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**2000 ESTIMATED MACHINERY COSTS
FOR SOUTH CAROLINA FARMS**

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2000 ESTIMATED MACHINERY COSTS FOR SOUTH CAROLINA FARMS

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The following machine costs are based on the same costs as those used in the Clemson enterprise budgets for South Carolina. These estimated costs can be used as guides for custom rate charges, however they do NOT include returns for risk, management OR operator's labor. To determine a custom rate the operator's labor must be added to the figures in Table 1 (as directed below), plus the addition of some "profit."

Machinery Cost

Machinery costs are typically divided into two major categories: fixed cost and variable cost. Fixed costs are those costs which do not vary with the usage during a production cycle, usually one year. Fixed costs include depreciation, interest, insurance and taxes. To estimate these items, many assumptions have to be made. All of the machinery performance assumptions come directly from the Agricultural Engineers Handbook. Table 2 presents some of the assumptions that will vary from farm to farm and machine to machine. These include:

- Average price (on which repair, depreciation, interest and taxes are based),
- Years owned and annual hours used (which determine per hour costs),
- Total hours of life (on which repairs are based), and
- Salvage value (which determines depreciation, interest, and insurance).

Other important assumptions are:

- The purchase price for equipment was calculated by discounting the dealer's price by 10%.
- An interest rate of 9.5%.
- An insurance rate of 0.6%.

Variable costs associated with the operation of machinery are those costs which vary directly with usage. These costs include repairs, fuel, and lubricants. There is no variable cost if the machine is not used. Repair costs are estimated by a formula which is based on the initial list price of the machine and hours used. Fuel cost is based on \$.75 per gallon for diesel fuel.



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Self-propelled Machinery

To determine the cost of using a self-propelled machine per timeover an acre, use the following formula and the appropriate data from table 1:

$$\begin{array}{l} \text{Fixed Cost} + \text{Variable Cost} \times \text{Hours Per Acre} = \text{Cost Per Timeover An Acre} \\ \text{Per Hour} \quad \quad \quad \text{Per Hour} \end{array}$$

Example: Tobacco Combine 2-Row (Table 1)

Fixed Cost Per Hour	\$47.99
Variable Cost Per Hour	<u>+ 14.98</u>
Total Cost Per Hour (less labor)	\$62.57
Hours Per Acre	<u>x 1.04</u>
Total Cost Per Timeover (less labor)	<u>\$65.07</u>

No labor costs have been included in table 1. For self-propelled machinery the hours per acre are multiplied by 1.10 to obtain the operator labor requirement per acre. This assumes slightly more labor is required than the machine is actually running (for refilling tank, operator maintenance, warm-up, etc.). The following formula and example will explain how labor requirements are computed:

$$\begin{array}{l} \text{Self-propelled Machinery} \\ \text{Hours Per Acre} \end{array} \quad \times \quad 1.10 \quad \begin{array}{l} \text{Self-propelled Labor Requirement} \\ \text{Per Timeover} \end{array}$$

1.04 x 1.10 = 1.144 hours, Tobacco Combine 2-Row Labor Requirement per Timeover

1.144 Hours of Labor x \$6.00 per hour = \$6.86 (Cost of Labor) for Tobacco Combine 2-Row (Labor Wages)

Tractor Powered Machinery

To determine the total cost for a particular operation, the equipment must be attached to the proper power-unit (tractor). The cost of the power-unit and the equipment being used are combined. Hours for the power-unit are computed by using the same rate as the equipment rate (using table 1):

	<u>80 HP Tractor</u>	+	<u>4-Bottom Flip Plow</u>
Fixed Cost/Hour	\$ 7.25		\$ 3.56
Variable Cost/Hour	<u>+ 4.68</u>		<u>+ 4.35</u>
Total Cost/Hour (less labor)	\$11.93		\$ 7.91
Hours Per Acre	0.25		0.25
Cost Per Timeover	\$2.98		\$1.98

Total Cost Per Timeover (less labor) \$4.96

The next step is to compute operator labor requirements. For tractor operations, the tractor hours per acre are multiplied by 1.10 to obtain the labor requirements per acre. This assumes that slightly more labor is required than the hours the machine is actually running (for hook-up, refilling tanks/planters, maintenance, etc.).

