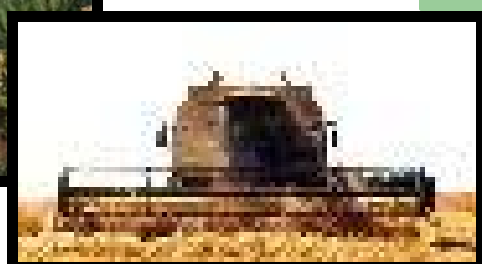
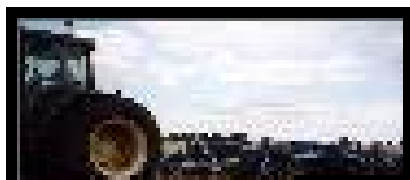




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EXTENSION ECONOMICS REPORT
2003 ESTIMATED MACHINERY COSTS
FOR SOUTH CAROLINA FARMS



2003 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 8.5%.
- 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 \$1.00 per gallon for diesel fuel.



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:

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

Example: Tobacco Combine 2-Row (Table 1)

Fixed Cost Per Hour	\$47.51
Variable Cost Per Hour	<u>+ 16.08</u>
Total Cost Per Hour (less labor)	\$63.59
Hours Per Acre	<u>x 1.04</u>
Total Cost Per Timeover (less labor)	<u>\$66.13</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:

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

$$1.04 \times 1.10 = 1.144 \text{ hours, Tobacco Combine 2-Row Labor Requirement per Timeover}$$

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

$$\text{Total Cost Per Timeover (labor included)} \$66.13 + \$6.86 = \$72.99.$$

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	\$ 6.51		\$ 3.04
Variable Cost/Hour	<u>+ 5.63</u>		<u>+ 3.88</u>
Total Cost/Hour (less labor)	\$12.14		\$ 6.92
Hours Per Acre	0.25		0.25
Cost Per Timeover	\$3.04		\$1.73
Total Cost Per Timeover (less labor)		\$4.77	

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:

$0.25 \times 1.10 = 0.275$ hours,
80 HP Tractor Labor Requirement $0.275 \text{ hrs. of labor} \times \$6.00/\text{hr.} = \$1.65$ (Cost of Labor) Per Timeover.

Total Cost Per Timeover (labor included) $\$4.77 + \$1.65 = \$6.42$.

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 2000 Farm Machinery Custom Rates (EER 196) 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 1. Estimated 2003 Machinery Fixed and Variable Costs Per Hour as Estimated for South Carolina Budgets

Machine Name	Variable Cost Per		Hours Per Acre
	Hour*	Fixed Cost Per Hour	
Power Units and Self-Propelled			
50-60 HP DIESEL TRACTOR	\$3.85	\$5.04	N/A
70-80 HP DIESEL TRACTOR	5.63	6.51	N/A
95-105 HP DIESEL TRACTOR	8.43	9.50	N/A
115-125 HP DIESEL TRACTOR	10.21	11.71	N/A
135-145 HP DIESEL TRACTOR	11.91	13.68	N/A
155-165 HP DIESEL TRACTOR	13.75	16.08	N/A
175-185 HP DIESEL TRACTOR	16.16	20.36	N/A
195-205 HP DIESEL TRACTOR	17.98	22.69	N/A
COMBINE	25.59	64.44	0.33
COMBINE LARGE	33.56	84.50	0.25
COMBINE LARGE W/ HEADER	38.76	97.61	0.25
COMBINE W/ HEADER	29.99	75.51	0.33
COTTON PICKER 2-ROW	47.76	59.06	0.76
COTTON PICKER 4-ROW	77.31	95.60	0.38
COTTON FINGER STRIPPER 4-ROW	45.43	56.18	0.23
HIBOY	24.39	56.78	0.06
TOBACCO COMBINE 1-ROW	11.80	34.84	1.56
TOBACCO COMBINE 2-ROW	16.08	47.51	1.04
VEGETABLE PICKER 4-ROW	34.10	85.88	0.25
VEGETABLE PICKER 1-ROW	7.54	13.61	0.79
EQUIPMENT			
4-BOTTOM FLIP PLOW	3.88	3.04	0.25
5-BOTTOM PLOW	6.15	4.81	0.20
BALE WAGON	1.96	4.58	0.17
CHISEL PLOW 12'	0.95	5.86	0.20
CHISEL PLOW 14'	1.11	6.83	0.17
CHISEL PLOW 18'	1.70	10.45	0.12
COTTON TRAILER	2.86	4.46	0.34
CULTIPACKER	0.31	3.66	0.20
CULTIVATOR 1-ROW	0.20	1.26	1.18
CULTIVATOR 2-ROW	0.43	2.70	0.56
CULTIVATOR 4-ROW	0.89	3.70	0.23
CULTIVATOR 6-ROW	1.42	3.94	0.17
CULTIVATOR W/ HERB.& INSECT 6-ROW	1.61	7.62	0.17
CULTIVATOR W/ HERBICIDE 6-ROW	1.46	6.93	0.17
CULTIVATOR W/ INSECTICIDE 6-ROW	1.46	6.93	0.17
CULTIVATOR W/ SPRAYER 6-ROW	1.46	6.93	0.17
DIGGER INVERTER	4.95	8.62	0.92
DISK W/ SPRAYER 16'	2.12	13.03	0.15
DISK W/ SPRAYER 21'	2.60	16.02	0.12
FERTILIZER SPREADER	6.09	28.95	0.12
FUMIGATION UNIT	1.04	4.64	0.43
GRAIN DRILL 16'	5.66	16.85	0.13
GRAIN DRILL 8'	3.12	9.31	0.29
GRAIN DRILL 13' W/ CULTIPACKER	4.59	13.69	0.16
GRAIN DRILL 13' W/ FERTILIZER	4.55	13.56	0.16
GRANULAR APPLICATOR	0.75	4.78	0.56

