Doane's Agricultural Report®

Estimated Machinery Operating Costs, 2000

Listed are the costs of owning and operating new machinery. Internet users can access http://apecon.agri.umn.edu/crop.html *for interactive worksheets.*

The costs of operating farm machinery, shown in this report, are based on an annual estimate made by William Lazarus of the University of Minnesota with input from Roger Selley of the University of Nebraska. The numbers reflect the per-hour or per-acre cost of operating newly purchased farm machinery at the annual rates shown.

Assumptions used. In these estimates, **fixed costs** (overhead) include depreciation, interest on investment, insurance, housing, and taxes. Depreciation is based on a 12-year life, with trade-in values based on the American Society of Agricultural Engineers' formulas. Purchase prices of the equipment are discounted 10% from the manufacturer's list price. Interest is inflation adjusted to a 6% "real" rate. Insurance is figured at 0.85% of new cost. Housing is charged at 33¢ per square foot of needed space.

Operating costs include on-farm diesel fuel at $1.00 per gallon; lubrication, estimated at 15% of fuel costs; and repair and maintenance cost estimates, based on accumulated hours of use. Labor costs are charged at an hourly rate that includes a 30% benefit factor. The hourly rate is $9.50 for unskilled labor and $12.00 for skilled labor. This rate is used with planting, harvesting, and sprayer equipment.

Total costs per hour or per acre are those necessary to fully recover all costs of owning and operating new machinery with new tractors. These are useful when making new equipment purchase decisions.

Custom charges are often based on machinery costs, but usually the market for custom work does not cover all costs. Normally, custom rates range somewhere between operating costs and total operating costs, plus a return for one's risk and time. Ideally, all allocated per-acre or per-hour overhead costs should also be covered. Note that operational supplies (such as twine and wrapping) are not included in the costs shown and should be added.

TRACTOR AND COMBINE COSTS

Tractor Hp. combine or truck size	Net cost of a new power unit	Annual hours of use	Overhead[1] cost per year	Overhead[1] cost per hour	Depreciation cost per hour	Fuel & oil cost per hour	Maintenance & repair cost/hr	Total cost[2] per year of use	Total cost[2] per hour of use	Diesel use/hr gallons
Tractors and Combines (Without Heads)										
40	19,200	400	920	2.30	2.82	2.02	0.65	3,117	7.79	1.76
60	24,200	400	1,156	2.89	3.56	3.04	0.81	4,118	10.30	2.64
75	29,300	400	1,410	3.53	4.21	3.79	1.04	5,027	12.57	3.30
105 MFWD	56,200	450	2,784	6.19	6.54	5.31	1.01	8,571	19.05	4.62
130 MFWD	73,300	450	3,619	8.04	8.52	6.58	1.32	11,009	24.46	5.72
160 MFWD	89,000	500	4,212	8.42	10.35	8.10	1.78	14,327	28.65	7.04
200 MFWD	112,100	500	5,291	10.58	13.04	10.12	2.24	17,993	35.99	8.80
225 MFWD	120,400	400	5,711	14.28	17.38	11.38	1.93	17,987	44.97	9.90
225 Tracked Tractor	139,200	400	6,590	16.47	20.09	11.38	2.23	20,072	50.18	9.90
260 4WD	104,700	400	4,977	12.44	15.11	11.45	1.68	16,270	40.68	9.95
310 4WD	116,300	400	5,519	13.80	16.79	13.65	1.86	18,437	46.09	11.87
360 4WD	130,000	400	6,160	15.40	18.76	15.85	2.08	20,837	52.09	13.78
425 4WD	150,800	400	7,132	17.83	21.77	18.71	2.41	24,288	60.72	16.27
190 HP Combine	124,000	300	5,435	18.12	27.94	9.61	21.36	23,110	77.03	8.36
220 HP Combine	129,000	300	5,683	18.94	29.07	11.13	22.23	24,410	81.37	9.68
275 HP Combine	146,600	300	6,474	21.58	33.03	13.92	25.26	28,135	93.78	12.10

[1]*Overhead costs included interest, insurance, and housing but not depreciation, which is shown separately.*
[2]*Sum of overhead cost per hour and depreciation per hour plus fuel, maintenance, and repair costs.Labor costs are included in the implement cost tables.*