Tractor Labor Requirement Per Timeover = Tractor Hours Per Acre x 1.10

Labor Requirement for the above example of a 4-bottom flip plow pulled by a 80 horse power tractor is as follows:

$0.25 \times 1.10 = 0.28$ hours,

80 HP Tractor Labor Requirement 0.28 hrs. of labor x \$6.00/hr. = \$1.68 (Cost of Labor) per timeover

Tobacco Equipment

Several special purpose pieces of tobacco equipment are operated with workers other than the driver riding on the machine. The above procedure will accurately compute the labor requirements for the driver; however, additional labor must be added separately.

Table 3, Total Cost Per Timeover an Acre

Table 3 computes total cost per acre for self-propelled machinery and tractor powered equipment. In the case of the tractor powered equipment, it is assumed a specific power source is used and labor costs \$6.00 per hour. If the actual power source used is different from the one shown under the heading "Power Unit", then the figures may not apply. The column "Labor Costs" is obtained by multiplying the required operator labor hours by \$6.00 per hour. Also included is a column showing approximate fuel requirements for each operation.

Custom Machine Operators

The publication 1998 Farm Machinery Custom Rates (EER 174) is a summary of a survey conducted by the University of Georgia to determine actual custom rate charges in the state of Georgia. The document was republished by Clemson University and distributed to South Carolina county agents to assist South Carolina producers. Please refer to this publication for custom rate information.



