORN PLANTER 4-36	40	7938.	3.93	275.	8.54	33.55	2.80	1.52	4.95	2.07	.61
CORN PLANTER 6-36	60	12583.	5.89	412.	8.02	47.24	2.16	1.46	5.18	1.38	.61
CORN PLANTER 6-30	60	11109.	4.91	344.	8.90	43.71	2.48	1.75	5.50	1.65	.73
CORN PLANTER 8-30	75	15996.	6.55	458.	8.77	57.39	2.13	1.62	5.91	1.24	.69
CORN PLANTER 12-30	100	22934.	9.82	687.	7.96	78.18	1.68	1.48	5.65	.83	.61
MIN-TIL PLANTER 4-36	60	8042.	3.05	214.	11.91	36.38	3.62	2.81	6.44	2.66	1.18
MIN-TIL PLANTER 6-36	75	12385.	4.58	321.	10.64	48.77	2.76	2.31	6.56	1.77	.98
MIN-TIL PLANTER 6-30	75	11353.	3.82	267.	12.12	46.29	3.21	2.77	7.22	2.13	1.18
MIN-TIL PLANTER 8-30	100	16359.	5.09	356.	12.22	62.19	2.77	2.85	7.76	1.59	1.18
MIN-TIL PLANTER 8-36	100	19902.	6.11	428.	11.55	70.56	2.52	2.38	7.84	1.33	.98
MIN-TIL PLANTER 12-3	160	26128.	7.64	535.	12.07	92.13	2.31	2.78	8.22	1.06	1.26
POTATO FILLER	---	5950.	5.75	322.	3.01	17.28	.26	0	3.00	0	.02
POTATO ROW MARKER 4R	120	7276.	4.98	214.	10.01	49.86	1.86	3.32	4.94	1.74	1.45

MACHINE	TRACTOR HP	PURCHASE COST	ESTIMATED ACRES/HR	ANNUAL ACRES USE	TOTAL COST/ACRE	TOTAL COST/HOUR	OPERATING COST/ACRE	PER ACRE COST			DIESEL FUEL GAL/ACRE
								TRACTOR	IMPLEMENT	LABOR	
POTATO ROW MARKER 6R	140	11050.	7.47	321.	8.75	65.38	1.28	2.58	5.01	1.16	1.12
POTATO PLANTER 4 ROW	120	17000.	3.83	214.	20.38	78.07	4.91	4.32	12.42	3.64	1.88
POTATO PLANTER 6 ROW	140	24960.	5.75	322.	17.94	103.10	3.67	3.35	12.16	2.43	1.46
BEET PLANTER 12 ROW	100	18700.	4.67	280.	15.71	73.32	3.09	3.11	10.73	1.86	1.29
GRAIN DRILL PW 12 FT	40	7910.	4.78	382.	6.57	31.40	2.33	1.25	3.69	1.63	.50
GRAIN DRILL PW 14 FT	40	8252.	5.57	446.	5.77	32.19	2.02	1.07	3.30	1.39	.43
GRAIN DRILL PW 16 FT	60	10073.	6.37	510.	6.09	38.80	1.89	1.35	3.52	1.22	.57
GRAIN DRILL PW 20 FT	75	12087.	7.96	637.	5.69	45.32	1.62	1.33	3.38	.98	.57
GRAIN DRILL PW 24 FT	75	14504.	9.56	765.	5.31	50.70	1.45	1.11	3.38	.81	.47
GRAIN DRILL PW 28 FT	100	17405.	11.15	892.	5.48	61.11	1.36	1.30	3.48	.70	.54