*Does not include labor cost. Table 3 contains labor cost on a per acre basis.

Table 1. Estimated Machinery Fixed and Variable Costs Per Hour as Estimated for South Carolina Budgets
(Continued)

Machine Name	Variable Cost Per		Hours Per Acre
	Hour*	Fixed Cost Per Hour	
EQUIPMENT			
HEAVY DISK 13'	1.77	10.91	0.17
HEAVY DISK 14'	1.98	12.19	0.15
HEAVY DISK 16'	2.41	14.84	0.13
HERBICIDE APPLICATOR 12'	1.15	3.32	0.15
HERBICIDE APPLICATOR 16'	1.81	4.24	0.11
LIGHT DISKING W/ HERBICIDE	4.52	11.21	0.15
LISTER	0.36	3.72	0.59
MOWER-CONDITIONER	6.34	21.30	0.36
MULCH BEDDER	8.37	13.99	0.52
MULCH LAYER	6.77	11.32	0.52
NO-TILL DRILL 12'	9.45	15.39	0.21
NO-TILL DRILL 16'	10.20	30.41	0.14
NURSE TANK ON PICK-UP	0.77	4.24	0.17
PEANUT COMBINE 2-ROW	8.15	36.54	1.10
PEANUT PLANTER	4.55	17.90	0.21
PRECISION PLANTER 4-ROW	2.95	12.37	0.20
PLANTER 1-ROW	0.18	1.93	1.65
PLANTER 2-ROW	0.34	3.61	0.89
PLANTER 4-ROW	2.87	12.03	0.20
PLANTER 6-ROW	4.03	16.90	0.17
PLANTER 8-ROW	5.87	24.66	0.12
PLANTER NO-TILL 4-ROW	6.20	15.38	0.17
PLANTER NO-TILL 6-ROW	8.02	19.91	0.18
PLANTER NO-TILL 8-ROW	12.12	30.07	0.12
PLANTER NO-TILL W/ HERBICIDE 4-ROW	6.69	16.61	0.20
PLANTER NO-TILL W/ SPRAYER 4-ROW	6.69	16.61	0.20
PLANTER W/ FERTILIZER 6-ROW	4.55	19.10	0.17
PLANTER W/ HERBICIDE 6-ROW	4.55	19.10	0.17
PLANTER W/ SPRAYER 4-ROW	3.16	13.27	0.20
PLANTER W/ SPRAYER 6-ROW	4.55	19.10	0.17
POTATO DIGGER (SWEET)	0.87	16.79	0.79
POTATO HARVESTER	12.77	28.13	0.79
POTATO PLANTER	13.05	15.03	0.27
POTATO PLANTER (SWEET)	1.30	13.65	0.39
PRIME AID BULK BARN	10.92	17.70	0.69
PTO AIR BLAST SPRAYER (500)	15.76	25.19	0.20
PTO BALER	4.39	20.91	0.38
PULL TYPE SPRAYER	1.80	9.90	0.18
RAKE	0.79	4.79	0.25
ROLLING CULTIVATOR 6-ROW	1.53	4.25	0.17
ROTARY MOWER 7'	0.63	2.83	0.29
ROTOVATOR	1.27	4.48	1.41
SICKLE MOWER	3.25	6.05	0.26
SIDEDRESSER 2-ROW	0.35	2.24	0.56

*Does not include labor cost. Table 3 contains labor cost on a per acre basis.

