

1996 Kentucky Custom Rates for Farm Machinery

Fred J. Benson, M.N. Mawampanga, and Larry D. Swetnam

The suggested custom rates provided in the following tables have been calculated by formula from the most recent farm machinery, energy, and labor prices available. In times of stable price levels, surveys of market custom rates are a reasonable method for determining charges; however, in today's world of drastically changing costs, any survey is out of date before the summary is completed and made available. We feel that our method of estimating custom rates can provide reasonable estimates as a base for determining a negotiated rate between a purchaser and a supplier of custom services.

Fuel and interest costs have decreased from last year. There were some slight price increases in some types of machinery, and some types of machinery decreased in price. New equipment prices were obtained from several regional sales offices of farm equipment manufacturers, and these prices were averaged for each tractor or implement.

Buyers of new machinery can generally negotiate an additional 6 percent off list price. This publication considers machinery prices to include a 6 percent increase to list price, representing property tax, transportation, and setup charges for farm machinery, which offsets the 6 percent negotiation. The cost estimates in this publication therefore consider the ending price the farmer pays to equate out to be approximately the list price quoted by the machinery dealer. (See Kentucky Farm Machinery Economic Cost Estimates for 1996.)

The items listed in the tables include a description of the implement, the tractor or combine base used with the implement, and the cash operating, total, and suggested custom rate costs on a per acre and per hour basis. Also included on a per acre or per hour basis are the estimated costs of overhead, hours of labor, repairs, maintenance, fuel, and lubrication.

Machine and Tractor Identification: The name of the implement and the size of the tractor or combine base is provided in columns 1 and 2. A self-propelled implement such as a swather will have three dashes (---) indicating that no tractor is used. Combines are presented slightly differently. The head of the combine is identified in the first column, and the size of the base unit is given in the second column. For example, the "COMBINE SM GRAIN MED," describes a medium sized combine head used for harvesting small grains. The second column describes the base combine as a medium sized unit. The medium sized combine base is also used on the medium sized soybean head and the four-row corn heads.

Cash Operating Costs: These costs, provided on a per hour and per acre basis, are estimates of the costs of fuel (diesel), oil, and repairs for the tractor and the implement as used for the particular function described. Labor cost estimates are not included in this figure.

Total Costs: Total costs provide estimates of all costs associated with carrying out the particular function. These

costs include cash operating costs, labor, and overhead costs for the tractor and implement. Labor is valued at \$6.25 per hour for unskilled labor and \$8.75 per hour for skilled labor.

Suggested Custom Rates: The suggested custom rate values include an additional 20 percent over the total cost figures. This margin provides a profit to the custom operator and a return for the risk and travel expenses involved. Many times a custom operator will cover more acres annually than a commercial farmer. Therefore, for popular custom services the overhead costs may be spread over more acres and hours, thereby reducing the total costs.

Overhead Cost/Acre: The overhead cost per acre is the total annual overhead cost of the tractor and implement on a per acre basis typical of a commercial farmer.

Labor Hours/Acre: This represents an estimate of the required hours of labor on one acre with a specific machine. It includes a measure for travel and set up time as well as direct use machine field time.

Repair and Maintenance/Acre: This is an estimate on a per acre basis for the average cost of repairs and maintenance of the tractor and implement as used on one acre. A set of formulas is used from the American Society of Agricultural Engineers Standards.

Fuel and Lube/Acre: This is an estimate of fuel (diesel) and oil costs per acre where diesel fuel is estimated to cost \$1.00 per gallon and oil cost is estimated to be 10 percent of the fuel costs.

Custom rates will vary from area to area and are always a function of the demand for and the supply of those custom services. The charges for the services may be determined in different ways for different situations. For example, if two farmers are trading services they may price their services on a cash cost basis. This assumes that the value of their labor and machinery overhead would be approximately the same. Cash cost and labor expenses could only be expected to be recouped if they were being paid by an insurance settlement to replant a crop. It is assumed that the ownership costs already are considered as a normal production cost.

If farmers trading machinery use consider their inputs, labor, and machinery overhead unequal, they should base their rates on a total cost or a suggested custom rate basis.

The following tables are the results of the projections for 1996.

Fred J. Benson is an Extension Economist in farm management, Mwana N. Mawampanga is a Post Doctorate Research Specialist in the Department of Agricultural Economics, and Larry D. Swetnam is a Research and Extension Specialist in Biosystems and Agricultural Engineering.

