

3-1987

# Machine Cost Estimates for Custom Rate Consideration

Thomas Dobbs  
*South Dakota State University*

Ron Thaden  
*South Dakota State University*

Dale Peckham  
*South Dakota State University*

Follow this and additional works at: [http://openprairie.sdstate.edu/econ\\_pamphlet](http://openprairie.sdstate.edu/econ_pamphlet)

 Part of the [Agricultural and Resource Economics Commons](#)

---

## Recommended Citation

Dobbs, Thomas; Thaden, Ron; and Peckham, Dale, "Machine Cost Estimates for Custom Rate Consideration" (1987). *Department of Economics Pamphlet Series*. Paper 20.  
[http://openprairie.sdstate.edu/econ\\_pamphlet/20](http://openprairie.sdstate.edu/econ_pamphlet/20)

This Article is brought to you for free and open access by the Economics at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in Department of Economics Pamphlet Series by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact [michael.biondo@sdstate.edu](mailto:michael.biondo@sdstate.edu).

MACHINE COST ESTIMATES  
FOR  
CUSTOM RATE CONSIDERATIONS

by

Thomas Dobbs, Ron Thaden, and Dale Peckham\*

Econ Pamphlet 87-2

March 1987

Economics Department  
Agricultural Experiment Station  
South Dakota State University  
Brookings, SD 57007

---

\*Authors are Professor of Economics, Extension Farm Management Agent, and Research Assistant, respectively.

## CONTENTS

	<u>Page</u>
Introduction .....	1
Use of the Tables .....	2
Tables of Estimated Operating and Ownership Costs .....	4
Appendix 1: Changes in Assumptions for Various Machine Operations .....	10
Appendix 2: Machines for which Prices Were Revised .....	11
Appendix 3: Machine Sizes and Types Added .....	12

MACHINE COST ESTIMATES  
FOR  
CUSTOM RATE CONSIDERATIONS

Introduction

These tables of estimated operating and ownership costs for various machinery operations were compiled as part of research conducted under Agricultural Experiment Station Project H-076, entitled "Economics of Farming Systems Alternatives in Eastern South Dakota". Machinery cost estimates are needed in that project in order to determine fixed and variable costs of production for alternative crops, crop rotations, cultural practices, and tillage systems. The machine costs included in this pamphlet are derived primarily from Dr. Herbert Allen's Economics Pamphlet 153, Costs per Hour and per Acre for Machine Operations, last revised in March 1986. Some of the machinery prices in Allen's publications were updated, however, to reflect most recent market conditions. Also, we changed the hours of use and certain other assumptions for some machine operations. Moreover, the tables in this pamphlet contain many machine operations not included in Allen's pamphlet. These various additions and changes are listed in Appendices 1, 2, and 3.

In addition to being used for crop budget estimation purposes, the tables in this pamphlet can be used by individuals wishing to determine appropriate farm custom rates. Extension Agents and others who receive questions about appropriate farm custom rates can refer to these tables on costs of ownership and operation. These costs can then be compared to rates reported for the most recent SDSU Economics Department custom rate survey. (The most recent survey was conducted in the Fall of 1986.) Individual circumstances and local conditions should also be considered in establishing a custom rate that is consistent with local market conditions and that seems "equitable" to both the custom operator and the purchaser of the custom services.

## Use of the Tables

Tables on the following pages each contain eight columns. Machine operations are listed in Column 1. Column 2 indicates the size of tractor used in each operation. No tractor size is listed if the machine is self-propelled. Acres or hours of annual use upon which calculations are based are listed in Column 3. Acres of use are based upon assumed hours of use per year (for the machine listed, rather than for the tractor) divided by hours required per acre. Column 4, total fixed cost, contains the summation of the tractor's and the implement's depreciation, housing, interest, taxes, and insurance costs for each operation. Column 5, total operating costs, contains the summation of each tractor's and implement's repair and fuel costs. The total of fixed and operating costs is contained in Column 6. It is simply the sum of Columns 4 and 5. Column 7, labor costs, was calculated by multiplying \$6.00 times the number of man hours required per acre for each operation. The last column, total of all costs, was calculated by multiplying total fixed and operating costs by 1.10 (to include a 10% return to management) and adding labor costs. If someone doing custom operations wants to cover all costs, including labor costs and a profit or return to management, they can refer to this last column. Persons using these tables for crop budget estimation purposes, on the other hand, may wish to ignore the last column and simply add labor costs (Column 7) to total fixed and operating costs (Column 6).