Table 1. Estimated Machinery Fixed and Variable Costs Per Hour as Estimated for South Carolina Budgets
(Continued)

Machine Name	Variable Cost Per		Hours Per Acre
	Hour*	Fixed Cost Per Hour	
EQUIPMENT			
SILAGE BLOWER	1.55	4.22	0.47
SILAGE CHOPPER	14.70	28.32	0.43
SILAGE CHOPPER & WAGON	18.41	51.55	0.57
SILAGE WAGON	2.62	10.37	0.57
SPIKE HARROW	0.09	1.36	0.24
SPRAYER, BLOWER	9.05	26.24	0.18
SPRING TOOTH	0.01	3.31	0.11
SUBSOILER-BEDDER 2-ROW	0.84	4.67	0.45
SUBSOILER-BEDDER 4-ROW	4.80	5.46	0.19
SUBSOILER-BEDDER 6-ROW	5.98	6.80	0.17
SUBSOILER-PLANTER W/ SPRAYER 4-ROW	10.50	26.06	0.20
SUBSOILER-PLANTER W/ SPRAYER 6-ROW	12.44	30.88	0.18
SUBSOILER-PLANTER 6-ROW	11.43	28.36	0.18
SUPER BEDDER	2.37	8.45	1.10
TOBACCO CULTIVATOR 1-ROW	0.48	1.09	0.71
TOBACCO HARVESTER LOW PROFILE	1.86	18.31	2.95
TOBACCO TOPPER 2-ROW	4.15	9.16	0.86
TOBACCO TRAILER	0.54	0.85	2.58
TOBACCO TRANSPLANTER 1-ROW	2.23	2.80	3.08
TOBACCO TRANSPLANTER 2-ROW	3.58	4.49	1.54
TOMATO TRANSPLANTER 3-ROW	1.61	13.99	2.06
TRACTOR MOUNTED SPRAYER	1.76	5.12	0.16
TRACTOR MOUNTED SPRAYER & FERT.	2.28	6.61	0.16
TRAILER 4W	1.22	6.77	0.14
TRANSPLANTER 1-ROW	0.39	3.36	2.75
TRANSPLANTER 2-ROW	0.62	5.42	2.29
TRANSPLANTER 4-ROW	2.50	13.71	1.38
WHIRL SEEDER	6.18	9.55	0.23
WINDROWER	0.25	1.40	0.10
TERRAMAX-2	1.24	4.60	0.17
COTTON MODULE BUILDER	5.12	12.72	0.24
TEDDER	7.18	10.28	0.11
STRIP TILL RIG	1.35	8.20	0.25
BUSHHOG 14'	9.46	23.49	0.31
FLAIL MOWER	2.11	9.45	0.15
PLANTER W/ SPRAYER 8-ROW	0.91	4.09	0.49
SUBSOILER-BEDDER 8-ROW	6.14	25.78	0.12
DO-ALL FIELD CONDITIONER 8-ROW	7.39	18.33	0.12
BOLL BUGGY	2.52	7.00	0.09
FARM WAGON	8.30	12.95	0.34
CULTIVATOR W/ HERBICIDE 8-ROW	2.45	8.08	0.15

*Does not include labor cost. Table 3 contains labor cost on a per acre basis.