MAINTENANCE EQUIPMENT

MACHINE	TRACTOR HP	PURCHASE COST	ESTIMATED ACRES/HR	ANNUAL ACRES USE	TOTAL COST/ACRE	TOTAL COST/HOUR	OPERATING COST/ACRE	PER ACRE COST			DIESEL FUEL GAL/ACRE
								TRACTOR	IMPLEMENT	LABOR	
CULTIVATOR 4-36	40	2700.	4.65	465.	3.23	15.05	1.08	1.29	.99	.95	.52
CULTIVATOR 6-36	60	3899.	6.98	698.	2.82	19.71	.76	1.23	.96	.63	.52
CULTIVATOR 6-30	60	3064.	5.82	582.	3.14	18.28	.88	1.47	.90	.76	.62
CULTIVATOR 8-30	75	4355.	7.76	776.	2.90	22.49	.69	1.36	.96	.57	.58
CULTIVATOR 12-30	140	5572.	11.64	1164.	2.85	33.16	.49	1.66	.81	.38	.72
RIDGE-CULT 4-36	75	4771.	4.65	465.	4.95	23.03	1.18	2.27	1.71	.96	.97
RIDGE-CULT 6-36	100	6652.	6.98	698.	4.32	30.15	.85	2.08	1.60	.64	.86
RIDGE-CULT 6-30	100	6544.	5.82	582.	5.13	29.85	1.01	2.50	1.87	.76	1.03
RIDGE-CULT 8-36	100	8426.	9.31	931.	3.55	33.07	.68	1.56	1.51	.48	.64
RIDGE-CULT 8-30	100	8731.	7.76	776.	4.31	33.45	.82	1.87	1.87	.57	.77
RIDGE-CULT 12-30	160	14119.	11.64	1164.	4.27	49.64	.71	1.82	2.00	.44	.83
ROTARY HOE 16	40	2352.	10.86	434.	1.83	19.90	.43	.55	.88	.39	.22
POTATO CULT. 4 ROW	75	2975.	6.13	889.	3.09	18.94	.89	1.73	.64	.72	.73
POTATO CULT. 6 ROW	75	4675.	9.19	1287.	2.33	21.40	.65	1.15	.69	.48	.49
BEET CULT. 12 ROW	100	7225.	6.00	360.	6.24	37.45	.88	2.42	3.08	.74	1.00
BEET THINNER 6 ROW	100	8500.	2.10	210.	17.16	36.04	4.36	6.92	6.78	3.47	2.86
BEET THINNER 12 ROW	120	15938.	4.20	420.	11.93	50.09	2.57	3.94	6.25	1.73	1.71
SPRAYER 30 FT	40	3188.	14.18	1135.	1.56	22.14	.70	.42	.52	.62	.17
SPRAYER 50 FT	60	4037.	23.64	2364.	1.07	25.28	.44	.36	.33	.37	.15
SPRAYER HI PRES 50FT	60	16405.	23.64	2364.	2.01	47.62	.65	.36	1.28	.37	.15
ANHYDROUS APPLICATOR	160	12187.	12.73	509.	6.24	79.42	1.14	1.67	4.12	.44	.75
FERTILIZER SPRDR 40	60	6341.	38.79	1164.	1.26	48.83	.25	.22	.89	.15	.09
SHREDDER 12 FT	60	5534.	4.36	436.	5.07	22.12	1.27	1.96	2.13	.97	.83