Table 2. Assumptions used in Estimating Machinery Costs

Machine Name	Average Price	Years Owned	Hours Used Annually	Total Hours of Life	Salvage Value
Power Units and Self-Propelled					
50-60 HP DIESEL TRACTOR	\$ 21,148.00	10	500	12000	\$ 6,246.78
70-80 HP DIESEL TRACTOR	26,662.90	10	500	12000	7,875.80
95-105 HP DIESEL TRACTOR	44,389.48	10	600	12000	13,111.95
115-125 HP DIESEL TRACTOR	53,569.28	10	600	12000	15,823.51
135-145 HP DIESEL TRACTOR	62,130.65	10	600	12000	18,352.41
155-165 HP DIESEL TRACTOR	72,620.25	10	600	12000	21,450.87
175-185 HP DIESEL TRACTOR	84,520.00	10	600	12000	24,965.87
195-205 HP DIESEL TRACTOR	99,030.00	10	600	12000	29,251.89
COMBINE	104,125.20	10	225	2000	21,976.89
COMBINE LARGE	143,864.95	10	225	2000	30,364.44
COMBINE LARGE W/ HEADER	159,170.00	10	225	2000	33,594.76
COMBINE W/ HEADER	114,264.75	10	225	2000	24,116.96
COTTON PICKER 2-ROW	114,057.55	12	250	2500	13,439.30
COTTON PICKER 4-ROW	180,120.00	12	250	2500	21,223.37
HIBOY	64,094.53	12	150	2000	8,877.52
TOBACCO COMBINE 1-ROW	55,000.00	7	260	2000	16,065.63
TOBACCO COMBINE 2-ROW	75,000.00	7	260	2000	21,907.67
EQUIPMENT					
4-BOTTOM FLIP PLOW	5,500.00	12	200	2500	761.79
5-BOTTOM PLOW	5,736.00	12	200	2500	794.47
BALE WAGON	6,367.00	10	150	2000	1,050.89
CHISEL PLOW 12'	5,958.00	12	120	2500	825.22
CHISEL PLOW 14'	7,550.00	12	120	2500	1,045.72
CHISEL PLOW 18'	10,790.00	12	120	2500	1,494.49
COTTON TRAILER	5,600.00	12	150	1100	820.88
CULTIPACKER	1,500.00	30	50	2500	23.04
CULTIVATOR 1-ROW	800.00	10	100	2000	141.47
CULTIVATOR 2-ROW	1,790.50	10	100	2000	316.63
CULTIVATOR 4-ROW	3,587.00	15	100	2500	344.38
CULTIVATOR 6-ROW	6,697.00	15	125	2500	642.96
CULTIVATOR W/ HERB. & INSECT 6-ROW	9,000.00	10	100	2000	1,591.57
CULTIVATOR W/ HERBICIDE 6-ROW	9,250.00	10	100	2000	1,635.78
CULTIVATOR W/ INSECTICIDE 6-ROW	8,550.00	10	100	2000	1,511.99
CULTIVATOR W/ SPRAYER 6-ROW	8,675.00	10	100	2000	1,534.10
DIGGER INVERTER	6,199.00	10	100	1200	1,187.59
DISK W/ SPRAYER 16'	9,500.00	12	120	2500	1,315.81
DISK W/ SPRAYER 21'	15,250.00	12	120	2500	2,112.23
FERTILIZER SPREADER	10,050.00	10	50	1000	1,658.77
FUMIGATION UNIT	1,475.00	8	50	750	333.03
GRAIN DRILL 16'	9,003.50	13	75	1200	1,103.63
GRAIN DRILL 8'	5,200.00	13	75	1200	637.41
GRAIN DRILL 13' W/ CULTIPACKER	7,200.00	13	75	1200	882.56
GRAIN DRILL 13' W/ FERTILIZER	6,300.00	13	75	1200	772.24
GRANULAR APPLICATOR	1,890.00	10	100	2000	334.23
HEAVY DISK 13'	9,600.00	12	120	2500	1,329.66
HEAVY DISK 14'	10,850.00	12	120	2500	1,502.80
HEAVY DISK 16'	12,500.00	12	120	2500	1,731.33
HERBICIDE APPLICATOR 12'	1,800.00	10	80	1000	318.31
HERBICIDE APPLICATOR 16'	2,250.00	10	90	1000	397.89
LIGHT DISKING W/ HERBICIDE	8,010.00	12	100	1440	1,109.44
LISTER	1,330.00	10	50	2000	235.20
MOWER-CONDITIONER	11,583.00	10	100	2000	1,911.80
MULCH BEDDER-LAYER	5,000.00	10	50	1000	884.21
MULCH LAYER	4,045.00	10	50	1000	715.32

Table 2. Assumptions used in Estimating Machinery Costs (Continued)

