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The Cost of Owning and Operating Farm Machinery

Larry K. Bond

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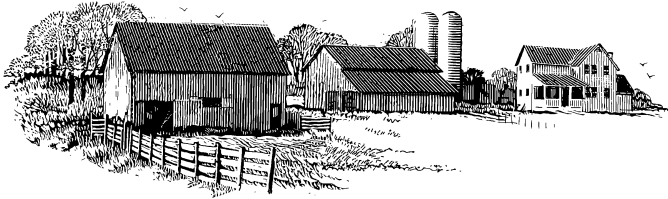
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THE COST OF OWNING AND OPERATING FARM MACHINERY—

UTAH 1997

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CONTENTS

	Page
Using This Information	1
Types of Costs	1
Fixed Costs	2
Variable Costs	5
Other Considerations	7
When Size or Cost is Different Than in Tables	7
Estimating Cost of Field Operations	7
Custom Rates	7
Purchase Price vs. Replacement Cost	8
References	55
Appendix A	56
Appendix B	57

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List of Tables

Table	Page
A. Estimated useful life and repair costs of selected farm machines	2
B. Taxes, housing, and insurance costs as a percentage of average value	5
1: Estimated Cost of Using a 40-hp Tractor for Specified Levels of Use Annually, Utah, 1997	9
2: Estimated Cost of Using an 80-hp Tractor for Specified Levels of Use Annually, Utah, 1997	10
3: Estimated Cost of Using a 100-hp Tractor for Specified Levels of Use Annually, Utah, 1997	11
4: Estimated Cost of Using a 150-hp Tractor for Specified Levels of Use Annually, Utah, 1997	12
5: Estimated Cost of Using a 150-hp 4-wheel Drive Tractor for Specified Levels of Use Annually, Utah, 1997	13
6: Estimated Cost of Using a 250-hp 4-wheel Drive Tractor for Specified Levels of Use Annually, Utah, 1997	14
7: Estimated Cost of Using a 350-hp Tractor, Front Wheel Assist for Specified Levels of Use Annually, Utah, 1997	15
8: Estimated Cost of Using a 350-hp 4-wheel Drive Tractor for Specified Levels of Use Annually, Utah, 1997	16
9: Estimated Cost of Using a 3-bottom 2-way Moldboard Plow for Specified Levels of Use Annually, Utah, 1997	17
10: Estimated Cost of Using a 4-bottom 2-way Moldboard Plow for Specified Levels of Use Annually, Utah, 1997	18
11: Estimated Cost of Using a 5-bottom 2-way Moldboard Plow for Specified Levels of Use Annually, Utah, 1997	19
12: Estimated Cost of Using an 8-bottom 2-way Moldboard Plow for Specified Levels of Use Annually, Utah, 1997	20
13: Estimated Cost of Using an 8-ft. Offset Disk for Specified Levels of Use Annually, Utah, 1997	21
14: Estimated Cost of Using a 14-ft. Offset Disk for Specified Levels of Use Annually, Utah, 1997	22
15: Estimated Cost of Using a 16-ft. Offset Disk for Specified Levels of Use Annually, Utah, 1997	23
16: Estimated Cost of Using a 21-ft. Offset Wing Disk for Specified Levels of Use Annually, Utah, 1997	24
17: Estimated Cost of Using a 23-ft. Offset Wing Disk for Specified Levels of Use Annually, Utah, 1997	25
18: Estimated Cost of Using a 21-ft. Tandem Disk for Specified Levels of Use Annually, Utah, 1997	26
19: Estimated Cost of Using a 24-ft. Tandem Disk for Specified Levels of Use Annually, Utah, 1997	27
20: Estimated Cost of Using a 24-ft. Winged Danish Digger for Specified Levels of Use Annually, Utah, 1997	28