MACHINE	TRACTOR HP	PURCHASE COST	ESTIMATED ACRES/HR	ANNUAL ACRES USE	TOTAL COST/ACRE	TOTAL COST/HOUR	OPERATING COST/ACRE	PER ACRE COST			DIESEL FUEL GAL/ACRE
								TRACTOR	IMPLEMEN	LABOR	
LIGHT TRUCK	---	18275.	1.52	606.	12.98	19.67	13.11	0	10.17	2.81	1.32
MEDIUM TRUCK	---	27300.	1.52	606.	17.75	26.89	17.11	0	14.94	2.81	1.65
HEAVY TRUCK	---	40560.	1.52	606.	25.20	38.17	23.70	0	22.39	2.81	2.75
MANURE SPREADER 150	75	3570.	3.49	349.	6.73	23.50	7.73	3.03	2.46	1.24	1.29
MANURE SPREADER 225	100	4590.	3.49	349.	8.57	29.91	8.70	4.16	3.16	1.24	1.72
MANURE SPREADER 400	100	9350.	4.65	465.	8.85	41.19	13.22	3.12	4.79	.93	1.29
GRAVITY BOX 185 BU	40	1258.	1.65	215.	7.63	12.63	4.78	3.62	1.44	2.57	1.45
GRAVITY BOX 240 BU	40	1632.	1.65	215.	7.99	13.22	4.94	3.62	1.80	2.57	1.45
HAY WAGON	40	1360.	3.78	945.	4.30	16.26	9.25	1.58	.46	2.25	.63
FORAGE WAGON 14 FT	40	4675.	1.65	215.	10.74	17.76	6.22	3.62	4.54	2.57	1.45
FORAGE WAGON 16 FT	40	5950.	1.65	215.	11.82	19.55	6.76	3.62	5.62	2.57	1.45
MEDIUM TRUCK (USED)	---	17000.	1.52	606.	12.64	19.15	12.98	0	9.83	2.81	1.65
HEAVY TRUCK (USED)	---	27300.	1.52	606.	18.62	28.21	18.39	0	15.81	2.81	2.75

HARVESTING EQUIPMENT

MACHINE	TRACTOR HP	PURCHASE COST	ESTIMATED ACRES/HR	ANNUAL ACRES USE	TOTAL COST/ACRE	TOTAL COST/HOUR	OPERATING COST/ACRE	PER ACRE COST			DIESEL FUEL GAL/ACRE
								TRACTOR	IMPLEMEN	LABOR	
MOWER-COND 9 FT	60	6578.	4.09	327.	6.52	26.69	1.51	2.10	3.28	1.14	.88
SWATHER-COND. 12 FT	---	23745.	5.45	436.	9.43	51.43	1.64	0	8.65	.78	.55
SWATHER-COND. 15 FT	---	24205.	6.82	545.	7.70	52.51	1.32	0	7.07	.62	.44
SWATHER 12 FT	---	16885.	5.82	465.	6.65	38.71	1.42	0	5.92	.73	.52
SWATHER 15 FT	---	17154.	7.27	582.	5.42	39.44	1.14	0	4.83	.58	.41
SWATHER 18 FT	---	19990.	8.73	698.	5.15	44.90	.98	0	4.65	.49	.34
SWATHER 20 FT	---	20898.	9.70	776.	4.82	46.73	.89	0	4.38	.44	.31
1 TON STACKER	60	10625.	4.15	829.	6.83	28.31	2.90	2.07	2.88	1.87	.87
3 TON STACKER	75	17568.	4.84	1064.	7.74	37.45	3.18	2.19	3.95	1.61	.93
6 TON STACKER	100	25329.	5.53	1548.	8.79	48.61	3.81	2.63	4.76	1.41	1.09
BALER PTO TWINE	40	7881.	3.78	756.	6.01	22.74	2.89	1.58	2.37	2.05	.63
ROUND BALER 1500 LB	60	11884.	4.64	927.	5.72	26.52	2.03	1.85	2.85	1.02	.78
ROUND BALER 1000 LB	60	8622.	3.01	603.	7.62	22.96	2.71	2.84	3.20	1.57	1.19
ROTARY MOWER	40	3834.	2.73	273.	6.43	17.54	2.20	2.19	2.67	1.56	.88
RAKE (HYD)	40	2538.	3.49	698.	3.86	13.47	1.58	1.71	.92	1.22	.69
FORAGE HARV. 1 ROW	60	11433.	.95	95.	37.39	35.35	11.00	9.07	20.10	8.22	3.81
FORAGE HARV. 2 ROW	100	14994.	1.65	165.	28.55	47.24	6.78	8.78	15.07	4.70	3.63
FOR HARV 2 ROW SP	---	53797.	2.04	305.	35.96	73.22	11.00	0	32.14	3.82	3.63
FOR HAR 3 ROW SP	---	62651.	3.05	458.	27.49	83.97	8.09	0	24.94	2.54	2.78
FORAGE BLOWER LG	60	2975.	1.00	50.	21.69	21.69	4.64	8.57	8.86	4.25	3.60