KEY FARM MACHINERY OPERATING COSTS

Type	Tractor size (hp)	Net cost of a new implement	Estimated work performed acres/hr	Estimated work performed acres/yr	Power cost per acre	Labor cost per acre	Implement cost/acre Repairs	Implement cost/acre Depreciation	Implement cost/acre Overhead	Total[1] cost per acre	Use-related[2] cost per acre
Tillage Equipment											
Chisel Plow 11 Ft	75	5,700	5.87	469	2.14	1.65	0.30	0.66	0.72	5.47	4.15
Chisel Plow 15 Ft	130 MFWD	7,300	8.00	640	3.06	1.21	0.28	0.62	0.66	5.83	4.16
Chisel Plow 19 Ft	160 MFWD	12,800	10.13	811	2.83	0.96	0.39	0.86	0.85	5.88	4.19
Chisel Plow 23 Ft	200 MFWD	16,000	12.27	981	2.93	0.79	0.40	0.88	0.87	5.87	4.14
Chisel Plow 31 Ft	225 MFWD	20,300	16.53	1,323	2.72	0.59	0.38	0.83	0.81	5.33	3.65
Chisel Plow 37 Ft	310 4WD	23,100	19.73	1,579	2.34	0.49	0.36	0.79	0.78	4.76	3.28