TABLE 1. ESTIMATED OPERATING COSTS, OWNERSHIP COSTS, AND SUGGESTED CUSTOM RATES ON A PER HOUR AND A PER ACRE BASIS

MACHINE	TRACTOR HP	CASH OPERATING COSTS		TOTAL COSTS		SUGGESTED CUSTOM RATES	
		PER HOUR	PER ACRE	PER HOUR	PER ACRE	PER HOUR	PER ACRE
MB PLOW 2-16	40	3.94	3.40	14.57	12.55	17.41	15.00
MB PLOW 3-16	60	6.34	3.63	19.80	11.35	23.58	13.51
MJ3 PLOW 4-16	75	7.92	3.41	22.86	9.83	27.17	11.68
MB PLOW 5-16	100	13.99	4.81	37.94	13.06	44.74	15.39
MB PLOW 6-16	120	16.87	4.83	43.33	12.41	50.93	14.59
MB PLOW 7-16	140	19.73	4.85	49.89	12.25	58.83	14.45
MB PLOW 8-16	160	24.35	5.23	58.37	12.55	68.73	14.77
MB PLOW 9-18	225	30.70	5.21	70.77	12.01	83.18	14.12
MB PLOW 10-18	225	31.69	4.84	73.06	11.16	86.36	13.19
MB PLOW 12-18	275	39.10	4.98	93.85	11.95	112.21	14.29
CHISEL PLOW 10 FT	75	8.60	1.97	27.72	6.35	32.15	7.37
CHISEL PLOW 15 FT	120	13.06	1.99	35.87	5.48	42.59	6.51
CHISEL PLOW 17 FT	140	15.29	2.06	41.05	5.53	48.69	6.56
CHISEL PLOW 20 FT	160	17.73	2.03	44.77	5.13	52.88	6.06
CHISEL PLOW WING 24	225	23.28	2.22	61.65	5.89	73.19	6.99
CHISEL PLOW WING 29	250	26.07	2.06	68.56	5.42	81.07	6.41
CHISEL PLOW WING 35	300	30.03	1.97	75.05	4.91	89.14	5.84
FIELD CULTIVATOR 12	75	7.74	1.28	23.99	3.96	28.63	4.72
FIELD CULTIVATOR 18	100	10.49	1.20	29.24	3.35	35.07	4.02
FIELD CULTIVATOR 28	160	18.15	1.34	45.83	3.38	54.85	4.04
FIELD CULTIVATOR 37	225	22.74	1.27	52.95	2.95	63.23	3.52
FIELD CULTIVATOR 50	250	27.53	1.14	74.00	3.05	88.08	3.63
DISK CHISEL 9 FT-	100	10.37	2.72	32.39	8.48	37.50	9.82
DISK CHISEL 11 FT	100	10.81	2.20	32.00	6.52	39.68	8.08
DISK CHISEL 14 FT	100	11.78	1.96	31.46	5.24	43.00	7.17
MIN-TIL PLANTER 4-36	60	9.52	2.67	44.47	12.48	51.14	14.35

MIN-TIL PLANTER 6-36	75	12.22	2.29	54.90	10.27	63.78	11.93
MIN-TIL PLANTER 6-30	75	12.10	2.72	54.21	12.17	61.58	13.82
MIN-TIL PLANTER 8-30	100	17.38	2.93	73.30	12.34	84.52	14.23
MIN-TIL PLANTER 8-36	100	17.78	2.49	75.54	10.60	86.25	12.10
MIN-TIL PLANTER 12-3	160	27.41	3.08	105.81	11.88	119.60	13.42
DISK 10 FT	60	6.29	1.30	24.51	5.05	29.41	6.07
DISK 12 FT	75	7.51	.97	27.00	3.48	32.41	4.18
DISK 17 FT	75	8.44	1.02	33.82	4.10	40.56	4.92
DISK 20 FT	100	11.40	1.18	40.48	4.17	48.57	5.01
DISK 21 FT	100	11.49	1.13	41.06	4.03	49.24	4.84
DISK 24 FT	120	14.31	1.23	50.82	4.37	60.85	5.23
DISK 28 FT	140	16.82	1.24	58.43	4.30	70.07	5.16
DISK 32 FT	160	19.12	1.23	63.26	4.08	75.74	4.88
DISK 40 FT	180	22.71	1.17	78.65	4.06	93.08	4.80