21: Estimated Cost of Using a 6-row Cultivator for Specified Levels of Use Annually, Utah, 1997	29
22: Estimated Cost of Using a 13-ft. Cultipacker, Mechanical for Specified Levels of Use Annually, Utah, 1997	30
23: Estimated Cost of Using a 13-ft. Cultipacker, Hydraulic for Specified Levels of Use Annually, Utah, 1997	31
24: Estimated Cost of Using a 12 X 45 Ft. Landplane for Specified Levels of Use Annually, Utah, 1997	32
25: Estimated Cost of Using a 14 X 55 Ft. Landplane for Specified Levels of Use Annually, Utah, 1997	33
26: Estimated Cost of Using a 12-ft. Drill for Specified Levels of Use Annually, Utah, 1997	34
27: Estimated Cost of Using a 14-ft. Grain Drill for Specified Levels of Use Annually, Utah, 1997	35
28: Estimated Cost of Using a 12-ft. Deep Furrow Grain Drill for Specified Levels of Use Annually, Utah, 1997	36
29: Estimated Cost of Using a 6-row Corn Planter for Specified Levels of Use Annually, Utah, 1997	37
30: Estimated Cost of Using a 300-gallon Sprayer W/30-ft Boom for Specified Levels of Use Annually, Utah, 1997	38
31: Estimated Cost of Using a 300-gallon Sprayer W/50-ft Boom for Specified Levels of Use Annually, Utah, 1997	39
32: Estimated Cost of Using a 14-ft Self-propelled Windrower for Specified Levels of Use Annually, Utah, 1997	40
33: Estimated Cost of Using a 12-ft Hydroswing Mower/Conditioner for Specified Levels of Use Annually, Utah, 1997	41
34: Estimated Cost of Using a Windrow Turner for Specified Levels of Use Annually, Utah, 1997	42
35: Estimated Cost of Using a V-rake, 28 Ft. for Specified Levels of Use Annually, Utah, 1997	43
36: Estimated Cost of Using a 2-string PTO-drive Baler for Specified Levels of Use Annually, Utah, 1997	44
37: Estimated Cost of Using a Large Square 4 X 4 X 8 Ft. Baler for Specified Levels of Use Annually, Utah, 1997	45
38: Estimated Cost of Using a Round Baler 1500 Lb. for Specified Levels of Use Annually, Utah, 1997	46
39: Estimated Cost of Using a Pull-type Automatic Balewagon for Specified Levels of Use Annually, Utah, 1997	47
40: Estimated Cost of Using a Self-propelled Automatic Balewagon for Specified Levels of Use Annually, Utah, 1997	48
41: Estimated Cost of Using a 3-row Corn Chopper for Specified Levels of Use Annually, Utah, 1997	49
42: Estimated Cost of Using a 2-row Forage Harvester for Specified Levels of Use Annually, Utah, 1997	50
43: Estimated Cost of Using a 15-ft. Small Combine for Specified Levels of Use Annually, Utah, 1997	51

44: Estimated Cost of Using a 26-ft. Medium Size Combine for Specified Levels of Use Annually, Utah, 1997	52
45: Estimated Cost of Using a Dump Wagon for Specified Levels of Use Annually, Utah, 1997	53
46: Estimated Cost of Using a Forage Bagger for Specified Levels of Use Annually, Utah, 1997	54
B.1 Approximate Fuel Required for Field Operations Over and Above Tractor	58
B.2 Average Accomplishment Rates for Fieldwork Machines	59
B.3 Average Accomplishment Rates for Non-field Machines	60

THE COST OF OWNING AND OPERATING FARM MACHINERY

By Larry K. Bond and Richard Beard¹

Many production costs are beyond the control of the farm operator in the short run, but he does have some control over machinery costs. Good management requires attention to such questions as: What size and how much machinery is needed for a given size of operation? Should it be owned, leased or custom hired? Should new or used machinery be purchased? And, how long should machinery be kept before being replaced?

Few farm operators keep good enough records to enable them to satisfactorily answer all these questions. The information provided herein should be useful to those with good records as well as those with incomplete records on machinery use.

USING THIS INFORMATION

The estimation of costs for farm machinery is important to persons involved with production agriculture—farmers, custom operators, as well as researchers. This publication can help fulfill a wide variety of needs.

Individual farmers can use estimated farm machinery costs to help formulate enterprise budgets that are useful in planning and controlling production on their farms. Farm operators can examine the costs of owning and operating various tractors and associated implements at the level of use their farming operations permit. Also, such information allows a ready comparison with costs being charged by custom operators.

Custom operators need farm machinery cost information to establish rates charged for performing custom work. Both farmers and custom operators tie up large amounts of capital in farm machinery. The success of their investments depends greatly on the costs of use and ownership, which, in turn, are influenced by level of use. Thus, estimating farm machinery costs is essential to sound investment analysis. This publication can be used to estimate those costs.

TYPES OF COSTS

Costs associated with owning and operating farm equipment can be separated into two categories: (1) fixed costs and (2) variable or operating costs. The American Society of Agricultural Engineers has developed standards for estimating fixed and variable costs associated with owning and operating farm machinery. These are found most currently in the publication “ASAE Standards, 1985.”² The calculations used in this publication are based on the

¹Extension Economist and Extension Farm Machinery Specialist, respectively.

²The newer editions of *ASAE Standards* have separate coefficients for almost every piece of machinery, making computer programming much more difficult. Estimated costs of owning and operating machinery are based on average prices for fuel, insurance, new machinery, etc., which can vary significantly from farm to farm. It is the opinion of the authors that the deviation from these averages would contribute to greater error than the use of 1985 coefficients.

ASAE standards for agricultural machinery management. The use of these standards and formulas in calculating machinery operation costs are summarized in the pages that follow.

The following assumptions were made in estimating the costs found in the tables that follow:

1. The rate of interest is 10.8%.
2. Diesel fuel was priced at \$.99 per gallon and gas at \$1.29 per gallon.
3. No labor charge is included.