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Tillage Equipment (continued)											
Chisel Plow 57 Ft	425 4WD	37,400	30.40	2,432	2.00	0.32	0.38	0.83	0.79	4.32	2.94
Chisel Plow, Front Dsk 8.8 Ft	105 MFWD	9,800	4.96	397	3.84	1.95	0.38	1.46	1.29	8.93	6.40
Chisel Plow, Front Dsk 16.3 Ft	200 MFWD	17,500	9.21	737	3.91	1.05	0.37	1.41	1.20	7.94	5.59
Chisel Plow, Frnt Dsk 18.8 Ft Fold	260 4WD	23,000	10.62	850	3.83	0.91	0.42	1.60	1.34	8.10	5.59
Chisel Plow, Frnt Dsk 21.3 Ft Fold	310 4WD	26,500	12.04	963	3.83	0.80	0.43	1.63	1.35	8.04	5.54
Moldboard Plow 4 -18, 6 Ft	75	11,000	2.78	334	4.52	3.48	1.71	1.78	1.66	13.15	10.22
Moldboard Plow 5 -18, 7.5 Ft	105 MFWD	13,600	3.48	417	5.48	2.79	1.69	1.77	1.65	13.37	9.94
Moldboard Plow 6 -18, 9 Ft	130 MFWD	16,100	4.17	542	5.86	2.32	1.77	1.61	1.51	13.07	9.64
Moldboard Plow 8 -18, 12 Ft	160 MFWD	21,600	5.56	723	5.15	1.74	1.79	1.62	1.50	11.80	8.78
Moldboard Plow 10 -18, 15 Ft	260 4WD	28,900	6.95	1,043	5.85	1.39	2.14	1.50	1.39	12.27	9.10
Reversible Plow 2 -18, 3 Ft	60	2,500	1.39	209	7.40	6.97	0.93	0.65	0.70	16.65	13.87
Reversible Plow 5 -18, 7.5 Ft	160 MFWD	7,500	3.48	522	8.24	2.79	1.11	0.78	0.76	13.68	10.50
Reversible Plow 5 -18, 7.5 Ft HD	160 MFWD	10,500	3.48	522	8.24	2.79	1.56	1.09	1.06	14.74	11.25
Reversible Plow 8 -18, 12 Ft	225 MFWD	14,800	5.56	835	8.08	1.74	1.37	0.96	0.94	13.09	9.59
Field Cultivator 12.5 Ft	75	5,800	9.02	1,082	1.39	1.07	0.22	0.29	0.31	3.29	2.59
Field Cultivator 18 Ft	105 MFWD	9,400	12.98	1,558	1.47	0.75	0.25	0.33	0.33	3.12	2.32
Field Cultivator 28 Ft	160 MFWD	14,800	20.19	2,423	1.42	0.48	0.25	0.33	0.33	2.82	2.07
Field Cultivator 37 Ft	225 MFWD	21,000	26.68	3,202	1.69	0.36	0.27	0.36	0.35	3.03	2.14
Field Cultivator 47 Ft	260 4WD	31,400	33.90	4,068	1.20	0.29	0.32	0.42	0.40	2.63	1.86
Field Cultivator 60 Ft	310 4WD	38,900	43.27	5,193	1.07	0.22	0.31	0.41	0.39	2.39	1.69
Tandem Disk 8.8 Ft Rigid	40	5,700	5.41	541	1.44	1.79	0.24	0.62	0.55	4.64	3.67
Tandem Disk 11 Ft Rigid	60	6,400	6.40	640	1.61	1.51	0.33	0.59	0.54	4.59	3.60
Tandem Disk 15 Ft Rigid	105 MFWD	11,700	8.73	873	2.18	1.11	0.45	0.79	0.70	5.23	3.83
Tandem Disk 21 Ft Rigid	160 MFWD	19,400	12.22	1,222	2.35	0.79	0.53	0.94	0.80	5.41	3.92
Tandem Disk H.D. 12 Ft Rigid	130 MFWD	10,000	6.98	698	3.50	1.39	0.48	0.85	0.75	6.97	5.07
Tandem Disk H.D. 18 Ft Fold	160 MFWD	19,100	10.47	1,047	2.74	0.93	0.61	1.08	0.93	6.28	4.55
Tandem Disk H.D. 30 Ft Fold	360 4WD	32,300	17.45	1,745	2.98	0.56	0.62	1.10	0.91	6.16	4.37
Offset Disk 7 Ft	60	5,500	3.25	325	3.17	2.99	0.39	1.00	0.86	8.41	6.66
Offset Disk 12 Ft	105 MFWD	10,000	5.56	556	3.42	1.74	0.41	1.07	0.92	7.56	5.53
Offset Disk 16 Ft	130 MFWD	12,500	7.42	742	3.30	1.31	0.38	1.00	0.88	6.87	4.90
Offset Disk 21 Ft Wing	200 MFWD	17,800	9.74	974	3.70	1.00	0.42	1.08	0.92	7.11	5.10