TABLE 1, CONTINUED

MACHINE	TRACTOR HP	CASH OPERATING COSTS		TOTAL COSTS		SUGGESTED CUSTOM RATES	
		PER HOUR	PER ACRE	PER HOUR	PER ACRE	PER HOUR	PER ACRE
DISK OFFSET 14 FT	140	15.17	2.48	46.23	7.57	55.50	9.08
DISK OFFSET 16 FT	160	17.07	2.44	48.20	6.90	57.80	8.28
DISK OFFSET 18 FT	180	19.25	2.45	53.21	6.77	63.75	8.12
DISK-WING OFFSET 21	225	21.35	2.33	62.22	6.79	74.58	8.14
DISK-WING OFFSET 23	225	22.10	2.20	67.78	6.75	81.17	8.09
LANDPLANE 45-12 FT	80	19.25	3.01	53.75	8.40	64.49	10.08
LANDPLANE 55-14 FT	225	22.92	2.87	74.41	9.30	89.29	11.16
LANDPLANE 70-14 FT	225	23.19	3.11	76.96	10.31	92.35	12.37
SPRINGTOOTH DRAG 30	60	5.91	.37	31.54	1.97	37.85	2.37
SPRINGTOOTH DRAG 48	75	7.26	.24	35.52	1.17	42.61	1.41
CORN PLANTER 4-36	40	6.94	1.51	36.49	7.96	42.19	9.21
CORN PLANTER 6-36	60	11.24	1.63	54.06	7.87	63.61	9.26

CORN PLANTER 6-30	60	10.47	1.83	49.79	8.69	57.16	9.98
CORN PLANTER 8-30	75	14.20	1.86	65.90	8.63	76.02	9.96
CORN PLANTER 12-30	100	21.07	1.84	94.12	8.22	05.78	9.23
GRAIN DRILL PW 12 FT	40	6.92	1.45	32.05	6.71	38.18	7.99
GRAIN DRILL PW 14 FT	40	7.06	1.27	32.67	5.86	37.59	6.74
GRAIN DRILL PW 16 FT	60	9.46	1.48	38.97	6.12	45.45	7.13
GRAIN DRILL PW 20 FT	75	11.43	1.43	44.46	5.58	51.42	6.46
GRAIN DRILL PW 24 FT	75	12.43	1.30	49.03	5.13	56.24	5.89
GRAIN DRILL PW 28 FT	100	16.50	1.48	60.16	5.40	70.30	6.31
CULTIVATOR 4-36	40	4.89	1.05	22.13	4.76	25.95	5.58
CULTIVATOR 6-36	60	6.04	.87	21.90	3.14	25.97	3.72
CULTIVATOR 6-30	60	5.94	1.02	21.17	3.64	25.34	4.35
CULTIVATOR 8-30	75	7.44	.96	25.27	3.26	30.29	3.90
CULTIVATOR 12-30	140	15.40	1.32	45.55	3.91	54.26	4.66
RIDGE-CULT 4-36	75	7.47	1.61	25.37	5.45	29.95	6.43
RIDGE-CULT 6-36	100	10.83	1.55	34.26	4.91	40.39	5.78
RIDGE-CULT 6-30	100	10.63	1.83	32.84	5.64	38.78	6.66
RIDGE-CULT 8-36	100	11.30	1.21	37.24	4.00	43.76	4.70
RIDGE-CULT 8-30	100	11.03	1.42	35.42	4.57	41.48	5.35
RIDGE-CULT 12-30	160	17.96	1.45	52.40	4.24	62.00	5.01
ROTARY HOE 16	40	4.03	.37	23.37	2.15	27.89	2.57
SPRAYER 30 FT	40	4.80	.34	24.46	1.72	29.32	2.07
SPRAYER 50 FT	60	7.20	.30	29.12	1.23	34.93	1.48
SPRAYER HI PRES 50FT	60	16.84	.71	65.85	2.79	78.91	3.34
ANHYDROUS APPLICA-TOR	160	25.54	2.01	88.32	6.94	98.26	7.72
FERTILIZER SPRDR	60	5.57	.14	21.39	.55	25.57	.66
SHREDDER 12 FT	60	6.70	1.54	25.32	5.80	29.92	6.86
MOWER-COND 9 FT	60	7.67	1.88	35.17	8.60	40.98	10.02
SWATHER-COND. 12 FT	---	5.10	.94	38.16	7.00	42.87	7.86