Machine Name	Average Price	Years Owned	Hours Used Annually	Total Hours of Life	
EQUIPMENT					
NO-TILL DRILL 12'	\$ 11,700.00	13	100	1200	\$ 1,434.17
NO-TILL DRILL 16'	13,500.00	13	75	1200	1,654.81
NURSE TANK ON PICK-UP	1,650.00	15	50	1200	158.41
PEANUT COMBINE 2-ROW	26,114.00	10	100	2000	4,618.04
PEANUT PLANTER	10,544.50	12	75	1440	1,460.48
PRECISION PLANTER 4-ROW	9,600.00	12	100	2000	1,329.66
PLANTER 1-ROW	1,303.75	10	75	2000	230.56
PLANTER 2-ROW	2,540.00	10	75	2000	449.18
PLANTER 4-ROW	11,875.00	12	100	2000	1,644.77
PLANTER 6-ROW	14,856.50	12	100	2000	2,057.72
PLANTER 8-ROW	18,465.00	12	100	2000	2,557.52
PLANTER NO-TILL 4-ROW	14,175.00	12	100	1440	1,963.33
PLANTER NO-TILL 6-ROW	16,873.50	12	100	1440	2,337.09
PLANTER NO-TILL 8-ROW	21,775.00	12	100	1440	3,015.98
PLANTER NO-TILL W/ HERBICIDE 4-ROW	12,987.50	12	100	1440	1,798.85
PLANTER NO-TILL W/ SPRAYER 4-ROW	16,086.50	12	100	1440	2,228.09
PLANTER W/ FERTILIZER 6-ROW	15,250.00	12	100	2000	2,112.23
PLANTER W/ HERBICIDE 6-ROW	13,500.00	12	100	2000	1,869.84
PLANTER W/ SPRAYER 4-ROW	12,000.00	12	100	2000	1,662.08
PLANTER W/ SPRAYER 6-ROW	16,250.00	12	100	2000	2,250.73
POTATO DIGGER (SWEET)	10,684.00	8	100	2000	2,412.30
POTATO HARVESTER	49,593.00	15	200	3000	4,761.25
POTATO PLANTER	19,873.00	15	150	1500	1,907.94
POTATO PLANTER (SWEET)	6,517.00	8	75	2000	1,471.45
PRIME AID BULK BARN	17,000.00	8	150	1500	4,035.10
PTO AIR BLAST SPRAYER (500)	18,001.00	10	100	1000	3,183.32
PTO BALER	13,555.00	8	100	2000	2,856.50
PULL TYPE SPRAYER	3,300.00	15	50	1200	316.82
RAKE	3,000.00	10	75	2000	530.52
ROLLING CULTIVATOR 6-ROW	7,000.00	15	125	2500	672.04
ROTARY MOWER 7'	6,850.00	10	100	2000	1,211.36
ROTOVATOR	1,600.00	10	50	1000	282.95
SICKLE MOWER	3,510.00	10	50	1000	620.71
SIDEDRESSER 2-ROW	1,600.00	10	100	2000	282.95
SILAGE BLOWER	3,000.00	10	100	1000	494.68
SILAGE CHOPPER	20,144.50	10	100	1500	3,324.89
SILAGE CHOPPER & WAGON	27,500.00	10	75	1500	4,538.93
SILAGE WAGON	7,375.00	10	100	2000	1,217.26
SPIKE HARROW	900.00	15	75	3000	86.41
SPRAYER, BLOWER	-	10	80	1000	-
SPRING TOOTH	2,186.50	15	75	15000	209.92
SUBSOILER-BEDDER 2-ROW	5,350.00	12	100	2500	741.01
SUBSOILER-BEDDER 4-ROW	7,500.00	12	150	2500	1,038.80
SUBSOILER-BEDDER 6-ROW	9,525.00	12	150	2500	1,319.28
SUBSOILER-PLANTER W/ SPRAYER 4-ROW	19,350.00	12	100	1440	2,680.10
SUBSOILER-PLANTER W/ SPRAYER 6-ROW	24,600.00	12	100	1440	3,407.26
SUBSOILER-PLANTER 6-ROW	24,600.00	12	100	1440	3,407.26
SUPER BEDDER	3,036.00	10	50	1000	581.63
TOBACCO CULTIVATOR 1-ROW	1,000.00	10	150	2000	176.84
TOBACCO HARVESTER LOW PROFILE	12,500.00	7	115	2000	3,189.07
TOBACCO TOPPER 2-ROW	2,950.00	8	50	1000	732.68
TOBACCO TRAILER	1,000.00	12	150	1100	146.59
TOBACCO TRANSPLANTER 1-ROW	2,900.00	10	145	1200	512.84
TOBACCO TRANSPLANTER 2-ROW	4,650.00	10	145	1200	822.31
TOMATO TRANSPLANTER 3-ROW	7,500.00	10	75	2000	1,326.31

Table 2. Assumptions used in Estimating Machinery Costs (Continued)