Fixed Costs

Fixed costs, sometimes referred to as overhead costs, are those costs associated with ownership and are incurred whether or not the machine is used. They are more a function of time than of use and include the following:

Depreciation is the loss in value due to damage, wear, and obsolescence. The estimated useful life of various types of machines is given in Table A. Obviously, the estimate of the number of years is based on the average number of hours used per year. On a small farm, the years of life may be 25 or more. Several assumptions are made to facilitate the calculations.

Table A. Estimated useful life and repair costs of selected farm machines*

Machine	Hours	Years
Tractor:		
2-wheel drive	10,000	15
4-wheel drive	10,000	15
Crawler	10,000	15
Tillage implements	2,000	15
Rotary Tillers	1,500	12
Seeding & fertilizing equipment	1,200	17
Sprayers (boom)	1,500	12
Harvesting equipment	2,000	10
Forage harvesters	2,000	10

*American Society of Agricultural Engineering Yearbook, 1985.

Maximum life of farm machinery is assumed to be 25 years. This assumption is based on the probability that a machine will either be worn out or obsolete after 25 years. Obviously, high annual usage will shorten the life. The useful life (in years) of the machine can be expressed as:

$$\text{Life of machine in years (YTT)} = \frac{\text{hours of use until wear-out}}{\text{hours of annual use}}$$

Another way of expressing YTT is the remaining **Y**ears **T**o **T**rade.

With the knowledge of how many years one can reasonably expect a piece of equipment to last, it is possible to charge depreciation according to hours of use. Average annual depreciation is calculated with this formula:

$$\text{Average annual depreciation} = \frac{\text{price—salvage value}}{\text{useful life of machine in years (YTT)}}$$

where: price = the current replacement price of the machine

salvage value = value of the machine (if any) at disposal

The salvage value of a machine, or its “remaining farm value” (RFV), is calculated from a series of formulas provided by the American Society of Agricultural Engineers (ASAE) called RFV equations. Each RFV equation pertains to a different category of machinery. The variable AGE is the age of the machine in years, and is a function of hours of use. An example of the types of machines to which each particular equation applies, is listed below.

<u>Equation</u>	<u>Example</u>
RFV1 = 0.64 (0.885) ^{AGE} X price	Balewagons, combines, swathers
RFV2 = 0.60 (0.885) ^{AGE} X price	All tillage equipment
RFV3 = 0.56 (0.885) ^{AGE} X price	Hay balers, corn choppers
RFV4 = 0.68 (0.885) ^{AGE} X price	Tractors
RFV5 = 0.15 X price	Trucks and cars

Interest is charged against the average value of the machine, regardless of what proportion is financed. The reason is simple. The money invested could be earning a return if put into savings or used elsewhere.

There are essentially two ways of looking at interest when calculating machinery expenses. If the machinery investment is made by borrowing money, the interest expense is the money paid to the lender as interest payments for the borrowed capital. If the investment is made from savings, it is necessary to consider the opportunity cost of having money tied up in

the machinery. Interest expense takes the form of earnings foregone by drawing the money out of an account or diverting it from another investment where it could have earned a return. There would be no economic advantage unless the earnings were greater than what could be earned elsewhere.

In this publication, interest has been charged at the current intermediate-term rate. If the operator has made the investment from savings, the interest charge as an opportunity cost could be somewhat less. Interest is charged against the average amount of money that is tied up in the investment at any one time. The calculation for interest can be expressed as:

$$\text{Interest expense} = \text{average investment} \times R$$

where: average investment = $\frac{\text{price} + \text{salvage value}}{2}$

and: R = going loan rate or interest or opportunity rate.

Taxes, Housing, and Insurance (THI) costs associated with farm machinery are:

- 1) Taxes levied by county and state governments. In Utah, farm machinery has not been taxed since 1986. However, pickups and trucks that require a license are taxed. The annual licensing fee is included in the tax.
- 2) Expenses charged to keep the machinery from being exposed to the elements when not in use. Exposure to weather results in increased equipment depreciation and repair. Thus, there is a cost associated with housing whether shelter is provided or not. Hence, there is justification for including it as a cost even when shelter is not provided.
- 3) Insurance expense to protect the investment against possible loss. This expense can vary widely between operations and between machines. Some farmers carry more insurance than others. However, the risk of fire, theft, or accident are basically the same whether the operator chooses to bear the risk personally or transfer the risk to an insurance company.

The ASAE has derived typical percentages of average investment to charge to housing for the various categories of equipment. Taxes, where applicable, are based on an average mill levy of 0.014341, or 1.4341%.

The annual THI charge is calculated by multiplying the THI percentage for the particular type of equipment by the average investment in the machine. The values in the tables may be considerably higher than many farmers pay because of negotiated rates, and that housing costs are based on value of machine rather than construction costs.