V-Ripper 25 O.C., 10 Ft	160 MFWD	11,300	6.18	618	4.64	1.57	0.59	0.99	0.96	8.74	6.42
V-Ripper 25 O.C., 14 Ft	200 MFWD	13,800	8.65	865	4.16	1.12	0.51	0.86	0.84	7.50	5.43
V-Ripper 25 O.C., 18 Ft	260 4WD	17,700	11.13	1,113	3.66	0.87	0.51	0.86	0.84	6.74	4.78
V-Ripper 25 O.C., 25 Ft	310 4WD	21,400	15.45	1,545	2.98	0.63	0.45	0.75	0.74	5.55	3.91
V-Ripper 30 O.C., 12.5 Ft	160 MFWD	9,400	7.73	773	3.71	1.25	0.39	0.66	0.66	6.68	4.92
V-Ripper 30 O.C., 17 Ft	200 MFWD	12,000	10.51	1,051	3.42	0.92	0.37	0.62	0.62	5.96	4.33
V-Ripper 30 O.C., 22.5 Ft	360 4WD	17,300	13.91	1,391	3.75	0.70	0.40	0.67	0.68	6.20	4.41
Comb Fld Cult Incorp 16 Ft	160 MFWD	17,100	11.54	1,154	2.48	0.84	0.48	0.88	0.74	5.42	3.95
Comb Fld Cult Incorp 23 Ft	200 MFWD	28,100	16.59	1,659	2.17	0.58	0.55	1.00	0.84	5.15	3.67
Comb Fld Cult Incorp 25 Ft	260 4WD	30,300	18.03	1,803	2.26	0.54	0.54	1.00	0.84	5.17	3.64
Comb Fld Cult Incorp 33 Ft	310 4WD	38,600	23.80	2,380	1.94	0.41	0.52	0.96	0.81	4.64	3.25
Comb Disk & V-Ripper 12.5 Ft	225 MFWD	20,700	6.44	644	6.98	1.50	0.73	1.90	1.56	12.68	8.91
Comb Disk & V-Ripper 17.5 Ft	360 4WD	26,500	9.02	902	5.78	1.07	0.67	1.74	1.45	10.72	7.55
Comb Disk & V-Ripper 22.5 Ft	425 4WD	45,800	11.59	1,159	5.24	0.84	0.90	2.34	1.90	11.21	7.78
Disk,Fld Cult Finish 13 Ft	130 MFWD	12,600	6.70	670	3.65	1.45	0.43	1.11	1.04	7.68	5.44
Disk,Fld Cult Finish 22 Ft	200 MFWD	22,700	11.33	1,133	3.18	0.85	0.46	1.19	1.02	6.70	4.74
Disk,Fld Cult Finish 30 Ft	260 4WD	30,400	15.45	1,545	2.63	0.63	0.45	1.17	0.99	5.87	4.07
Disk,Fld Cult Finish 38 Ft	310 4WD	36,400	19.58	1,958	2.35	0.50	0.42	1.10	0.93	5.31	3.67
Roller Harrow 12 Ft	75	9,600	7.42	742	1.69	1.31	0.29	0.77	0.69	4.75	3.59
Roller Harrow 28 Ft	160 MFWD	25,000	17.31	1,731	1.66	0.56	0.33	0.86	0.72	4.12	2.91
Springtooth Drag 30 Ft	60	8,700	21.64	649	0.48	0.47	0.08	0.73	0.67	2.43	1.62
Springtooth Drag 48 Ft	75	11,000	34.62	1,212	0.36	0.30	0.07	0.49	0.49	1.70	1.12
Springtooth Drag 58 Ft	105 MFWD	12,800	41.83	4,183	0.46	0.23	0.10	0.17	0.16	1.11	0.80
Planting Equipment											
Row Crop Planter 4 -36, 12 Ft	40	13,400	5.60	392	1.39	2.49	0.70	1.66	1.84	8.08	5.83
Row Crop Planter 6 -30, 15 Ft	60	15,000	7.00	490	1.47	1.99	0.63	1.49	1.65	7.23	5.16
Row Crop Planter 8 -30, 20 Ft	75	22,300	9.33	653	1.35	1.49	0.70	1.66	1.81	7.01	4.82
Row Crop Planter 12 -30, 30 Ft	105 MFWD	34,100	14.00	980	1.36	0.99	0.71	1.69	1.85	6.61	4.32
Min-Til Planter 4 -36, 12 Ft	60	13,400	5.09	356	2.02	2.73	0.77	1.83	2.03	9.38	6.79
Min-Til Planter 6 -30, 15 Ft	75	19,200	6.36	509	1.97	2.19	1.03	1.83	2.00	9.02	6.47
Min-Til Planter 8 -30, 20 Ft	105 MFWD	25,300	8.48	594	2.24	1.64	0.88	2.07	2.25	9.08	6.10
Min-Til Planter 12 -30, 30 Ft	160 MFWD	47,100	12.73	1,273	2.25	1.09	1.61	1.80	1.92	8.67	6.09