Machine Name	Average Price	Years Owned	Hours Used Annually	Total Hours of Life	
EQUIPMENT					
TRACTOR MOUNTED SPRAYER	\$ 1,150.00	10	80	1000	\$ 203.37
TRACTOR MOUNTED SPRAYER & FERT.	1,500.00	10	80	1000	265.26
TRAILER 4W	1,800.00	10	50	1000	336.88
TRANSPLANTER 1-ROW	1,800.00	10	75	2000	318.31
TRANSPLANTER 2-ROW	2,907.00	10	75	2000	514.08
TRANSPLANTER 4-ROW	10,000.00	10	100	2000	1,768.41
TRUCK 1.5 TON	30,000.00	8	500	4000	6,014.28
WHIRL SEEDER	500.00	10	50	1000	88.42
WINDROWER	2,324.50	8	80	1500	489.85
TERRAMAX-2	12,000.00	12	100	1440	1,662.08

*These number correspond to the acreage assumptions in the budgets which are specified for tobacco due to the

Table 3. Total Cost Per Timeover an Acre of Various Operations Assuming a Specific Power Source is Used and Machine Operator Labor Cost is \$6.00 per hour.*

Machine Name	Power Unit (diesel)	Labor Hours	Machine Hours	Gallons of Fuel			Labor Cost at \$6.00 Per Timeover	Total Cost (Fixed, Variable, and Labor)
				Required Per Timeover	Variable Cost Per Timeover	Fixed Cost Per Timeover		
Self-Propelled								
COMBINE	N/A	0.36	0.33	2.20	7.65	21.39	2.18	31.22
COMBINE LARGE	N/A	0.28	0.25	2.30	8.01	22.39	1.65	32.05
COMBINE LARGE W/ HEADER	N/A	0.28	0.25	2.55	8.86	24.77	1.65	35.28
COMBINE W/ HEADER	N/A	0.36	0.33	2.41	8.40	23.47	2.18	34.05
COTTON PICKER 2-ROW	N/A	0.84	0.76	5.54	33.68	45.06	5.02	83.75
COTTON PICKER 4-ROW	N/A	0.42	0.38	4.38	26.59	35.58	2.51	64.68
HIBOY	N/A	0.07	0.06	0.25	1.31	3.31	0.40	5.02
TOBACCO COMBINE 1-ROW	N/A	1.72	1.56	5.49	16.68	54.91	10.30	81.88
TOBACCO COMBINE 2-ROW	N/A	1.14	1.04	4.99	15.16	49.91	6.86	71.94
EQUIPMENT								
4-BOTTOM FLIP PLOW	70-80HP	0.28	0.25	1.20	2.26	2.70	1.65	6.61
5-BOTTOM PLOW	95-105HP	0.22	0.20	1.28	2.32	2.75	1.32	6.39
BALE WAGON	50-60HP	0.19	0.17	0.60	0.96	2.01	1.12	4.09
CHISEL PLOW 12'	95-105HP	0.22	0.20	1.28	1.61	3.29	1.32	6.22
CHISEL PLOW 14'	95-105HP	0.19	0.17	1.09	1.41	3.09	1.12	5.62
CHISEL PLOW 18'	115-125HP	0.13	0.12	0.92	1.24	2.85	0.79	4.88
COTTON TRAILER	50-60HP	0.37	0.34	1.20	2.07	3.60	2.24	7.91
CULTIPACKER	70-80HP	0.22	0.20	0.96	0.98	1.95	1.32	4.25