Table 2. Assumptions used in Estimating Machinery Costs

Machine Name	Average Price	Years Ownec	Hours Used Annually	Total Hours of Life	Salvage Value
Power Units and Self-Propelled					
50-60 HP DIESEL TRACTOR	\$19,490.25	10	500	12000	\$5,757.11
70-80 HP DIESEL TRACTOR	25170.93	10	500	12000	7435.09
95-105 HP DIESEL TRACTOR	44032.50	10	600	12000	13006.50
115-125 HP DIESEL TRACTOR	54306.75	10	600	12000	16041.35
135-145 HP DIESEL TRACTOR	63431.26	10	600	12000	18736.59
155-165 HP DIESEL TRACTOR	74549.47	10	600	12000	22020.73
175-185 HP DIESEL TRACTOR	94392.47	10	600	12000	27882.04
195-205 HP DIESEL TRACTOR	105188.75	10	600	12000	31071.09
COMBINE	108197.64	10	225	2000	22836.42
COMBINE LARGE	141882.50	10	225	2000	29946.02
COMBINE LARGE W/ HEADER	163898.75	10	225	2000	34592.82
COMBINE W/ HEADER	126789.14	10	225	2000	26760.39
COTTON PICKER 2-ROW	118722.87	12	250	2500	13989.01
COTTON PICKER 4-ROW	192154.89	12	250	2500	22641.44
COTTON FINGER STRIPPER 4-ROW	112918.90	12	250	2500	13305.13
HIBOY	68909.39	12	150	2000	9544.41
TOBACCO COMBINE 1-ROW	56650.00	7	260	2000	16547.60
TOBACCO COMBINE 2-ROW	77250.00	7	260	2000	22564.90
VEGETABLE PICKER 4-ROW	144200.00	10	225	2000	30435.16
VEGETABLE PICKER 1-ROW	24720.00	15	200	3000	2373.28
EQUIPMENT					
4-BOTTOM FLIP PLOW	4913.10	12	200	2500	680.50
5-BOTTOM PLOW	7786.80	12	200	2500	1078.52
BALE WAGON	5036.85	10	150	2000	831.34
CHISEL PLOW 12'	5684.83	12	120	2500	787.39
CHISEL PLOW 14'	6626.66	12	120	2500	917.84
CHISEL PLOW 18'	10145.09	12	120	2500	1405.16
COTTON TRAILER	5422.95	12	150	1100	794.93
CULTIPACKER	2317.50	30	50	2500	35.60
CULTIVATOR 1-ROW	927.00	10	100	2000	163.93
CULTIVATOR 2-ROW	1988.88	10	100	2000	351.72
CULTIVATOR 4-ROW	3360.38	15	100	2500	322.62
CULTIVATOR 6-ROW	4472.78	15	125	2500	429.42
CULTIVATOR W/ HERB.& INSECT 6-ROW	5608.35	10	100	2000	991.79
CULTIVATOR W/ HERBICIDE 6-ROW	5098.50	10	100	2000	901.63
CULTIVATOR W/ INSECTICIDE 6-ROW	5098.50	10	100	2000	901.63
CULTIVATOR W/ SPRAYER 6-ROW	5098.50	10	100	2000	901.63
DIGGER INVERTER	6384.97	10	100	1200	1223.22
DISK W/ SPRAYER 16'	12653.55	12	120	2500	1752.60
DISK W/ SPRAYER 21'	15555.06	12	120	2500	2154.48
FERTILIZER SPREADER	10602.56	10	50	1000	1749.97
FUMIGATION UNIT	1519.25	8	50	750	343.03
GRAIN DRILL 16'	10660.50	13	75	1200	1306.75
GRAIN DRILL 8'	5886.45	13	75	1200	721.55
GRAIN DRILL 13' W/ CULTIPACKER	8658.18	13	75	1200	1061.31
GRAIN DRILL 13' W/ FERTILIZER	8574.75	13	75	1200	1051.08
GRANULAR APPLICATOR	3516.57	10	100	2000	621.88
HEAVY DISK 13'	10588.66	12	120	2500	1466.60
HEAVY DISK 14'	11836.40	12	120	2500	1639.42
HEAVY DISK 16'	14408.82	12	120	2500	1995.72
HERBICIDE APPLICATOR 12'	1957.00	10	80	1000	346.08
HERBICIDE APPLICATOR 16'	2806.75	10	90	1000	496.35
LIGHT DISKING W/ HERBICIDE	9069.15	12	100	1440	1256.14
LISTER	1369.90	10	50	2000	242.26
MOWER-CONDITIONER	15606.97	10	100	2000	2575.96
MULCH BEDDER	5150.00	10	50	1000	910.73
MULCH LAYER	4166.35	10	50	1000	736.78

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

Machine Name	Average Price	Years Ownec	Hours Used Annually	Total Hours of Life	Salvage Value
EQUIPMENT					
NO-TILL DRILL 12'	\$12,978.00	13	100	1200	\$1,590.82
NO-TILL DRILL 16'	19235.25	13	75	1200	2357.83
NURSE TANK ON PICK-UP	1923.53	15	50	1200	184.67
PEANUT COMBINE 2-ROW	26897.42	10	100	2000	4756.58
PEANUT PLANTER	10860.84	12	75	1440	1504.30
PRECISION PLANTER 4-ROW	10011.60	12	100	2000	1386.67
PLANTER 1-ROW	1066.05	10	75	2000	188.52
PLANTER 2-ROW	1993.05	10	75	2000	352.45
PLANTER 4-ROW	9733.50	12	100	2000	1348.15
PLANTER 6-ROW	13673.25	12	100	2000	1893.84
PLANTER 8-ROW	19954.14	12	100	2000	2763.78
PLANTER NO-TILL 4-ROW	12444.98	12	100	1440	1723.71
PLANTER NO-TILL 6-ROW	16106.63	12	100	1440	2230.87
PLANTER NO-TILL 8-ROW	24333.75	12	100	1440	3370.39
PLANTER NO-TILL W/ HERBICIDE 4-ROW	13441.50	12	100	1440	1861.74
PLANTER NO-TILL W/ SPRAYER 4-ROW	13441.50	12	100	1440	1861.74
PLANTER W/ FERTILIZER 6-ROW	15457.73	12	100	2000	2141.00
PLANTER W/ HERBICIDE 6-ROW	15457.73	12	100	2000	2141.00
PLANTER W/ SPRAYER 4-ROW	10736.05	12	100	2000	1487.01
PLANTER W/ SPRAYER 6-ROW	15457.73	12	100	2000	2141.00
POTATO DIGGER (SWEET)	11004.52	8	100	2000	2484.67
POTATO HARVESTER	51080.79	15	200	3000	4904.08
POTATO PLANTER	20469.19	15	150	1500	1965.17
POTATO PLANTER (SWEET)	6712.51	8	75	2000	1515.59
PRIME AID BULK BARN	17510.00	8	150	1500	4156.15
PTO AIR BLAST SPRAYER (500)	18541.03	10	100	1000	3278.82
PTO BALER	13601.41	8	100	2000	2866.28
PULL TYPE SPRAYER	4495.95	15	50	1200	431.64
RAKE	2641.95	10	75	2000	467.21
ROLLING CULTIVATOR 6-ROW	4820.40	15	125	2500	462.79
ROTARY MOWER 7'	2085.75	10	100	2000	368.85
ROTOVATOR	1648.00	10	50	1000	291.43
SICKLE MOWER	2224.80	10	50	1000	393.44
SIDEDRESSER 2-ROW	1648.00	10	100	2000	291.43
SILAGE BLOWER	3090.00	10	100	1000	509.52
SILAGE CHOPPER	20748.84	10	100	1500	3424.64
SILAGE CHOPPER & WAGON	28325.00	10	75	1500	4675.10
SILAGE WAGON	7596.25	10	100	2000	1253.78
SPIKE HARROW	927.00	15	75	3000	89.00
SPRAYER, BLOWER	15450.00	10	80	1000	2732.20
SPRING TOOTH	2252.10	15	75	15000	216.22
SUBSOILER-BEDDER 2-ROW	3777.53	12	100	2500	523.21
SUBSOILER-BEDDER 4-ROW	6628.05	12	150	2500	918.03
SUBSOILER-BEDDER 6-ROW	8250.30	12	150	2500	1142.72
SUBSOILER-PLANTER W/ SPRAYER 4-ROW	21089.25	12	100	1440	2921.00
SUBSOILER-PLANTER W/ SPRAYER 6-ROW	24982.65	12	100	1440	3460.26
SUBSOILER-PLANTER 6-ROW	22943.25	12	100	1440	3177.79
SUPER BEDDER	3127.08	10	50	1000	599.08
TOBACCO CULTIVATOR 1-ROW	1205.10	10	150	2000	213.11
TOBACCO HARVESTER LOW PROFILE	12875.00	7	115	2000	3284.74
TOBACCO TOPPER 2-ROW	3038.50	8	50	1000	754.66
TOBACCO TRAILER	1030.00	12	150	1100	150.98
TOBACCO TRANSPLANTER 1-ROW	2987.00	10	145	1200	528.23
TOBACCO TRANSPLANTER 2-ROW	4789.50	10	145	1200	846.98
TOMATO TRANSPLANTER 3-ROW	7725.00	10	75	2000	1366.10