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Planting Equipment (continued)											
Min-Til Planter 16 -30, 40 Ft	200 MFWD	66,600	16.97	2,206	2.12	0.82	2.28	1.47	1.58	8.26	6.06
Potato Planter Filler 19 Ft	None	13,400	5.75	322	0.02	0.00	0.60	2.02	2.25	4.89	2.64
Potato Row Marker 4 Row, 12.6 Ft	130 MFWD	12,600	4.98	214	4.91	2.99	0.22	2.86	3.04	14.01	9.36
Potato Row Marker 6 Row, 19 Ft	160 MFWD	19,600	7.47	321	3.84	1.99	0.22	2.96	3.15	12.17	7.89
Potato Row Marker 8 Row, 27.4 Ft	160 MFWD	25,100	10.79	464	2.65	1.38	0.20	2.63	2.80	9.66	6.08
Potato Planter 4 Row, 12.6 Ft	130 MFWD	37,800	3.83	214	6.39	6.96	2.27	8.56	8.93	33.10	22.07
Potato Planter 6 Row, 19 Ft	130 MFWD	50,300	5.75	322	4.26	4.64	2.01	7.59	7.94	26.44	17.10
Potato Planter 8 Row, 27.4 Ft	160 MFWD	69,200	8.30	465	3.45	3.21	1.91	7.23	7.56	23.36	14.79
Beet Planter 12 Row, 22 Ft	105 MFWD	26,400	4.67	280	4.08	3.19	1.40	4.58	4.91	18.16	11.92
Grain Drill 25 Ft	130 MFWD	27,300	10.61	848	2.31	1.26	0.88	1.56	1.70	7.70	5.24
Grain Drill 30 Ft	130 MFWD	34,600	12.73	1,018	1.92	1.05	0.92	1.65	1.78	7.33	4.91
Grain Drill 35 Ft	160 MFWD	41,600	14.85	1,188	1.93	0.90	0.95	1.70	1.83	7.31	4.91
Presswheel Drill 12 Ft	75	20,000	5.09	382	2.47	2.62	1.24	2.54	2.73	11.61	8.18
Presswheel Drill 16 Ft	105 MFWD	25,900	6.79	509	2.81	1.96	1.21	2.47	2.65	11.10	7.54
Presswheel Drill 20 Ft	130 MFWD	27,900	8.48	636	2.88	1.57	1.04	2.13	2.30	9.92	6.68
Presswheel Drill 30 Ft	160 MFWD	40,900	12.73	1,018	2.25	1.05	1.09	1.95	2.09	8.44	5.68
Presswheel Drill 40 Ft	200 MFWD	53,700	16.97	1,358	2.12	0.78	1.08	1.92	2.05	7.96	5.28
Air Seeder Drill 36 Ft	260 4WD	63,100	15.27	1,222	2.66	0.87	1.40	2.51	2.67	10.11	6.63
No-Till Drill 15 Ft	130 MFWD	27,600	6.36	509	3.84	2.09	1.47	2.63	2.83	12.87	8.78
No-Till Drill 20 Ft	160 MFWD	44,100	8.48	679	3.38	1.57	1.77	3.16	3.36	13.23	8.88
No-Till Drill 30 Ft	200 MFWD	65,200	12.73	1018	2.83	1.05	1.74	3.11	3.29	12.02	7.89
Crop Maintenance Equipment											
Cultivator 4 -36, 12 Ft	75	3,700	6.18	618	2.03	1.60	0.14	0.32	0.33	4.43	3.53
Cultivator 6 -30, 15 Ft	60	4,600	7.73	773	1.33	1.28	0.14	0.32	0.33	3.40	2.70
Cultivator 8 -30, 20 Ft	130 MFWD	6,200	10.30	1,030	2.37	0.96	0.14	0.33	0.33	4.13	3.02
Cultivator 12 -30, 30 Ft	160 MFWD	12,200	15.45	1,545	1.85	0.64	0.19	0.43	0.41	3.52	2.56
Cultivator 16 -30, 40 Ft	200 MFWD	15,000	20.61	2,061	1.75	0.48	0.17	0.39	0.38	3.17	2.28
Cultivator Hi Res 4 -36, 12 Ft	75	6,500	6.18	618	2.03	1.60	0.25	0.57	0.55	5.00	3.88
Cultivator Hi Res 6 -30, 15 Ft	105 MFWD	8,900	7.73	773	2.46	1.28	0.27	0.62	0.60	5.23	3.84
Cultivator Hi Res 8 -30, 20 Ft	160 MFWD	12,100	10.30	1,030	2.78	0.96	0.28	0.64	0.60	5.26	3.83