MACHINE	TRACTOR HP	PURCHASE COST	ESTIMATED ACRES/HR	ANNUAL ACRES USE	TOTAL COST/ACRE	TOTAL COST/HOUR	OPERATING COST/ACRE	PER ACRE COST			DIESEL FUEL GAL/ACRE
								TRACTOR	IMPLEMENT	LABOR	
CORN PICKER 2-36	40	16057.	1.42	213.	23.19	32.89	8.16	4.22	13.49	5.48	1.69
PICKER-SHELLER 2-ROW	60	14307.	1.49	223.	22.45	33.42	7.50	5.76	11.47	5.22	2.42
COMBINE SM GRAIN SML	SML	5522.	4.10	819.	15.81	64.79	2.24	12.60	1.31	1.90	1.46
COMBINE SM GRAIN MED	MED	6492.	4.73	945.	15.66	74.03	2.00	12.67	1.34	1.64	1.52
COMBINE SM GRAIN LGE	LRG	7188.	6.30	1261.	13.30	83.84	1.53	10.95	1.11	1.23	1.38
COMBINE SOYBEANS SML	SML	6630.	3.58	717.	18.38	65.88	2.64	14.40	1.80	2.17	1.67
COMBINE SOYBEANS MED	MED	6873.	4.14	827.	17.99	74.40	2.31	14.48	1.62	1.88	1.74
COMBINE SOYBEANS LGE	LRG	7188.	4.96	993.	16.90	83.87	1.94	13.91	1.42	1.57	1.75
COMBINE CORN 3-30 SM	SML	8157.	1.77	355.	37.99	67.34	5.57	29.12	4.48	4.38	3.38
COMBINE CORN 2-38 SM	SML	5139.	1.49	298.	43.27	64.43	6.11	34.67	3.38	5.22	4.03
COMBINE CORN 3-38 SM	SML	8873.	2.25	449.	30.30	68.03	4.48	22.99	3.84	3.46	2.67
COMBINE CORN 4-36 MD	MED	11173.	2.84	567.	27.70	78.56	3.75	21.12	3.83	2.74	2.54
COMBINE CORN 4-30 MD	MED	10947.	2.60	520.	30.12	78.31	4.07	23.04	4.08	2.99	2.77
COMBINE CORN 6-30 LG	LRG	14782.	3.90	780.	23.38	91.18	2.97	17.70	3.68	1.99	2.23
COMBINE CORN 8-30 LG	LRG	19068.	4.73	945.	20.17	95.35	2.68	14.60	3.92	1.64	1.84
COMBINE CORN 12-30 J	JMB	27430.	7.09	1418.	16.34	115.85	2.09	11.50	3.74	1.10	1.69
POTATO HVSTR SEED 2R	120	33150.	1.49	320.	44.18	66.00	18.44	11.08	21.59	11.52	4.82
POTATO HRVSTR. 2 ROW	120	33150.	1.99	319.	36.28	72.26	13.26	8.31	19.33	8.64	3.61
ROTARY DISK BEAN CUT	100	5525.	5.20	416.	6.40	33.26	1.67	2.79	2.10	1.49	1.15
BEET LIFTER 4 ROW	100	30420.	3.47	277.	23.72	82.20	4.09	4.19	17.28	2.24	1.73
BEET LIFTER 6 ROW	120	38220.	5.20	416.	19.17	99.66	15.81	3.18	14.49	1.49	1.38
BEET TOPPER 4 ROW	75	11900.	3.11	249.	13.19	41.03	9.29	3.40	7.54	2.25	1.45
BEET TOPPER 6 ROW	100	12750.	4.67	373.	10.03	46.81	9.45	3.11	5.42	1.50	1.29
BEET WAGON 8 TON	75	6800.	3.47	277.	8.30	28.78	5.56	3.05	4.02	1.23	1.30

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