There is no single "correct" cost figure for any given machine operation. The figures in these tables should be used only as general guides. Costs can be particularly sensitive to acres or hours of annual use. We have assumed rather full use of equipment in our calculations in most instances. If equipment is greatly underutilized, fixed costs per acre can be much higher than what we have shown. For instance, if a 15' chisel plow is used for only 240 acres, rather

than for 599 acres per year, one would need to add approximately \$1.45 to the fixed costs per acre. Users of this pamphlet who feel that their acres or hours of use differ substantially from the assumptions listed in our tables may wish to recalculate costs, using formulas shown in Allen's Economics Pamphlet 153.

Those wishing to see tables containing more detailed calculations underlying the tables published herein should contact the senior author of this pamphlet.

Estimated Operating and Ownership Costs:  
for Determining Possible Machine Custom Rates

Operation	Tractor DbHp	Acres of Use	Total Fixed Cost	Total Operating Costs	Total Fixed and Operating Costs	Labor Costs	Total of All Costs; Including 10% Return*
				-----\$ Per Acre-----			
<u>TILLAGE OPERATIONS</u>							
Plow 5/16's	125-D	731	5.36	3.44	8.80	2.46	12.14
Plow 6/16's	140-D	874	5.12	3.18	8.30	2.06	11.19
Plow 7/16's	165-D	1016	4.93	3.16	8.09	1.78	10.68
Plow 8/16's	210-D	1168	4.72	3.39	8.11	1.54	10.46
Plow 6/18's	165-D	980	4.28	3.14	7.42	1.83	10.00
Plow 7/18's	180-D	1147	4.32	3.02	7.34	1.57	9.64
Plow 8/18's	210-D	1309	3.67	2.95	6.62	1.37	8.65
Plow 10/18's	280-D	1634	3.88	3.15	7.03	1.10	8.83
Plow 11/18's	280-D	1798	3.56	2.86	6.42	1.00	8.06
Chisel Plow 15'	125-D	599	2.59	1.61	4.20	1.21	5.83
Chisel Plow 17'	140-D	680	2.55	1.58	4.13	1.07	5.61
Chisel Plow 25'	220-D	990	3.14	1.78	4.92	.73	6.14
Chisel Plow 27'	280-D	1075	3.12	1.96	5.08	.67	6.26
Chisel Plow 29'	280-D	1149	3.05	1.87	4.92	.62	6.03
Chisel Plow 35'	310-D	1389	3.20	1.74	4.94	.52	5.95
Tandem Disk 17'	80-D	820	2.60	.93	3.53	.88	4.76
Tandem Disk 19'	100-D	917	2.87	1.06	3.93	.79	5.11
Tandem Disk 22'	125-D	1064	2.87	1.09	3.96	.68	5.04
Tandem Disk 25'	140-D	1205	2.76	1.07	3.83	.59	4.80
Tandem Disk 30'	165-D	1449	2.83	1.06	3.89	.50	4.78
Tandem Disk 40'	280-D	1923	2.53	1.22	3.75	.37	4.49
Field Cultivator 17'	80-D	595	2.00	1.17	3.17	1.21	4.68
Field Cultivator 23'	125-D	806	2.70	1.44	4.14	.89	5.44
Field Cultivator 27'	140-D	943	2.47	1.34	3.81	.76	4.95
Field Cultivator 33'	180-D	1149	2.49	1.39	3.98	.62	4.89
Field Cultivator 40'	220-D	1408	2.52	1.43	3.95	.52	4.86

\*Calculated by adding: (1) Total fixed and operating costs; (2) 10% return on fixed and operating costs; and (3) Labor costs.