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

Machine Name	Average Price	Years Owned	Hours Used Annually	Total Hours of Life	Salvage Value
EQUIPMENT					
TRACTOR MOUNTED SPRAYER	\$3,012.75	10	80	1000	\$532.78
TRACTOR MOUNTED SPRAYER & FERT.	3893.40	10	80	1000	688.51
TRAILER 4W	2502.90	10	50	1000	468.44
TRANSPLANTER 1-ROW	1854.00	10	75	2000	327.86
TRANSPLANTER 2-ROW	2994.21	10	75	2000	529.50
TRANSPLANTER 4-ROW	10094.00	10	100	2000	1785.04
TRUCK 1.5 TON	30900.00	8	500	4000	6194.71
WHIRL SEEDER	515.00	10	50	1000	91.07
WINDROWER	2394.24	8	80	1500	504.55
TERRAMAX-2	10289.70	12	100	1440	1425.19
COTTON MODULE BUILDER	20672.10	12	250	2500	2435.77
TEDDER	4527.00	10	75	2000	800.56
STRIP TILL RIG	19003.50	12	100	1440	2632.11
BUSHHOG 14'	6952.50	10	100	2000	1229.49
FLAIL MOWER	3012.75	10	100	2000	532.78
PLANTER W/ SPRAYER 8-ROW	20857.50	12	100	2000	2888.90
SUBSOILER-BEDDER 8-ROW	14832.00	12	100	1440	2054.33
DO-ALL FIELD CONDITIONER 8-ROW	7944.39	15	125	2500	762.71
BOLL BUGGY	15759.00	12	150	1100	2310.05
FARM WAGON	3012.75	10	50	1000	630.91
CULTIVATOR W/ HERBICIDE 8-ROW	6595.61	10	100	2000	1166.38