Cultivator Hi Res 12 -30, 30 Ft	225 MFWD	20,600	15.45	1,545	2.91	0.64	0.31	0.72	0.67	5.26	3.66
Rotary Hoe 15 Ft	75	4,000	18.55	1,855	0.68	0.53	0.06	0.13	0.12	1.51	1.21
Rotary Hoe 21 Ft	105 MFWD	6,200	25.96	2,596	0.73	0.38	0.07	0.14	0.13	1.45	1.08
Rotary Hoe 30 Ft	160 MFWD	9,400	37.09	3,709	0.77	0.27	0.07	0.15	0.13	1.39	1.03
Potato Cultivator 4 Row, 12.6 Ft	75	4,600	5.36	778	2.34	1.84	0.31	0.32	0.30	5.12	4.16
Potato Cultivator 6 Row, 19 Ft	105 MFWD	6,900	8.04	1,126	2.37	1.23	0.30	0.33	0.32	4.55	3.46
Sugar Beet Cult 12 Row, 22 Ft	105 MFWD	10,400	5.60	336	3.40	1.76	0.24	1.68	1.64	8.71	5.97
Boom Sprayer, Self-Prop 47 Ft	None	57,800	25.92	2,592	0.12	0.58	1.07	1.08	1.14	4.00	2.86
Boom Sprayer, Self-Prop 60 Ft	None	72,000	33.09	3,309	0.12	0.45	1.05	1.06	1.11	3.79	2.68
Boom Sprayer 30 Ft	40	4,700	15.36	1,229	0.51	0.98	0.14	0.19	0.23	2.04	1.66
Boom Sprayer 50 Ft	60	5,900	25.61	2,561	0.40	0.59	0.11	0.11	0.14	1.35	1.10
Sprayer High Pressure 50 Ft	60	25,100	23.64	2,364	0.44	0.63	0.51	0.52	0.56	2.66	1.97
Hooded Sprayer 8 Row, 20 Ft	40	6,600	10.24	819	0.76	1.46	0.29	0.39	0.46	3.37	2.68
Anhydrous Applicator 30 Ft	160 MFWD	19,000	12.73	509	2.25	0.99	0.84	1.81	1.97	7.86	5.23
Fert Spreader 4 T, 40 Ft	60	9,800	23.76	713	0.43	0.53	0.21	0.67	0.73	2.57	1.72
Corn Stalk Chopper 12 Ft	60	8,700	4.65	465	2.21	2.25	0.63	1.17	0.90	7.15	5.63
Potato Shredder 18 Ft	130 MFWD	12,800	6.98	698	3.50	1.50	0.61	1.14	0.91	7.67	5.61
Stalk Shredder 20 Ft	130 MFWD	15,000	7.76	776	3.15	1.35	0.65	1.21	0.97	7.32	5.32
Rock Picker 6 Ft	75	12,800	1.42	85	8.86	8.04	5.36	9.38	7.35	39.00	29.16
Harvesting Equipment											
Mower-Conditioner 9 Ft	40	13,100	4.36	349	1.79	2.39	0.59	2.34	1.78	8.89	6.58
Rotary Hay Mower 6 Ft	40	6,800	2.91	291	2.68	3.27	1.37	1.46	1.12	9.89	7.98
Rotary Mow/Cond 9 Ft	75	15,400	6.55	524	1.92	1.52	0.40	1.83	1.39	7.07	5.14
Hay Rake (Hyd) 9 Ft	40	4,300	3.49	698	2.23	2.72	0.33	0.38	0.33	6.00	5.01
Hay Swather-Cond 12 Ft	60	17,800	5.82	465	1.77	1.63	0.60	2.39	1.87	8.25	5.89
Swather-Cond, Self-Prop 16 Ft	None	64,000	7.76	621	0.46	1.22	0.53	6.43	4.78	13.42	8.64
Grain Swather, Pull Type 18 Ft	75	10,500	8.73	698	1.44	1.09	0.08	0.94	0.82	4.37	3.14
Grain Swather, Pull Type 21 Ft	75	15,500	10.18	815	1.23	0.93	0.10	1.19	1.00	4.45	3.11
Grain Swather, Self-Prop 21 Ft	None	53,800	10.18	815	0.35	0.93	0.34	4.12	3.11	8.85	5.74
Hay Baler PTO Twine 12 Ft	40	16,700	4.36	873	1.79	3.05	1.97	1.15	0.95	8.90	7.43
Round Baler 1000 Lb, 9 Ft	60	11,400	3.01	603	3.42	3.50	3.64	1.13	0.92	12.61	10.73
Round Baler 1500 Lb, 12 Ft	60	12,700	4.02	804	2.56	2.62	3.04	0.95	0.77	9.95	8.46
Rd Baler/Wrap 1000 Lb, 9 Ft	60	21,900	3.01	603	3.42	3.50	6.99	2.18	1.72	17.81	15.13