Estimated Operating and Ownership Costs:  
for Determining Possible Machine Custom Rates

Operation	Tractor DbHp	Acres of Use	Total Fixed Cost	Total Operating Costs	Total Fixed and Operating Costs	Labor Costs	Total of All Costs; Including 10% Return*
-----\$ Per Acre-----							
<u>TILLAGE OPERATIONS (continued)</u>							
Rod Weeder 24'	80-D	1163	.68	.51	1.19	.62	1.93
Spike Harrow 24'	100-D	1075	1.09	1.02	2.11	.66	2.98
Spike Harrow 30'	125-D	1351	1.07	1.11	2.18	.53	2.93
Spike Harrow 36'	140-D	1613	.98	1.02	2.00	.44	2.64
Spike Harrow 48'	180-D	2174	.93	.96	1.89	.34	2.42
Spike Harrow 66'	280-D	2941	.85	.98	1.83	.24	2.25
Springtooth Drag 24'	80-D	1087	.83	.56	1.39	.66	2.19
Springtooth Drag 36'	100-D	1613	.85	.51	1.36	.44	1.94
Stalk Shredder 12.5'	60-D	470	1.55	.95	2.50	1.22	3.97
Corn Cultivator 6-30"	60-D	526	1.56	.97	2.53	1.37	4.15
Corn Cultivator 8-30"	80-D	700	1.91	1.05	2.96	1.03	4.28
Corn Cultivator 12-30"	140-D	1053	1.99	1.15	3.14	.68	4.13
Corn Cultivator 4-40"	45-D	455	1.51	.84	2.35	1.58	4.16
Corn Cultivator 6-40"	60-D	700	1.40	.78	2.18	1.03	3.42
Corn Cultivator 8-40"	100-D	944	1.86	.99	2.85	.76	3.89
Rotary Hoe 15'	35-D	690	1.01	.48	1.49	1.04	2.68
Rotary Hoe 20'	45-D	917	.98	.46	1.44	.78	2.36
Rotary Hoe 25'	60-D	1149	.99	.49	1.48	.62	2.25
Rotary Hoe 30'	60-D	1389	.86	.41	1.27	.52	1.92
Rotary Hoe 40'	80-D	1852	1.11	.47	1.58	.39	2.13
Roto Tiller 16'	230-D	776	4.04	2.68	6.72	1.16	8.55

\*Calculated by adding: (1) Total fixed and operating costs; (2) 10% return on fixed and operating costs; and (3) Labor costs.



Estimated Operating and Ownership Costs:  
for Determining Possible Machine Custom Rates

Operation	Tractor DbHp	Acres of Use	Total Fixed Cost	Total Operating Costs	Total Fixed and Operating Costs	Labor Costs	Total of All Costs; Including 10% Return*
-----\$ Per Acre-----							
<u>FERTILIZER APPLICATION</u>							
Anhydrous Applicator 23'	165-D	910	2.02	1.68	3.70	.97	5.04
Dry Fertilizer Spreader 45'	70-D	962	1.01	.35	1.36	.37	1.87
Sprayer 8 Row 26'	45-D	740	1.18	.62	1.80	.98	2.96
<u>PLANTING OPERATIONS</u>							
Air Planter 6-30" W/FC	60-D	403	4.14	1.35	5.49	1.07	7.11
Air Planter 8-30" W/FC	80-D	540	4.23	1.31	5.54	.80	6.89
Air Planter 12-30" W/FC	100-D	810	4.90	1.43	6.33	.53	7.49
Air Planter 4-38" W/FC	45-D	340	4.00	1.23	5.23	1.26	7.01
Air Planter 6-38" W/FC	70-D	512	4.42	1.36	5.78	.84	7.20
Air Planter 8-38" W/FC	100-D	682	3.87	1.29	5.16	.63	6.31
Conv. Planter 6-30" W/FC	60-D	366	4.10	1.45	5.55	1.18	7.28
Conv. Planter 8-30" W/FC	80-D	496	4.21	1.47	5.68	.88	7.13
Conv. Planter 12-30" W/FC	100-D	750	4.57	1.46	6.03	.58	7.21
Conv. Planter 4-38" W/FC	45-D	320	3.34	1.18	4.52	1.34	6.31
Conv. Planter 6-38" W/FC	60-D	469	3.67	1.23	4.90	.92	6.31
Conv. Planter 8-38" W/FC	80-D	625	3.36	1.16	4.52	.69	5.66
No Till Planter 4 Row	60-D	247	5.10	1.80	6.90	1.75	9.34
No Till Planter 8 Row	100-D	496	5.18	1.67	6.85	.88	8.41
No Till Planter 12 Row	140-D	741	4.97	1.56	6.53	.58	7.76
Drill 10' W/F	45-D	330	4.05	2.55	6.60	2.18	9.44
Drill 2-10' W/F	60-D	658	3.46	2.21	5.67	1.09	7.33
Drill 2-16' W/F	80-D	1052	3.29	2.05	5.34	.68	6.55
No Till Drill 10'	60-D	330	4.21	2.88	7.09	2.18	9.98
No Till Drill 20'	100-D	658	5.61	3.36	8.97	1.09	10.96