CULTIVATOR 1-ROW	50-60HP	1.30	1.18	4.15	3.93	8.12	7.79	19.83
CULTIVATOR 2-ROW	50-60HP	0.62	0.56	1.97	1.98	4.64	3.70	10.32
CULTIVATOR 4-ROW	70-80HP	0.25	0.23	1.10	1.30	2.62	1.52	5.43
CULTIVATOR 6-ROW	70-80HP	0.19	0.17	0.82	1.16	2.28	1.12	4.56
CULTIVATOR W/ HERB. & INSECT 6-ROW	70-80HP	0.19	0.17	0.82	1.24	3.40	1.12	5.76
CULTIVATOR W/ HERBICIDE 6-ROW	70-80HP	0.19	0.17	0.82	1.25	3.46	1.12	5.83
CULTIVATOR W/ INSECTICIDE 6-ROW	70-80HP	0.19	0.17	0.82	1.22	3.29	1.12	5.63
CULTIVATOR W/ SPRAYER 6-ROW	70-80HP	0.19	0.17	0.82	1.22	3.32	1.12	5.66
DIGGER INVERTER	95-105HP	1.01	0.92	5.89	10.92	17.29	6.07	34.28
DISK W/ SPRAYER 16'	95-105HP	0.17	0.15	0.96	1.30	3.05	0.99	5.34
DISK W/ SPRAYER 21'	115-125HP	0.13	0.12	0.92	1.33	3.43	0.79	5.55
FERTILIZER SPREADER	50-60HP	0.13	0.12	0.42	1.07	4.12	0.79	5.98
FUMIGATION UNIT	50-60HP	0.47	0.43	1.51	1.79	4.48	2.84	9.11
GRAIN DRILL 16'	95-105HP	0.14	0.13	0.83	1.54	3.25	0.86	5.64
GRAIN DRILL 8'	70-80HP	0.32	0.29	1.39	2.16	4.60	1.91	8.67
GRAIN DRILL 13' W/ CULTIPACKER	95-105HP	0.18	0.16	1.02	1.74	3.52	1.06	6.32
GRAIN DRILL 13' W/ FERTILIZER	115-125HP	0.18	0.16	1.23	1.89	3.61	1.06	6.56
GRANULAR APPLICATOR	50-60HP	0.62	0.56	1.97	2.00	4.72	3.70	10.42
HEAVY DISK 13'	135-145HP	0.19	0.17	1.52	1.95	4.15	1.12	7.23
HEAVY DISK 14'	135-145HP	0.17	0.15	1.34	1.76	3.86	0.99	6.61
HEAVY DISK 16'	155-165HP	0.14	0.13	1.33	1.75	3.89	0.86	6.50
HERBICIDE APPLICATOR 12'	70-80HP	0.17	0.15	0.72	0.86	1.57	0.99	3.42
HERBICIDE APPLICATOR 16'	70-80HP	0.12	0.11	0.53	0.67	1.19	0.73	2.59
LIGHT DISKING W/ HERBICIDE	135-145HP	0.19	0.17	1.52	2.36	4.15	1.12	7.64
LISTER	70-80HP	0.65	0.59	2.83	2.97	6.50	3.89	13.36
MOWER-CONDITIONER	50-60HP	0.40	0.36	1.27	2.83	8.01	2.38	13.21
MULCH BEDDER	50-60HP	0.57	0.52	1.83	5.86	10.36	3.43	19.66
MULCH LAYER	50-60HP	0.57	0.52	1.83	5.06	8.95	3.43	17.45

*Cost for equipment applies only if specified power unit is used.

Table 3. Total Cost Per Timeover an Acre of Various Operations Assuming a Specific Power Source is Used and Machine Operator Labor Cost is \$6.00 per hour.* (Continued)