KEY FARM MACHINERY OPERATING COSTS

Type	Tractor size (hp)	Net cost of a new implement	Estimated work performed acres/hr	Estimated work performed acres/yr	Power cost per acre	Labor cost per acre	Implement cost/acre Repairs	Implement cost/acre Depreciation	Implement cost/acre Overhead	Total[1] cost per acre	Use-related[2] cost per acre
Harvesting Equipment (continued)											
Large Rectangular Baler 24 Ft	130 MFWD	57,500	16.29	815	1.50	0.65	0.26	4.23	3.34	9.99	6.15
Forage Harvester 2 Row, 5 Ft	105 MFWD	25,800	1.38	138	13.81	9.66	3.48	11.22	8.92	47.10	33.69
Forage SP Harvstr 2 Row, 5 Ft	None	154,500	1.70	255	3.12	7.85	5.46	38.50	27.37	82.30	54.93
Forage SP Harvstr 3 Row, 7.5 Ft	None	172,500	2.55	382	3.12	5.23	4.07	28.66	20.41	61.48	41.07
Forage SP Harvstr 6 Row, 15 Ft	None	234,600	5.09	764	3.12	2.62	2.76	19.49	13.83	41.82	27.98
Combine w/Grain Head 20 Ft	220 HP Combine	10,300	6.79	1,358	11.99	1.96	0.18	0.49	0.35	14.97	11.83
Combine w/Grain Head 30 Ft	275 HP Combine	18,600	10.18	2,036	9.21	1.31	0.21	0.59	0.42	11.74	9.20
Soybean Combine w/Hd 15 Ft	220 HP Combine	14,000	4.45	891	18.27	2.99	0.37	1.02	0.72	23.36	18.39
Soybean Combine w/Hd 18 Ft	275 HP Combine	15,400	5.35	1,069	17.54	2.49	0.34	0.93	0.67	21.97	17.27
Soybean Combine w/Hd 25 Ft	275 HP Combine	18,200	7.42	1,485	12.63	1.79	0.29	0.79	0.56	16.07	12.60
Corn Combine w/Hd 4 -36, 12 Ft	190 HP Combine	19,100	3.36	672	22.93	3.96	0.66	1.84	1.30	30.70	24.00
Corn Combine w/Hd 4 -30, 10 Ft	190 HP Combine	20,000	2.80	560	27.51	4.76	0.83	2.31	1.62	37.03	28.94
Corn Combine w/Hd 6 -30, 15 Ft	220 HP Combine	25,300	4.20	840	19.37	3.17	0.70	1.95	1.38	26.57	20.68
Corn Combine w/Hd 8 -30, 20 Ft	220 HP Combine	32,000	5.09	1,018	15.98	2.62	0.73	2.03	1.44	22.80	17.64
Corn Combine w/Hd 12 -30, 30 Ft	275 HP Combine	49,400	7.64	1,527	12.28	1.74	0.75	2.09	1.46	18.33	14.05
Potato Windrower 2 Row, 6.3 Ft	75	32,200	1.49	149	8.41	6.87	4.89	13.45	10.14	43.76	31.26
Potato Windrower 4 Row, 12.6 Ft	105 MFWD	70,600	2.99	299	6.37	3.43	5.37	14.74	10.85	40.77	27.84
Potato Harvester Seed 2 Row, 6.3 Ft	130 MFWD	68,100	1.38	295	17.74	28.10	15.20	13.84	10.79	85.69	69.06
Potato Harvester Seed 4 Row, 12.6 Ft	130 MFWD	107,700	2.76	590	8.87	14.05	12.02	10.95	8.48	54.37	42.98
Potato Harvester 2 Row, 6.3 Ft	130 MFWD	55,700	1.84	294	13.31	21.08	8.30	11.36	8.89	62.94	49.67
Disk Bean Top Cutter 6 Row, 11 Ft	105 MFWD	13,300	6.40	512	2.98	2.08	0.45	1.54	1.26	8.31	6.08
Sugar Beet Lifter 4 Row, 7.3 Ft	105 MFWD	48,500	3.47	277	5.50	3.84	9.06	10.37	8.19	36.96	26.99
Sugar Beet Lifter 6 Row, 11 Ft	130 MFWD	63,200	5.20	426	4.70	2.56	7.93	8.78	6.95	30.93	22.43
Sugar Beet Topper 6 Row, 11 Ft	75	19,200	5.33	427	2.36	2.25	1.10	2.67	2.19	10.56	7.71
Sugar Beet Topper 12 Row, 22 Ft	160 MFWD	37,100	10.67	853	2.69	1.13	1.06	2.58	2.10	9.55	6.66
Sugar Beet Wagon 8 Ton, 7.3 Ft	75	10,300	3.47	277	3.63	2.74	0.62	2.23	1.91	11.13	8.20
Sugar Beet Wagon 20 Ton, 11 Ft	200 MFWD	40,900	5.20	520	6.92	1.83	1.75	4.72	3.77	18.99	13.18
Sugar Beet Wagon 24 Ton, 11 Ft	225 MFWD	43,300	5.20	520	8.65	1.83	1.86	5.00	3.98	21.31	14.58
Hay Stacker 1 Ton, 12 Ft	60	23,300	4.15	829	2.48	3.21	2.89	1.69	1.35	11.63	9.58
Hay Stacker 3 Ton, 12 Ft	75	34,400	4.84	1,064	2.60	2.75	3.95	1.94	1.55	12.79	10.52
Hay Stacker 6 Ton, 12 Ft	105 MFWD	55,500	5.53	1,548	3.45	2.41	6.77	2.15	1.71	16.48	13.65