Table B. Taxes, housing, and insurance costs as a percentage of average value

Item	Taxes	Housing	Insurance	Total THI Percentage
Tractors	0.0%	1.0%	0.33%	1.33%
Light trucks and cars ¹	1.43	1.0	3.6	6.03
Heavy duty trucks ¹	1.43	1.0	2.5	4.93
Self-propelled harvesters	0.0	1.0	0.33	1.33
Tillage implements	0.0	1.0	0.33	1.33

¹Insurance is based on fleet rates and includes liability.

$$\text{THI} = \frac{\text{price} + \text{salvage value}}{2} \times \text{THI percentage}^3$$

Variable Costs

The variable or operating costs are those costs that are incurred when a machine is operated and generally fall into the following categories:

Repairs and Maintenance. These are difficult costs to predict. Repair bills on identical machines can vary widely due to differences in use, operator, topography, soils, and other factors. The ASAE, through years of sampling repair costs and probabilities of whether a machine will function or not in a given time period, has developed a series of Total Accumulated Repairs (TAR) equations to use in estimating average repair costs for different types of equipment on a nation-wide basis. Individual operators, depending on such things as their maintenance practices and the topography of their land, may have repair costs that vary from the average.

³Percentage should be expressed in decimal form. For tractors, it would be 0.0143.

The different TAR equations formulated by the ASAE each apply to a separate category of machines:

Equation	Equipment
$TAR_1 = 0.001 X (PU)^{1.5}$	4-wheel drive tractors
$TAR_2 = 0.0012 X (PU)^{1.5}$	2-wheel drive tractors
$TAR_3 = 0.00096 X (PU)^{1.4}$	Trucks, combines, balers w/motor
$TAR_4 = 0.00127 X (PU)^{1.4}$	Bale wagons, PTO balers
$TAR_5 = 0.00159 X (PU)^{1.4}$	Grain drills, swathers
$TAR_6 = 0.00191 X (PU)^{1.4}$	Fertilizer spreaders
$TAR_7 = 0.00301 X (PU)^{1.3}$	Hay mowers, tillage equipment

where: PU = percentage use

Percentage use (PU) refers to the percentage of the expected life of the machine that it will be used in a given year. A machine is assumed to be used 100% of its expected life, unless the expected life exceeds 25 years. PU is calculated as follows:

$$PU = \frac{\text{hours of annual use} \times \text{expected life in years} \times 100}{\text{expected life in hours}}$$

Fuel and Lubrication costs are dependent upon several factors. The size of the engine (PTO horsepower) and how hard the machine works (engine load factor) influence these expenses, as does the price of fuel. The cost of oil and lubrication is estimated to be 10% of fuel cost. The expense for fuel and oil is calculated as follows:

$$\text{Fuel and Lubrication Cost} = \frac{(\text{PTO HP}^2 \times \text{engine load factor}^5 \times \text{fuel price})}{\text{constant}} \times \text{hours of annual use} \times 1.10$$

where: constant = 9.37 for gasoline engines
12.5 for diesel engines

This translates to 0.06 gallons of diesel fuel per PTO of horsepower for a tractor operating at a load factor of 75%. If the PTO horsepower and the engine load factor are not known, but the gallons of fuel consumed per hour is known, then the fuel and oil costs can be calculated in this manner:

⁴For some machines that do not normally have a rated power take off horsepower, the number 1 is used instead of zero to avoid multiplication by zero. For example, see the table for self-propelled swather.

⁵Engine Load Factor refers to the level of operation as a percentage of maximum deliverable power.

$$\text{Fuel and Lubrication Cost} = \frac{\text{gallons used per hour}}{\text{hour}} \times \text{fuel price} \times \frac{\text{hours of annual use}}{\text{annual use}} \times 1.10$$

Fuel prices change, and, in all likelihood, the price paid for fuel will be different than what was used in these tables. A simple method of adjusting costs to reflect a change in the price of fuel is shown in Appendix A.

OTHER CONSIDERATIONS

When Size or Cost is Different Than in Tables

It is impossible to include every possible size of tractor and other equipment in this publication. Furthermore, purchase prices may be different than what the user of these tables actually paid. Nevertheless, the tables are flexible enough to enable an estimate of ownership and operating costs of almost any user's equipment.

Fuel and oil expense for powered machinery can be estimated by finding a machine with a similar fuel consumption rate, regardless of the purchase price or size of the machine. All other costs, including repairs, can be estimated by finding a table with a tractor or other machine having a purchase price similar to the one in question. Total annual cost is then found by adding the two figures together (for the same level of annual use). This figure can be divided by the hours used per year to get the cost per hour of use.

Estimating Cost of Field Operations

To estimate the cost per hour or per acre of performing a field operation that uses more than one piece of machinery, such as a tractor and a plow, it is necessary to look up the cost of each separately and add them together. It should be emphasized that labor costs have not been included.

Custom Rates

It is useful to compare per-hour or per-acre costs with the going custom rate. If the custom rate is less than or equal to estimated costs, some consideration should be given to hiring a custom operator. However, several factors need to be considered. One is the quality of work done by the custom operator and another is timing. If the quality is poor, the yield per acre might be lowered. Moreover, if the custom operator cannot be relied on when needed, a reduction in yield and/or quality of the commodity harvested may occur. Both of these items are costs that should be estimated and added to the custom rate before making the final comparison. Pride of ownership may also be an important factor with some operators.