\*Calculated by adding: (1) Total fixed and operating costs; (2) 10% return on fixed and operating costs; and (3) Labor costs.

Estimated Operating and Ownership Costs:  
for Determining Possible Machine Custom Rates

Operation	Tractor DbHp	Acres of Use	Total Fixed Cost	Total Operating Costs	Total Fixed and Operating Costs	Labor Costs	Total of All Costs; Including 10% Return*
				-----\$ Per Acre-----			
<u>GRAIN HARVESTING</u>							
Self Propelled Swather 16'		636	5.08	1.94	7.02	.85	8.57
Self Propelled Swather 18'		694	5.59	2.20	7.79	.78	9.35
Self Propelled Swather 21'		806	5.69	2.20	7.89	.66	9.34
Combine Grain 20' SP		878	13.18	3.94	17.12	1.48	20.31
Combine Grain 24' SP		1053	14.07	4.00	18.07	1.23	21.11
Combine Grain 24' PT	165-D	1053	9.61	3.42	13.03	1.23	15.56
Combine Corn 6 Row SP		878	19.12	5.50	24.62	1.48	28.56
Combine Corn 8 Row SP		1169	14.94	4.51	19.45	1.10	22.50
Ear Corn Picker	60-D	230	10.50	4.72	15.22	4.71	21.45
<u>FORAGE HARVESTING (per acre)</u>							
Sickle Mower 7' & 9'	35-D	196	2.24	1.40	3.64	1.84	5.84
Mower-Conditioner 12'	60-D	385	4.42	2.45	6.87	1.49	9.05
Mower-Conditioner 16'	80-D	513	5.34	2.86	8.20	1.12	10.14
Side Rake 8.5'	35-D	333	2.57	1.41	3.98	1.73	6.10
Side Rake 9.5'	35-D	374	2.52	1.34	3.86	1.54	5.79
Wheel Rake 18'	45-D	708	1.11	.65	1.76	.81	2.75
Wheel Rake 20'	45-D	784	1.01	.59	1.60	.73	2.49
Forage Harvester 2 Row Head	125-D	292	13.68	10.96	24.64	3.71	30.81
Forage Harvester 3 Row Head	165-D	414	9.87	8.69	18.56	2.60	23.02
Forage Harvester Windrow Pickup	125-D	560	6.18	5.36	11.54	1.93	14.62

\*Calculated by adding: (1) Total fixed and operating costs; (2) 10% return on fixed and operating costs; and (3) Labor costs.

Estimated Operating and Ownership Costs:  
for Determining Possible Machine Custom Rates