SWATHER-COND. 15 FT	---	5.17	.76	39.37	5.77	44.19	6.48
SWATHER 12 FT	---	6.17	1.06	54.68	9.40	62.12	10.68
SWATHER 15 FT	---	6.23	.86	55.79	7.67	62.98	8.66
TABLE 1, CONTINUED							
MACHINE	TRACTOR HP	CASH OPERATING COSTS		TOTAL COSTS		SUGGESTED CUSTOM RATES	
		PER HOUR	PER ACRE	PER HOUR	PER ACRE	PER HOUR	PER ACRE
SWATHER 18 FT	-	6.34	.73	57.64	6.60	65.43	7.50
SWATHER 20 FT	-	6.48	.67	60.03	6.19	67.70	6.98
BALER PTO TWINE	40	9.60	2.54	31.77	8.40	35.73	9.45
ROUND BALER 1500 LB	60	12.97	2.80	36.24	7.82	42.24	9.11
ROUND BALER 1000 LB	60	11.87	3.94	33.39	11.08	37.77	12.53
ROTARY MOWER	40	4.08	1.50	15.26	5.60	18.26	6.70
RAY,E (HYD)	40	5.63	1.61	17.87	5.12	21.05	6.03
FORAGE HARV. 1 ROW	60	8.60	9.10	40.34	42.67	47.28	50.01
FORAGE HARV. 2 ROW	100	12.92	7.81	49.72	30.05	57.83	34.95
FOR HARV 2 ROW SP	-	19.59	9.62	83.01	40.76	94.81	46.56
FOR HAR 3 ROW SP	-	22.68	7.43	95.01	31.10	107.73	35.27
FORAGE BLOWER LG	60	5.71	5.71	24.77	24.77	28.14	28.14
CORN PICKER 2-36	40	8.03	5.66	36.04	25.41	41.22	29.06
PICKER-SHELLER 2-ROW	60	9.25	6.21	37.13	24.93	42.85	28.78
COMBINE SM GRAIN SML	SML	38.07	9.29	79.91	19.51	95.28	23.26
COMBINE SM GRAIN MED	MED	46.82	8.25	96.63	17.03	115.97	20.44
COMBINE SM GRAIN LGE	LRG	57.81	7.34	117.06	14.86	140.78	17.87
COMBINE SOYBEANS SML	SML	38.79	9.38	82.28	19.89	98.52	23.82
COMBINE SOYBEANS MED	MED	47.38	8.59	98.47	17.85	118.87	21.55
COMBINE SOYBEANS LGE	LRG	58.41	8.47	119.01	17.26	144.06	20.90
COMBINE CORN 3-30 SM	SML	38.63	21.79	81.73	46.11	97.21	54.84

COMBINE CORN 2-38 SM	SML	38.23	25.67	80.42	54.01	95.88	64.39
COMBINE CORN 3-38 SM	SML	38.93	17.34	82.73	36.84	98.25	43.75
COMBINE CORN 4-36 MD	MED	47.59	16.78	99.17	34.96	117.77	41.52
COMBINE CORN 4-30 MD	MED	47.97	18.45	100.39	38.61	119.06	45.79
COMBINE CORN 6-30 LG	LRG	60.08	15.40	124.46	31.91	147.36	37.78
COMBINE CORN 8-30 LG	LRG	61.24	12.95	128.29	27.14	151.40	32.03
COMBINE CORN 12-30 J	JMB	70.85	9.99	147.03	20.74	173.88	24.52
LIGHT TRUCK	-	8.21	5.42	18.94	12.50	22.01	14.53
MEDIUM TRUCK	-	14.76	9.74	29.90	19.73	34.45	22.73
HEAVY TRUCK	-	26.61	17.56	49.02	32.35	56.22	37.10
MANURE SPREADER 150	75	10.16	2.91	26.72	7.65	31.33	8.98
MANURE SPREADER 245	100	14.88	4.26	36.50	10.46	42.71	12.24
MANURE SPREADER 350	100	17.32	3.72	41.99	9.02	49.55	10.65
GRAVITY BOX 185 BU	40	4.20	2.54	15.75	9.52	18.75	11.33
GRAVITY BOX 240 BU	40	4.27	2.58	16.00	9.67	19.03	11.50
HAY WAGON	40	4.73	1.25	21.90	5.79	26.13	6.91
FORAGE WAGON 14 FT	40	6.40	3.87	22.59	13.66	26.02	15.73
FORAGE WAGON 16 FT	40	6.63	4.01	23.18	14.01	26.66	16.12
MEDIUM TRUCK (USED)	-	8.56	5.65	19.21	12.68	22.34	14.74
HEAVY TRUCK (USED)	-	22.60	14.92	42.12	27.80	48.41	31.95

Cooperative Extension Service

Agriculture and Natural Resources
Family and Consumer Sciences
4-H Youth Development
Community and Economic Development

MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, physical or mental disability or reprisal or retaliation for prior civil rights activity. Reasonable accommodation of disability may be available with prior notice. Program information may be made available in languages other than English. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating.

Lexington, KY 40506 Revised 04-2024



Disabilities
accommodated
with prior notification.