Purchase Price vs. Replacement Cost

Costs of ownership are determined by the value placed on a machine. The question arises, "Should the actual purchase price or the cost of replacement be used?" The answer

depends on the purpose for which costs are wanted. It is customary to use replacement cost, unless the piece of equipment is relatively new. This may result in estimated costs being higher than they actually are. However, when making management decisions for planning purposes, the fact that costs will be higher for replacements must not be overlooked. It is usually better to overestimate costs than to underestimate them.

**Table 1: Estimated Cost of Using a 40-hp Tractor for Specified Levels of Use
Annually, Utah, 1997**

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing., & Ins.	Repairs	Fuel and Oil	Total Cost	Cost /Hr
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
25	15	405	1721	212	11	56	2405	96.23
50	15	405	1721	212	31	113	2482	49.65
75	15	405	1721	212	57	169	2565	34.20
100	15	405	1721	212	88	226	2652	26.53
125	15	405	1721	212	123	283	2744	21.96
150	15	405	1721	212	162	339	2839	18.93
175	15	405	1721	212	204	396	2938	16.79
200	15	405	1721	212	249	453	3040	15.20
225	15	405	1721	212	298	509	314	13.98
250	15	405	1721	212	349	566	3253	13.01
275	15	405	1721	212	402	622	3363	12.23
300	15	405	1721	212	458	679	3475	11.59
325	15	405	1721	212	517	736	3591	11.05
350	15	405	1721	212	577	792	3708	10.60
375	15	405	1721	212	640	849	3828	10.21
400	15	405	1721	212	706	906	3949	9.87
425	15	405	1721	212	773	962	4073	9.58
450	15	405	1721	212	842	1019	4199	9.33
475	15	405	1721	212	913	1075	4327	9.11
500	15	405	1721	212	986	1132	4456	8.91
525	15	405	1721	212	1061	1189	4588	8.74
550	15	405	1721	212	1138	1245	4721	8.58
575	15	405	1721	212	1216	1302	4856	8.45
600	15	405	1721	212	1296	1359	4993	8.32
625	15	405	1721	212	1378	1415	5131	8.21
650	15	405	1721	212	1461	1472	5271	8.11
675	15	480	1666	205	1537	1528	5416	8.02
700	14	497	1666	205	1594	1585	5547	7.93
725	14	515	1666	205	1651	1642	5678	7.83
750	13	533	1666	205	1708	1698	5810	7.75

Purchase Price	\$ 18,975
Hours to Wear out or 12-year Life	10,000
RFV Equation Number	4
TAR Equation Number	2
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
PTO Horsepower	40
Engine Load Factor	.65
Price Per Gallon of Diesel Fuel	\$0.99
Gallons of Fuel Consumed Per Hour	3.1

Table 2: Estimated Cost of Using an 80-hp Tractor for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Fuel and Repairs	Oil	Total Cost	Cost /hr
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
25	15	746	3172	391	20	113	4442	177.71
50	15	746	3172	391	57	226	4593	91.86
75	15	746	3172	391	106	339	4754	63.39
100	15	746	3172	391	163	453	4924	49.25
125	15	746	3172	391	227	566	5102	40.82
150	15	746	3172	391	299	679	5287	35.25
175	15	746	3172	391	376	792	5478	31.30
200	15	746	3172	391	460	906	5674	28.37
225	15	746	3172	391	549	1019	5877	26.12
250	15	746	3172	391	642	1132	6084	24.34
275	15	746	3172	391	741	1245	6296	22.90
300	15	746	3172	391	845	1359	6512	21.71
325	15	746	3172	391	952	1472	6733	20.72
350	15	746	3172	391	1064	1585	6958	19.88
375	15	746	3172	391	1180	1698	7188	19.17
400	15	746	3172	391	1300	1812	7421	18.55
425	15	746	3172	391	1424	1925	7658	18.02
450	15	746	3172	391	1551	2038	7899	17.55
475	15	746	3172	391	1683	2151	8143	17.14
500	15	746	3172	391	1817	2265	8391	16.78
525	15	746	3172	391	1955	2378	8642	16.46
550	15	746	3172	391	2096	2491	8897	16.18
575	15	746	3172	391	2241	2604	9154	15.92
600	15	746	3172	391	2389	2718	9415	15.69
625	15	746	3172	391	2539	2831	9680	15.49
650	15	746	3172	391	2693	2944	9947	15.30
675	15	884	3070	378	2833	3057	10222	15.14
700	14	916	3070	378	2937	3171	10472	14.96
725	14	949	3070	378	3042	3284	10723	14.79
750	13	982	3070	378	3147	3397	10974	14.63