Operation	Tractor DbHp	Hours of Use	Total Fixed Cost	Total Operating Costs	Total Fixed and Operating Costs	Labor Costs	Total of All Costs; Including 10% Return*
-----\$ Per Hour-----							
<u>FORAGE HARVESTING (per hour)</u>							
Baler Small Square	45-D	100	14.90	5.58	20.48	6.00	28.53
Baler Small Round	45-D	100	17.53	6.14	23.69	6.00	32.06
Baler Medium Round	60-D	100	22.22	8.06	30.28	6.00	39.31
Baler Large Round	80-D	100	24.64	9.99	34.63	6.00	44.09
Stackhand 1 Ton**	60-D	75	19.02	11.93	30.95	6.00	40.04
Stackhand 3 Ton**	70-D	75	36.59	21.20	57.79	6.00	69.57
Stackhand 6 Ton**	100-D	75	58.49	33.49	91.98	6.00	107.18
Stackmover 1 Ton**	60-D	40	7.02	4.87	11.89	6.00	19.08
Stackmover 3 Ton**	60-D	40	18.08	7.91	25.99	6.00	34.59
Stackmover 10 Ton**	100-D	40	47.60	12.48	60.08	6.00	72.08
Bale Wagon Pull**	60-D	150	8.36	4.56	12.92	6.00	20.21
Bale Wagon Sp**		400	16.92	34.63	49.77	6.00	60.75
Bale Loader**	35-D	100	3.83	2.68	6.51	6.00	13.16
<u>MISCELLANEOUS OPERATIONS</u>							
Forage Wagon w/Tractor**	60-D	100	14.35	15.03	29.43	6.00	38.37
Forage Wagon Only**		100	10.11	10.90	21.01	6.00	29.11
Gravity Box w/Gear 260 bu**	45-D	100	6.08	5.48	11.56	6.00	18.72
Gravity Box w/Gear 400 bu**	45-D	100	7.35	6.80	14.15	6.00	21.56
Gravity Box w/Gear 500 bu**	45-D	100	8.18	7.67	15.85	6.00	23.43
Silage Baggers w/o Bags	80-D	60	41.32	10.24	51.56	6.00	62.72
Silage Blower	80-D	60	10.01	6.10	16.11	6.00	23.72
Mixer/Grinder 100 bu	60-D	100	13.48	6.74	20.22	6.00	28.24
Mixer/Grinder 125 bu	80-D	100	17.86	8.91	26.77	6.00	35.45
Mixer/Grinder 135 bu	100-D	100	21.62	10.94	32.56	6.00	41.82

\*Calculated by adding: (1) Total fixed and operating costs; (2) 10% return on fixed and operating costs; and (3) Labor costs.

\*\* See footnote on next page.

Estimated Operating and Ownership Costs:  
for Determining Possible Machine Custom Rates

Operation	Tractor DbHp	Hours of Use	Total Fixed Cost	Total Operating Costs	Total Fixed and Operating Cost	Labor Costs	Total of All Costs; Including 10% Return*
<u>MISCELLANEOUS OPERATIONS, (continued)</u>							
Tub Grinder Medium	140-D	100	21.81	13.21	35.02	6.00	44.52
Tub Grinder Large	210-D	100	28.17	18.34	46.51	6.00	57.16
Tractor w/Loader Medium Duty	80-D	75	10.21	6.50	16.71	6.00	24.38
Tractor w/Loader Heavy Duty	80-D	75	12.00	6.88	18.88	6.00	26.77
Skid Steer Loader (Small)	20-G	200	3.65	2.56	6.21	6.00	12.83
Skid Steer Loader (Medium)	30-G	200	5.73	4.70	10.43	6.00	17.47
Manure Spreader 390 bu **	60-D	100	10.35	10.57	20.92	6.00	29.01
Manure Spreader 600 bu **	80-D	100	13.41	13.73	27.14	6.00	35.85
Manure Spreader (Truck Mounted)	425-475CID Truck	100	21.03	16.16	37.19	6.00	46.91
2 Ton Truck (gas) 16' Box	250-300CID	500	8.00	5.03	13.03	6.00	20.33
Truck (diesel) Tandem Axel Twin Screw 22' Box	425-475CID	500	10.72	8.51	19.23	6.00	27.15
Snowblower 8'	125-D	50	14.23	8.91	23.14	6.00	31.45

\*Calculated by adding: (1) Total fixed and operating costs; (2) 10% return on fixed and operating costs; and (3) Labor costs.

\*\*The tractor DbHp indicates the power required to adequately handle the towed vehicle in most situations. Caution should be observed in the weight relationship between the towing vehicle and the towed vehicle. The relationship should be at least 1:1 or higher for the towing vehicle unless the towed vehicle is equipped with a braking system.

Appendix 1. Changes in Assumptions for Various Machine Operations

Machine	MPH in Field	
	Now	Was
Air Planters	5	7
Windrow Pickup	3.5	4
	Hours of Use	
	Now	Was
Roto Tiller	125	250
Anhydrous Applicator 23'	120	60
Sprayer 8 Row	100	50
Ear Corn Picker	150	75
Forage Harvestors (Silage Cutters)	150	75
Bale Wagon SP	400	200
Forage Wagons	100	50
Grain Wagons	100	50
Manure Spreaders	100	50
	Horsepower	
	Now	Was
Combine Grain 24' PT	165	100
Bale Wagon PT*	60	35
Stackmover 1 Ton	80	400
Stackmover 3Ton	80	500
Stackmover 10 Ton	100	600
	Field Efficiency	
	Now	Was
Forage Harvester Windrow Pickup	.54	.60

\*A 60 HP diesel tractor was used with the bale wagon to handle the weight. The tractor's engine would not be running at full capacity, so the tractor's fuel cost was cut in half.