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

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	0.363	0.33	1.71	8.44	21.27	2.18	31.89
COMBINE LARGE	N/A	0.275	0.25	1.70	8.39	21.13	1.65	31.17
COMBINE LARGE W/ HEADER	N/A	0.275	0.25	1.97	9.69	24.40	1.65	35.74
COMBINE W/ HEADER	N/A	0.363	0.33	2.01	9.90	24.92	2.18	37.00
COTTON PICKER 2-ROW	N/A	0.836	0.76	4.33	36.30	44.89	5.02	86.21
COTTON PICKER 4-ROW	N/A	0.418	0.38	3.50	29.38	36.33	2.51	68.22
COTTON FINGER STRIPPER 4-ROW	N/A	0.253	0.23	1.25	10.45	12.92	1.52	24.89
HIBOY	N/A	0.066	0.06	0.20	1.46	3.41	0.40	5.27
TOBACCO COMBINE 1-ROW	N/A	1.716	1.56	4.24	18.41	54.35	10.30	83.06
TOBACCO COMBINE 2-ROW	N/A	1.144	1.04	3.86	16.72	49.41	6.86	72.99
VEGETABLE PICKER 4-ROW	N/A	0.275	0.25	1.73	8.53	21.47	1.65	31.65
VEGETABLE PICKER 1-ROW	N/A	0.869	0.79	0.94	5.96	10.75	5.21	21.92
EQUIPMENT								
4-BOTTOM FLIP PLOW	70-80HP	0.275	0.25	0.90	2.38	2.39	1.65	6.42
5-BOTTOM PLOW	95-105HP	0.220	0.20	0.96	2.92	2.86	1.32	7.10
BALE WAGON	50-60HP	0.187	0.17	0.45	0.99	1.64	1.12	3.75
CHISEL PLOW 12'	95-105HP	0.220	0.20	0.96	1.88	3.07	1.32	6.27
CHISEL PLOW 14'	95-105HP	0.187	0.17	0.82	1.62	2.78	1.12	5.52
CHISEL PLOW 18'	115-125HP	0.132	0.12	0.69	1.43	2.66	0.79	4.88
COTTON TRAILER	50-60HP	0.374	0.34	0.90	2.28	3.23	2.24	7.75
CULTIPACKER	70-80HP	0.220	0.20	0.72	1.19	2.03	1.32	4.54
CULTIVATOR 1-ROW	50-60HP	1.298	1.18	3.12	4.78	7.43	7.79	20.00
CULTIVATOR 2-ROW	50-60HP	0.616	0.56	1.48	2.40	4.33	3.70	10.43
CULTIVATOR 4-ROW	70-80HP	0.253	0.23	0.83	1.50	2.35	1.52	5.37
CULTIVATOR 6-ROW	70-80HP	0.187	0.17	0.61	1.20	1.78	1.12	4.10
CULTIVATOR W/ HERB. & INSECT 6-ROW	70-80HP	0.187	0.17	0.61	1.23	2.40	1.12	4.75
CULTIVATOR W/ HERBICIDE 6-ROW	70-80HP	0.187	0.17	0.61	1.21	2.28	1.12	4.61
CULTIVATOR W/ INSECTICIDE 6-ROW	70-80HP	0.187	0.17	0.61	1.21	2.28	1.12	4.61
CULTIVATOR W/ SPRAYER 6-ROW	70-80HP	0.187	0.17	0.61	1.21	2.28	1.12	4.61
DIGGER INVERTER	95-105HP	1.012	0.92	4.42	12.31	16.67	6.07	35.05
DISK W/ SPRAYER 16	95-105HP	0.165	0.15	0.72	1.58	3.38	0.99	5.95
DISK W/ SPRAYER 21	115-125HP	0.132	0.12	0.69	1.54	3.33	0.79	5.66
FERTILIZER SPREADER	50-60HP	0.132	0.12	0.32	1.19	4.08	0.79	6.06
FUMIGATION UNIT	50-60HP	0.473	0.43	1.14	2.10	4.16	2.84	9.10
GRAIN DRILL 16	95-105HP	0.143	0.13	0.62	1.83	3.43	0.86	6.12
GRAIN DRILL 8	70-80HP	0.319	0.29	1.04	2.54	4.59	1.91	9.04
GRAIN DRILL 13' W/ CULTIPACKER	95-105HP	0.176	0.16	0.77	2.08	3.71	1.06	6.85
GRAIN DRILL 13' W/ FERTILIZER	115-125HP	0.176	0.16	0.92	2.36	4.04	1.06	7.46
GRANULAR APPLICATOR	50-60HP	0.616	0.56	1.48	2.58	5.50	3.70	11.78
HEAVY DISK 13	135-145HP	0.187	0.17	1.14	2.33	4.18	1.12	7.63
HEAVY DISK 14	135-145HP	0.165	0.15	1.01	2.08	3.88	0.99	6.95
HEAVY DISK 16	155-165HP	0.143	0.13	1.00	2.10	4.02	0.86	6.98
HERBICIDE APPLICATOR 12	70-80HP	0.165	0.15	0.54	1.02	1.47	0.99	3.48
HERBICIDE APPLICATOR 16	70-80HP	0.121	0.11	0.40	0.82	1.18	0.73	2.73
LIGHT DISKING W/ HERBICIDE	135-145HP	0.165	0.15	1.01	1.94	3.11	0.99	6.04
LISTER	70-80HP	0.649	0.59	2.12	3.53	6.04	3.89	13.46
MOWER-COONITIONER	50-60HP	0.396	0.36	0.95	3.67	9.48	2.38	15.53
MULCH BEDDER	50-60HP	0.572	0.52	1.37	6.35	9.90	3.43	19.68
MULCH LAYER	50-60HP	0.572	0.52	1.37	5.52	8.51	3.43	17.46