Purchase Price	\$34,970
Hours to Wear out or 12 Year Life	10,000
RFV Equation Number	4
TAR Equation Number	2
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
PTO Horsepower	80
Engine Load Factor	.65
Price Per Gallon of Diesel Fuel	\$0.99
Gallons of Fuel Consumed Per Hour	3.1

**Table 3: Estimated Cost of Using a 100-hp Tractor for Specified Levels of Use
Annually, Utah, 1997**

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes Housing, & Ins.	Repairs	Fuel and Oil	Total Cost	Cost /hr
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
50	15	1118	4753	585	86	326	6868	137.37
100	15	1118	4753	585	243	653	7352	73.53
150	15	1118	4753	585	447	980	7883	52.55
200	15	1118	4753	585	689	1306	8451	42.26
250	15	1118	4753	585	962	1633	9051	36.21
300	15	1118	4753	585	1265	1960	9681	32.27
350	15	1118	4753	585	1594	2286	10337	29.53
400	15	1118	4753	585	1948	2613	11017	27.54
450	15	1118	4753	585	2324	2940	11720	26.05
500	15	1118	4753	585	2722	3267	12445	24.89
550	15	1118	4753	585	3141	3593	13190	23.98
600	15	1118	4753	585	3579	3920	13954	23.26
650	15	1118	4753	585	4035	4247	14737	22.67
700	14	1373	4599	566	4401	4573	15512	22.16
750	13	1471	4599	566	4715	4900	16251	21.67
800	13	1569	4599	566	5029	5227	16991	21.24
850	12	1667	4599	566	5344	5553	17730	20.86
900	11	1765	4599	566	5658	5880	18469	20.52
950	11	1863	4599	566	5972	6207	19208	20.22
1000	10	1961	4599	566	6287	6534	19947	19.95
1050	10	2060	4599	566	6601	6860	20686	19.70
1100	9	2158	4599	566	6915	7187	21425	19.48
1150	9	2256	4599	566	7230	7514	22164	19.27
1200	8	2354	4599	566	7544	7840	22904	19.09
1250	8	2452	4599	566	7859	8167	23643	18.91
1300	8	2550	4599	566	8173	8494	24382	18.76
1350	7	3002	4457	549	8487	8820	25316	18.75
1400	7	3113	4457	549	8802	9147	26068	18.62
1450	7	3224	4457	549	9116	9474	26820	18.50
1500	7	3336	4457	549	9430	9801	27572	18.38

Purchase Price	\$52,390
Hours to Wear out or 12 Year Life	10,000
RFV Equation Number	4
TAR Equation Number	2
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
PTO Horsepower	100
Engine Load Factor	.75
Price Per Gallon of Diesel Fuel	\$0.99
Gallons of Fuel Consumed Per Hour	6.0

**Table 4: Estimated Cost of Using a 150-hp Tractor for Specified Levels of Use
Annually, Utah, 1997**

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Fuel and Repairs	Oil	Total Cost	Cost /hr
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
50	15	1735	7376	908	134	490	10642	212.85
100	15	1735	7376	908	378	980	11376	113.77
150	15	1735	7376	908	694	1470	12183	81.22
200	15	1735	7376	908	1069	1960	13047	65.24
250	15	1735	7376	908	1494	2450	13962	55.85
300	15	1735	7376	908	1963	2940	14922	49.74
350	15	1735	7376	908	2474	3430	15923	45.50
400	15	1735	7376	908	3023	3920	16962	42.41
450	15	1735	7376	908	3607	4410	18036	40.08
500	15	1735	7376	908	4225	4900	19144	38.29
550	15	1735	7376	908	4874	5390	20283	36.88
600	15	1735	7376	908	5554	5880	21452	35.75
650	15	1735	7376	908	6262	6370	22651	34.85
700	14	2131	7137	879	6830	6860	23837	34.05
750	13	2283	7137	879	7317	7350	24967	33.29
800	13	2435	7137	879	7805	7840	26097	32.62
850	12	2587	7137	879	8293	8330	27227	32.03
900	11	2740	7137	879	8781	8820	28357	31.51
950	11	2892	7137	879	9269	9310	29487	31.04
1000	10	3044	7137	879	9757	9801	30617	30.62
1050	10	3196	7137	879	10244	10291	31747	30.24
1100	9	3348	7137	879	10732	10781	32877	29.89
1150	9	3501	7137	879	11220	11271	34007	29.57
1200	8	3653	7137	879	11708	11761	35138	29.28
1250	8	3805	7137	879	12196	12251	36268	29.01
1300	8	3957	7137	879	12684	12741	37398	28.77
1350	7	4659	6917	852	13171	13231	38830	28.76
1400	7	4831	6917	852	13659	13721	39981	28.56
1450	7	5004	6917	852	14147	14211	41131	28.37
1500	7	5176	6917	852	14635	14701	42282	28.19

Purchase Price	\$81,305
Hours to Wear out or 12 Year Life	10,000
RFV Equation Number	4
TAR Equation Number	2
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
PTO Horsepower	150
Engine Load Factor	.75
Price Per Gallon of Diesel Fuel	\$0.99
Gallons of Fuel Consumed Per Hour	10.0