Machine Name	Power Unit	Labor Hours	Machine Hours	Gallons of Fuel			Labor Cost at \$6.00 Per Timeover	Total Cost (Fixed, Variable, and Labor)
				Required Per Timeover	Variable Cost Per Timeover	Fixed Cost Per Timeover		
EQUIPMENT								
NO-TILL DRILL 12'	95-105HP	0.23	0.21	1.34	3.27	5.16	1.39	9.82
NO-TILL DRILL 16'	115-125HP	0.15	0.14	1.08	2.19	4.83	0.92	7.94
NURSE TANK ON PICK-UP	50-60HP	0.19	0.17	0.60	0.65	1.63	1.12	3.40
PEANUT COMBINE 2-ROW	95-105HP	1.21	1.10	7.04	16.49	51.78	7.26	75.52
PEANUT PLANTER	95-105HP	0.23	0.21	1.34	2.41	5.93	1.39	9.73
PRECISION PLANTER 4-ROW	95-105HP	0.22	0.20	1.28	1.98	4.49	1.32	7.79
PLANTER 1-ROW	50-60HP	1.82	1.65	5.81	5.57	13.55	10.89	30.01
PLANTER 2-ROW	50-60HP	0.98	0.89	3.13	3.19	9.39	5.87	18.45
PLANTER 4-ROW	95-105HP	0.22	0.20	1.28	2.11	5.08	1.32	8.51
PLANTER 6-ROW	115-125HP	0.19	0.17	1.31	2.19	5.33	1.12	8.64
PLANTER 8-ROW	135-145HP	0.13	0.12	1.08	1.84	4.55	0.79	7.18
PLANTER NO-TILL 4-ROW	135-145HP	0.19	0.17	1.52	2.88	5.51	1.12	9.52
PLANTER NO-TILL 6-ROW	155-165HP	0.20	0.18	1.84	3.57	6.89	1.19	11.64
PLANTER NO-TILL 8-ROW	175-185HP	0.13	0.12	1.38	2.86	5.68	0.79	9.33
PLANTER NO-TILL W/ HERB. 4-ROW	135-145HP	0.22	0.20	1.79	3.27	6.17	1.32	10.76
PLANTER NO-TILL W/ SPRAYER 4-ROW	135-145HP	0.22	0.20	1.79	3.58	6.97	1.32	11.87
PLANTER W/ FERTILIZER 6-ROW	115-125HP	0.19	0.17	1.31	2.21	5.41	1.12	8.74
PLANTER W/ HERBICIDE 6-ROW	115-125HP	0.19	0.17	1.31	2.12	5.03	1.12	8.27
PLANTER W/ SPRAYER 4-ROW	95-105HP	0.22	0.20	1.28	2.12	5.11	1.32	8.55
PLANTER W/ SPRAYER 6-ROW	115-125HP	0.19	0.17	1.31	2.26	5.63	1.12	9.01
POTATO DIGGER (SWEET)	70-80HP	0.87	0.79	3.79	4.37	17.93	5.21	27.51
POTATO HARVESTER	115-125HP	0.87	0.79	6.07	16.52	32.23	5.21	53.96
POTATO PLANTER	95-105HP	0.30	0.27	1.73	5.33	6.85	1.78	13.96
POTATO PLANTER (SWEET)	70-80HP	0.43	0.39	1.87	2.33	8.21	2.57	13.11
PRIME AID BULK BARN	50-60HP	0.76	0.69	2.43	9.49	16.31	4.55	30.35
PTO AIR BLAST SPRAYER (500)	95-105HP	0.22	0.20	1.28	4.47	7.11	1.32	12.90
PTO BALER	95-105HP	0.42	0.38	2.43	4.35	12.05	2.51	18.90
PULL TYPE SPRAYER	50-60HP	0.20	0.18	0.63	0.81	2.41	1.19	4.40
RAKE	50-60HP	0.28	0.25	0.88	1.01	2.86	1.65	5.52
ROLLING CULTIVATOR 6-ROW	70-80HP	0.19	0.17	0.82	1.18	2.33	1.12	4.63
ROTARY MOWER 7'	50-60HP	0.32	0.29	1.02	1.52	4.49	1.91	7.92
ROTOVATOR	50-60HP	1.55	1.41	4.96	6.19	14.51	9.31	30.00
SICKLE MOWER	50-60HP	0.29	0.26	0.92	2.15	4.09	1.72	7.95
SIDEDRESSER 2-ROW	70-80HP	0.62	0.56	2.69	2.81	5.33	3.70	11.84
SILAGE BLOWER	50-60HP	0.52	0.47	1.65	2.20	4.71	3.10	10.01
SILAGE CHOPPER	115-125HP	0.47	0.43	3.30	9.80	17.55	2.84	30.18
SILAGE CHOPPER & WAGON	115-125HP	0.63	0.57	4.38	15.04	36.66	3.76	55.46
SILAGE WAGON	95-105HP	0.63	0.57	3.65	5.48	11.72	3.76	20.96
SPIKE HARROW	50-60HP	0.26	0.24	0.84	0.78	1.71	1.58	4.07
SPRAYER, BLOWER	50-60HP	0.20	0.18	0.63	0.57	1.04	1.19	2.79
SPRING TOOTH	50-60HP	0.12	0.11	0.39	0.35	1.00	0.73	2.08
SUBSOILER-BEDDER 2-ROW	70-80HP	0.50	0.45	2.16	2.65	6.37	2.97	11.99
SUBSOILER-BEDDER 4-ROW	115-125HP	0.21	0.19	1.46	2.65	3.53	1.25	7.43
SUBSOILER-BEDDER 6-ROW	135-145HP	0.19	0.17	1.52	2.85	3.79	1.12	7.77
SUBSOILER-PLANTER W/ SPRAYER 4-ROW	135-145HP	0.22	0.20	1.79	3.91	7.81	1.32	13.04
SUBSOILER-PLANTER W/ SPRAYER 6-ROW	155-165HP	0.20	0.18	1.84	4.27	8.68	1.19	14.13
SUBSOILER-PLANTER 6-ROW	155-165HP	0.20	0.18	1.84	4.27	8.68	1.19	14.13