*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			Total Cost (Fixed,		
				Required Per Timeover	Variable Cost Per Timeover	Fixed Cost Per Timeover	Labor Cost at \$6.00 Per Timeover	Variable, and Labor)	
EQUIPMENT									
NO-TILL DRILL 12	95-105HP	0.231	0.21	1.01	3.75	5.23	1.39	10.37	
NO-TILL DRILL 16	115-125HP	0.154	0.14	0.81	2.86	5.90	0.92	9.68	
NURSE TANK ON PICK-UP	50-60HP	0.187	0.17	0.45	0.79	1.58	1.12	3.49	
PEANUT COMBINE 2-ROW	95-105HP	1.210	1.10	5.28	18.24	50.64	7.26	76.14	
PEANUT PLANTER	95-105HP	0.231	0.21	1.01	2.73	5.75	1.39	9.87	
PRECISION PLANTER 4-ROW	95-105HP	0.220	0.20	0.96	2.28	4.37	1.32	7.97	
PLANTER 1-ROW	50-60HP	1.815	1.65	4.36	6.65	11.50	10.89	29.04	
PLANTER 2-ROW	50-60HP	0.979	0.89	2.35	3.73	7.70	5.87	17.30	
PLANTER 4-ROW	95-105HP	0.220	0.20	0.96	2.26	4.31	1.32	7.89	
PLANTER 6-ROW	115-125HP	0.187	0.17	0.98	2.42	4.86	1.12	8.40	
PLANTER 8-ROW	135-145HP	0.132	0.12	0.81	2.13	4.60	0.79	7.52	
PLANTER NO-TILL 4-ROW	135-145HP	0.187	0.17	1.14	3.08	4.94	1.12	9.14	
PLANTER NO-TILL 6-ROW	155-165HP	0.198	0.18	1.38	3.92	6.48	1.19	11.59	
PLANTER NO-TILL 8-ROW	175-185HP	0.132	0.12	1.04	3.39	6.05	0.79	10.23	
PLANTER NO-TILL W/ HERB. 4-ROW	135-145HP	0.220	0.20	1.34	3.72	6.06	1.32	11.10	
PLANTER NO-TILL W/ SPRAYER 4-ROW	135-145HP	0.220	0.20	1.34	3.72	6.06	1.32	11.10	
PLANTER W/ FERTILIZER 6-ROW	115-125HP	0.187	0.17	0.98	2.51	5.24	1.12	8.87	
PLANTER W/ HERBICIDE 6-ROW	115-125HP	0.187	0.17	0.98	2.51	5.24	1.12	8.87	
PLANTER W/ SPRAYER 4-ROW	95-105HP	0.220	0.20	0.96	2.32	4.55	1.32	8.19	
PLANTER W/ SPRAYER 6-ROW	115-125HP	0.187	0.17	0.98	2.51	5.24	1.12	8.87	
POTATO DIGGER (SWEET)	70-80HP	0.869	0.79	2.84	5.14	18.41	5.21	28.76	
POTATO HARVESTER	115-125HP	0.869	0.79	4.55	18.15	31.47	5.21	54.83	
POTATO PLANTER	95-105HP	0.297	0.27	1.30	5.80	6.62	1.78	14.20	
POTATO PLANTER (SWEET)	70-80HP	0.429	0.39	1.40	2.70	7.86	2.57	13.13	
PRIME AID BULK BARN	50-60HP	0.759	0.69	1.82	10.19	15.69	4.55	30.43	
PTO AIR BLAST SPRAYER (500'	95-105HP	0.220	0.20	0.96	4.84	6.94	1.32	13.10	
PTO BALER	95-105HP	0.418	0.38	1.82	4.87	11.56	2.51	18.94	
PULL TYPE SPRAYER	50-60HP	0.198	0.18	0.48	1.02	2.69	1.19	4.90	
RAKE	50-60HP	0.275	0.25	0.66	1.16	2.46	1.65	5.27	
ROLLING CULTIVATOR 6-ROW	70-80HP	0.187	0.17	0.61	1.22	1.83	1.12	4.17	
ROTARY MOWER 7'	50-60HP	0.319	0.29	0.77	1.30	2.28	1.91	5.49	
ROTOVATOR	50-60HP	1.551	1.41	3.72	7.22	13.42	9.31	29.95	
SICKLE MOWER	50-60HP	0.286	0.26	0.69	1.85	2.88	1.72	6.45	
SIDEDRESSER 2-ROW	70-80HP	0.616	0.56	2.02	3.35	4.90	3.70	11.95	
SILAGE BLOWER	50-60HP	0.517	0.47	1.24	2.54	4.35	3.10	9.99	
SILAGE CHOPPER	115-125HP	0.473	0.43	2.48	10.71	17.21	2.84	30.76	
SILAGE CHOPPER & WAGON	115-125HP	0.627	0.57	3.28	16.31	36.06	3.76	56.13	
SILAGE WAGON	95-105HP	0.627	0.57	2.74	6.30	11.33	3.76	21.39	
SPIKE HARROW	50-60HP	0.264	0.24	0.63	0.95	1.54	1.58	4.07	
SPRAYER, BLOWER	50-60HP	0.198	0.18	0.48	2.32	5.63	1.19	9.14	
SPRING TOOTH	50-60HP	0.121	0.11	0.29	0.42	0.92	0.73	2.07	
SUBSOILER-BEDDER 2-ROW	70-80HP	0.495	0.45	1.62	2.91	5.03	2.97	10.91	
SUBSOILER-BEDDER 4-ROW	115-125HP	0.209	0.19	1.09	2.85	3.26	1.25	7.36	
SUBSOILER-BEDDER 6-ROW	135-145HP	0.187	0.17	1.14	3.04	3.48	1.12	7.64	
SUBSOILER-PLANTER W/ SPRAYER 4-ROW	135-145HP	0.220	0.20	1.34	4.48	7.95	1.32	13.75	
SUBSOILER-PLANTER W/ SPRAYER 6-ROW	155-165HP	0.198	0.18	1.38	4.71	8.45	1.19	14.35	
SUBSOILER-PLANTER 6-ROW	155-165HP	0.198	0.18	1.38	4.53	8.00	1.19	13.72	