Table 5: Estimated Cost of Using a 150-hp 4-wheel Drive Tractor for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Repairs	Fuel and Oil	Total Cost	Cost /hr
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
50	15	1926	8192	1009	124	490	11740	234.82
100	15	1926	8192	1009	350	980	12457	124.57
150	15	1926	8192	1009	642	1470	13239	88.27
200	15	1926	8192	1009	989	1960	14076	70.38
250	15	1926	8192	1009	1382	2450	14959	59.84
300	15	1926	8192	1009	1817	2940	15884	52.95
350	15	1926	8192	1009	2290	3430	16847	48.14
400	15	1926	8192	1009	2798	3920	17845	44.61
450	15	1926	8192	1009	3339	4410	18876	41.95
500	15	1926	8192	1009	3910	4900	19937	39.88
550	15	1926	8192	1009	4511	5390	21028	38.23
600	15	1926	8192	1009	5140	5880	22147	36.91
650	15	1926	8192	1009	5796	6370	23293	35.84
700	14	2367	7927	976	6321	6860	24451	34.93
750	13	2536	7927	976	6773	7350	25561	34.08
800	13	2705	7927	976	7224	7840	26672	33.34
850	12	2874	7927	976	7676	8330	27782	32.69
900	11	3043	7927	976	8127	8820	28893	32.10
950	11	3212	7927	976	8579	9310	30004	31.58
1000	10	3381	7927	976	9030	9801	31114	31.11
1050	10	3550	7927	976	9482	10291	32225	30.69
1100	9	3719	7927	976	9933	10781	33335	30.31
1150	9	3888	7927	976	10385	11271	34446	29.95
1200	8	4057	7927	976	10836	11761	35557	29.63
1250	8	4226	7927	976	11288	12251	36667	29.33
1300	8	4395	7927	976	11739	12741	37778	29.06
1350	7	5174	7683	946	12191	13231	39224	29.06
1400	7	5366	7683	946	12642	13721	40358	28.83
1450	7	5558	7683	946	13094	14211	41491	28.61
1500	7	5749	7683	946	13545	14701	42624	28.42

Purchase Price	\$90,300
Hours to Wear out or 12 Year Life	10,000
RFV Equation Number	4
TAR Equation Number	1
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
PTO Horsepower	150
Engine Load Factor	.75
Price per Gallon of Diesel Fuel	\$0.99
Gallons of Fuel Consumed per Hour	10.0

Table 6: Estimated Cost of Using a 250-hp 4-wheel Drive Tractor for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Repairs	Fuel and Oil	Total Cost	Cost /hr
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
300	15	2754	11710	1442	2598	4900	23404	78.01
350	15	2754	11710	1442	3273	5717	24896	71.13
400	15	2754	11710	1442	3999	6534	26439	66.10
450	15	2754	11710	1442	4772	7350	28028	62.29
500	15	2754	11710	1442	5589	8167	29662	59.33
550	15	2754	11710	1442	6448	8984	31338	56.98
600	15	2754	11710	1442	7347	9801	33054	55.09
650	15	2754	11710	1442	8285	10617	34808	53.55
700	14	3383	11331	1395	9036	11434	36579	52.26
750	13	3625	11331	1395	9681	12251	38283	51.04
800	13	3866	11331	1395	10326	13068	39986	49.98
850	12	4108	11331	1395	10972	13884	41690	49.05
900	11	4349	11331	1395	11617	14701	43394	48.22
950	11	4591	11331	1395	12263	15518	45098	47.47
1000	10	4833	11331	1395	12908	16335	46802	46.80
1050	10	5074	11331	1395	13553	17151	48505	46.20
1100	9	5316	11331	1395	14199	17968	50209	45.65
1150	9	5558	11331	1395	14844	18785	51913	45.14
1200	8	5799	11331	1395	15490	19602	53617	44.68
1250	8	6041	11331	1395	16135	20418	55321	44.26
1300	8	6283	11331	1395	16780	21235	57024	43.87
1350	7	7396	10982	1352	17426	22052	59208	43.86
1400	7	7670	10982	1352	18071	22869	60945	43.53
1450	7	7944	10982	1352	18717	23685	62681	43.23
1500	7	8218	10982	1352	19362	24502	64417	42.94
1550	6	8492	10982	1352	20007	25319	66153	42.68
1600	6	8766	10982	1352	20653	26136	67889	42.43
1650	6	9040	10982	1352	21298	26952	69625	42.20
1700	6	9314	10982	1352	21944	27769	71361	41.98
1750	6	9588	10982	1352	22589	28586	73097	41.77

Purchase Price	\$129,080
Hours to Wear out or 12 Year Life	10,000
RFV Equation Number	4
TAR Equation Number	1
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
PTO Horsepower	250
Engine Load Factor	.75
Price per Gallon of Diesel Fuel	\$0.99
Gallons of Fuel Consumed per Hour	15.1