*Cost for equipment applies only if specified power unit is used.

Table 3. Total Cost Per Timeover an Acre of Various Operations Assuming a Specific Power Source is Used and Machine Operator Labor Cost is \$6.00 per Hour.* (Continued)

Machine Name	Power Unit	Labor Hours	Machine Hours	Gallons of Fuel			Labor Cost at \$6.00 Per Timeover	Total Cost (Fixed, Variable, and Labor)
				Required Per Timeover	Variable Cost Per Timeover	Fixed Cost Per Timeover		
EQUIPMENT								
SUPER BEDDER	70-80HP	1.21	1.10	5.28	7.68	17.40	7.26	32.33
TOBACCO TRANSPLANTER 1-ROW	70-80HP	3.39	3.08	14.78	21.09	31.05	20.33	72.47
TOBACCO TRANSPLANTER 2-ROW	95-105HP	1.69	1.54	9.86	16.23	22.49	10.16	48.88
TOMATO TRANSPLANTER 3-ROW	70-80HP	2.27	2.06	9.89	12.85	44.13	13.60	70.57
TRACTOR MOUNTED SPRAYER	50-60HP	0.18	0.16	0.56	0.62	1.25	1.06	2.92
TRACTOR MOUNTED SPRAYER & FERT.	50-60HP	0.18	0.16	0.56	0.65	1.35	1.06	3.05
TRAILER 4W	50-60HP	0.15	0.14	0.49	0.56	1.52	0.92	3.00
TRANSPLANTER 1-ROW	50-60HP	3.03	2.75	9.68	9.71	25.16	18.15	53.02
TRANSPLANTER 2-ROW	50-60HP	2.52	2.29	8.06	8.64	25.74	15.11	49.49
TRANSPLANTER 4-ROW	70-80HP	1.52	1.38	6.62	9.87	29.56	9.11	48.53
WHIRL SEEDER	50-60HP	0.11	0.10	0.35	0.35	0.72	0.66	1.72
WINDROWER	50-60HP	0.19	0.17	0.60	0.74	1.77	1.12	3.63
TERRAMAX-2	155-165HP	0.26	0.24	2.46	4.18	7.67	1.58	13.43

*Cost for equipment applies only if specified power unit is used.