*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			Total Cost (Fixed,	
				Required Per Timeover	Variable Cost Per Timeover	Fixed Cost Per Timeover	Labor Cost at \$6.00 Per Timeover	Variable, and Labor)
EQUIPMENT								
SUPER BEDDER	70-80HP	1.210	1.10	3.96	8.80	16.46	7.26	32.52
TOBACCO CULTIVATOR 1-ROW	50-60HP	0.781	0.71	1.87	3.07	4.35	4.69	12.11
TOBACCO HARVESTER LOW PROFILE	50-60HP	3.245	2.95	7.79	16.84	68.88	19.47	105.19
TOBACCO TOPPER 2-ROW	50-60HP	0.946	0.86	2.27	6.88	12.21	5.68	24.77
TOBACCO TRAILER	50-60HP	2.838	2.58	6.81	11.33	15.20	17.03	43.56
TOBACCO TRANSPLANTER 1-ROW	70-80HP	3.388	3.08	11.09	24.21	28.67	20.33	73.21
TOBACCO TRANSPLANTER 2-ROW	95-105HP	1.694	1.54	7.39	18.50	21.54	10.16	50.20
TOMATO TRANSPLANTER 3-ROW	70-80HP	2.266	2.06	7.42	14.91	42.23	13.60	70.74
TRACTOR MOUNTED SPRAYER	50-60HP	0.176	0.16	0.42	0.90	1.63	1.06	3.59
TRACTOR MOUNTED SPRAYER & FERT.	50-60HP	0.176	0.16	0.42	0.98	1.86	1.06	3.90
TRAILER 4W	50-60HP	0.154	0.14	0.37	0.71	1.65	0.92	3.28
TRANSPLANTER 1-ROW	50-60HP	3.025	2.75	7.26	11.66	23.10	18.15	52.91
TRANSPLANTER 2-ROW	50-60HP	2.519	2.29	6.05	10.24	23.95	15.11	49.30
TRANSPLANTER 4-ROW	70-80HP	1.518	1.38	4.97	11.22	27.90	9.11	48.23
WHIRL SEEDER	50-60HP	0.253	0.23	0.61	1.42	2.20	1.52	5.14
WINDROWER	50-60HP	0.110	0.10	0.26	0.41	0.64	0.66	1.71
TERRAMAX-2	155-165HP	0.187	0.17	1.31	0.87	1.64	1.12	3.63
BROADCAST DEEP TILLAGE	70-80HP	0.264	0.24	0.86	5.11	7.94	1.58	14.63
COTTON MODULE BUILDER	50-60HP	0.121	0.11	0.29	1.72	2.18	0.73	4.63
TEDDER	70-80HP	0.275	0.25	0.90	1.30	3.31	1.65	6.26
STRIP TILL RIC	70-80HP	0.341	0.31	1.12	4.13	8.84	2.05	15.02
BUSHHOG 14'	50-60HP	0.165	0.15	0.40	0.89	2.17	0.99	4.05
FLAIL MOWER	155-165HP	0.539	0.49	3.76	2.33	4.47	3.23	10.03
PLANTER W/ SPRAYER 8-ROW	155-165HP	0.132	0.12	0.92	2.17	4.74	0.79	7.70
SUBSOILER-BEDDER 8-ROW	70-80HP	0.132	0.12	0.43	3.04	4.92	0.79	8.75
DO-ALL FIELD CONDITIONER 8-ROW	70-80HP	0.099	0.09	0.32	1.30	1.86	0.59	3.75
BOLL BUGGY	50-60HP	0.374	0.34	0.90	4.13	6.12	2.24	12.49
FARM WAGON	70-80HP	0.165	0.15	0.72	1.21	2.19	0.99	4.39
CULTIVATOR W/ HERBICIDE 8-ROW	95-105HP	0.110	0.10	0.58	1.03	1.85	0.66	3.54

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