Appendix 2. Machines for Which Prices Were Revised

<u>Machine</u>	<u>List Price</u>	<u>Sale Price</u>
Plow 10/18's	\$ 15,250	\$ 13,862
Plow 11/18's	15,800	14,362
Chisel Plow 29'	14,125	12,712
Field Cultivator 17'	4,995	4,645
Field Cultivator 23'	9,500	8,778
Field Cultivator 27'	9,900	9,147
Field Cultivator 33'	11,500	10,626
Corn Cultivator 4-40"	2,700	2,430
Corn Cultivator 6-40"	4,432	3,989
Corn Cultivator 8-40"	7,017	6,317
Air Planter 6-30"	11,151	10,259
Air Planter 8-30"	15,724	14,466
Air Planter 12-30"	27,105	24,937
Conventional Planter 4-38"	7,300	6,205
Conventional Planter 6-38"	12,588	10,700
Conventional Planter 8-38"	15,100	12,835
Drill 10'	8,176	6,950
Drill 2 x 10'	15,927	13,540
No Till Drill 10'	12,555	11,300
No Till Drill 20'	22,600	20,340
Combine Corn 6 Row SP	141,525	123,865
Combine Corn 8 Row SP	152,000	129,200
Combine Grain 20' SP	97,530	85,360
Combine Grain 24' SP	124,865	109,284
Sickle Mower 7' & 9'	2,067	2,067
Mower Conditioner 12'	8,750	8,750
Mower Conditioner 16'	14,750	14,750
Side Rake 8.5'	3,915	3,915
Side Rake 9.5'	4,400	4,400
Large Round Baler 1000-1500 lbs	13,876	12,350
Sprayer 26' PT	4,000	3,600
Forage Wagon	9,079	7,500
Gravity Box 260 bu	1,975	1,679
Gravity Box 400 bu	3,075	2,614
Gravity Box 500 bu	3,800	3,230

Appendix 3. Machine Sizes and Types Added

Machine	Sizes Added	
	List Price	Sale Price
Plow 6/18's	\$ 9,325	\$ 8,477
Plow 7/18's	11,735	10,667
Plow 8/18's	11,900	10,817
Chisel Plow 35'	16,225	14,602
Tandem Disk 40'	24,900	22,410
Field Cultivator 40'	15,530	14,348
Corn Cultivator 6-30"	3,172	2,855
Corn Cultivator 8-30"	6,295	5,665
Corn Cultivator 12-30"	7,975	7,717
Air Planter 4-38"	8,949	8,233
Air Planter 6-38"	15,505	14,265
Air Planter 8-38"	16,590	15,263
Conventional Planter 6-30"	10,700	9,095
Conventional Planter 8-30"	15,100	12,385
Conventional Planter 12-30"	24,832	21,107
Drill 2 x 16'	25,000	21,250
Forage Harvester 3 Row Head	19,500	16,575
Forage Harvester Windrow Pickup	17,200	14,620
Wheel Rake 18'	3,075	3,075
Wheel Rake 20'	3,195	3,195
Truck (diesel)		
Tandem Axel Twin Screw 22' Box	38,200	34,400
	Types Added	
	List Price	Sale Price
Silage Bagger w/o Bags	\$17,225	\$15,502
Silage Blower	2,150	1,935
Mixer Grinder 100 bu	7,420	6,678
Mixer Grinder 125 bu	9,875	8,887
Mixer Grinder 135 bu	10,225	9,202
Tub Grinder Medium	8,900	8,010
Tub Grinder Large	11,950	10,755
Loader Medium Duty (for Tractor)	2,825	2,542
Loader Heavy Duty (for Tractor)	3,900	3,510
Skid Steer Loader (Small)	6,200	5,580
Skid Steer Loader (Medium)	9,730	8,757
Manure Spreader 390 bu	5,325	4,526
Manure Spreader 600 bu	6,850	5,822
Manure Spreader (Truck Mounted)	8,975	7,629
Snowblower 8'	1,945	1,750