[1]Total cost per acre is total cost per hour divided by acres per hour. Includes fuel, lubricants, repairs, and maintenance, labor, and overhead costs including depreciation.

[2] Use-related cost per acre includes fuel and lubricants, power and equipment repairs and maintenance, labor, and power and equipment depreciation (depreciation is both time-related and use-related).

MISCELLANEOUS

	Tractor size (hp)	Net cost of a new implement	Estimated work—performed hours/year	Power cost per hour	Labor cost per hour	Repairs per hour	Depreciation per hour	Overhead per hour	Total cost per hour	Use-related cost per hour	Diesel fuel gal/hour
Per-Hour Calculations Only											
Rd Bale Wrapper Silage	60	18,300	150	10.30	9.50	13.99	7.32	5.73	46.84	38.22	2.64
Bale Wrapper Dry Hay	40	7,900	150	7.79	9.50	6.04	3.16	2.55	29.04	24.19	1.76
Forage Blower	60	5,900	50	10.30	9.50	0.96	7.08	5.61	33.45	24.94	2.64
Manure Spreader 150 Bu	75	7,000	100	12.57	9.69	5.18	3.81	3.56	34.80	27.72	3.30
Manure Spreader 300 Bu	105 MFWD	9,200	100	19.05	9.69	6.80	5.01	4.67	45.22	34.36	4.62
Manure Spreader 400 Bu	130 MFWD	13,600	100	24.46	9.69	10.06	7.41	6.86	58.48	43.57	5.72
Liquid Manure Spreader 9500 Gal	225 Tracked Tractor	42,800	70	50.18	9.69	28.43	33.29	30.52	152.11	105.12	9.90
Grain Cart 500 Bu	60	15,300	130	10.30	9.50	3.69	7.06	5.91	36.46	27.66	2.64
Gravity Grain Box 240 Bu	75	4,000	130	12.57	9.50	0.96	1.85	1.95	26.82	21.35	3.30
Baled Hay Wagon	40	3,300	250	7.79	19.00	0.97	0.79	0.87	29.42	26.25	1.76
Forage Wagon 14 Ft Long	40	11,000	130	7.79	9.50	2.55	5.08	4.39	29.31	22.62	1.76
Forage Wagon 16 Ft Long	40	12,300	130	7.79	9.50	2.86	5.68	4.72	30.55	23.52	1.76
Soil scraper bucket 12 Cu Yd	260 4WD	35,700	80	40.68	13.32	6.94	24.17	21.46	106.57	72.66	9.95

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