Appendix 3. Machine Sizes and Types Added

<u>Machine</u>	<u>Sizes Added</u>	
	<u>List Price</u>	<u>Sale Price</u>
Plow 6/18's	\$ 9,325	\$ 8,477
Plow 7/18's	11,735	10,667
Plow 8/18's	11,900	10,817
Chisel Plow 35'	16,225	14,602
Tandem Disk 40'	24,900	22,410
Field Cultivator 40'	15,530	14,348
Corn Cultivator 6-30"	3,172	2,855
Corn Cultivator 8-30"	6,295	5,665
Corn Cultivator 12-30"	7,975	7,717
Air Planter 4-38"	8,949	8,233
Air Planter 6-38"	15,505	14,265
Air Planter 8-38"	16,590	15,263
Conventional Planter 6-30"	10,700	9,095
Conventional Planter 8-30"	15,100	12,385
Conventional Planter 12-30"	24,832	21,107
Drill 2 x 16'	25,000	21,250
Forage Harvester 3 Row Head	19,500	16,575
Forage Harvester Windrow Pickup	17,200	14,620
Wheel Rake 18'	3,075	3,075
Wheel Rake 20'	3,195	3,195
Truck (diesel)		
Tandem Axel Twin Screw 22' Box	38,200	34,400
	<u>Types Added</u>	
	<u>List Price</u>	<u>Sale Price</u>
Silage Bagger w/o Bags	\$17,225	\$15,502
Silage Blower	2,150	1,935
Mixer Grinder 100 bu	7,420	6,678
Mixer Grinder 125 bu	9,875	8,887
Mixer Grinder 135 bu	10,225	9,202
Tub Grinder Medium	8,900	8,010
Tub Grinder Large	11,950	10,755
Loader Medium Duty (for Tractor)	2,825	2,542
Loader Heavy Duty (for Tractor)	3,900	3,510
Skid Steer Loader (Small)	6,200	5,580
Skid Steer Loader (Medium)	9,730	8,757
Manure Spreader 390 bu	5,325	4,526
Manure Spreader 600 bu	6,850	5,822
Manure Spreader (Truck Mounted)	8,975	7,629
Snowblower 8'	1,945	1,750



Chisel Plow 35'	16,225	14,602
Tandem Disk 40'	24,900	22,410
Field Cultivator 40'	15,530	14,348
Corn Cultivator 6-30"	3,172	2,855
Corn Cultivator 8-30"	6,295	5,665
Corn Cultivator 12-30"	7,975	7,717
Air Planter 4-38"	8,949	8,233
Air Planter 6-38"	15,505	14,265
Air Planter 8-38"	16,590	15,263
Conventional Planter 6-30"	10,700	9,095
Conventional Planter 8-30"	15,100	12,385
Conventional Planter 12-30"	24,832	21,107
Drill 2 x 16'	25,000	21,250
Forage Harvester 3 Row Head	19,500	16,575
Forage Harvester Windrow Pickup	17,200	14,620
Wheel Rake 18'	3,075	3,075
Wheel Rake 20'	3,195	3,195
Truck (diesel)		
Tandem Axel Twin Screw 22' Box	38,200	34,400

	Types Added	
	List Price	Sale Price
Silage Bagger w/o Bags	\$17,225	\$15,502
Silage Blower	2,150	1,935
Mixer Grinder 100 bu	7,420	6,678
Mixer Grinder 125 bu	9,875	8,887
Mixer Grinder 135 bu	10,225	9,202
Tub Grinder Medium	8,900	8,010
Tub Grinder Large	11,950	10,755
Loader Medium Duty (for Tractor)	2,825	2,542
Loader Heavy Duty (for Tractor)	3,900	3,510
Skid Steer Loader (Small)	6,200	5,580
Skid Steer Loader (Medium)	9,730	8,757
Manure Spreader 390 bu	5,325	4,526
Manure Spreader 600 bu	6,850	5,822
Manure Spreader (Truck Mounted)	8,975	7,629
Snowblower 8'	1,945	1,750