Table 7: Estimated Cost of Using a 350-hp Tractor, Front Wheel Assist for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Fuel and Repairs	Oil	Total Cost	Cost /hr
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
300	15	2069	8800	1084	1952	6860	20765	69.22
350	15	2069	8800	1084	2460	8004	22416	64.05
400	15	2069	8800	1084	3005	9147	24105	60.26
450	15	2069	8800	1084	3586	10291	25830	57.40
500	15	2069	8800	1084	4200	11434	27587	55.18
550	15	2069	8800	1084	4846	12577	29376	53.41
600	15	2069	8800	1084	5521	13721	31195	51.99
650	15	2069	8800	1084	6226	14864	33043	50.84
700	14	2542	8515	1049	6790	16008	34903	49.86
750	13	2724	8515	1049	7275	17151	36713	48.95
800	13	2905	8515	1049	7760	18295	38524	48.16
850	12	3087	8515	1049	8245	19438	40334	47.45
900	11	3269	8515	1049	8730	20582	42144	46.83
950	11	3450	8515	1049	9215	21725	43954	46.27
1000	10	3632	8515	1049	9700	22869	45764	45.76
1050	10	3813	8515	1049	10185	24012	47574	45.31
1100	9	3995	8515	1049	10670	25155	49384	44.89
1150	9	4176	8515	1049	11155	26299	51194	44.52
1200	8	4358	8515	1049	11640	27442	53004	44.17
1250	8	4540	8515	1049	12125	28586	54814	43.85
1300	8	4721	8515	1049	12610	29729	56624	43.56
1350	7	5558	8253	1016	13095	30873	58795	43.55
1400	7	5764	8253	1016	13580	32016	60629	43.31
1450	7	5970	8253	1016	14065	33160	62463	43.08
1500	7	6176	8253	1016	14550	34303	64298	42.87
1550	6	6382	8253	1016	15035	35446	66132	42.67
1600	6	6587	8253	1016	15520	36590	67966	42.48
1650	6	6793	8253	1016	16005	37733	69801	42.30
1700	6	6999	8253	1016	16490	38877	71635	42.14
1750	6	7205	8253	1016	16975	40020	73469	41.98

Purchase Price	\$ 97,000
Hours to Wear out or 12 Year Life	10000
RFV Equation Number	4
TAR Equation Number	1
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
PTO Horsepower	350
Engine Load Factor	.75
Price per Gallon of Diesel Fuel	\$0.99
Gallons of Fuel Consumed per Hour	19.0

Table 8: Estimated Cost of Using a 350-hp 4-wheel Drive Tractor for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Fuel and Repairs	Oil	Total Cost	Cost /hr
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
300	15	2827	12020	1480	2667	6860	25854	86.18
350	15	2827	12020	1480	3360	8004	27691	79.12
400	15	2827	12020	1480	4105	9147	29580	73.95
450	15	2827	12020	1480	4899	10291	31517	70.04
500	15	2827	12020	1480	5737	11434	33499	67.00
550	15	2827	12020	1480	6619	12577	35524	64.59
600	15	2827	12020	1480	7542	13721	37590	62.65
650	15	2827	12020	1480	8504	14864	39696	61.07
700	14	3473	11631	1432	9275	16008	41819	59.74
750	13	3721	11631	1432	9938	17151	43873	58.50
800	13	3969	11631	1432	10600	18295	45927	57.41
850	12	4217	11631	1432	11263	19438	47981	56.45
900	11	4465	11631	1432	11925	20582	50035	55.59
950	11	4713	11631	1432	12588	21725	52089	54.83
1000	10	4961	11631	1432	13250	22869	54143	54.14
1050	10	5209	11631	1432	13913	24012	56197	53.52
1100	9	5457	11631	1432	14575	25155	58251	52.96
1150	9	5705	11631	1432	15238	26299	60305	52.44
1200	8	5953	11631	1432	15900	27442	62359	51.97
1250	8	6201	11631	1432	16563	28586	64413	51.53
1300	8	6449	11631	1432	17225	29729	66467	51.13
1350	7	7592	11273	1388	17888	30873	69014	51.12
1400	7	7874	11273	1388	18550	32016	71101	50.79
1450	7	8155	11273	1388	19213	33160	73188	50.47
1500	7	8436	11273	1388	19875	34303	75275	50.18
1550	6	8717	11273	1388	20538	35446	77362	49.91
1600	6	8998	11273	1388	21200	36590	79450	49.66
1650	6	9279	11273	1388	21863	37733	81537	49.42
1700	6	9561	11273	1388	22525	38877	83624	49.19
1750	6	9842	11273	1388	23188	40020	85711	48.98

Purchase Price	\$132,500
Hours to Wear out or 12 Year Life	10,000
RFV Equation Number	4
TAR Equation Number	1
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
PTO Horsepower	350
Engine Load Factor	.75
Price per Gallon of Diesel Fuel	\$0.99
Gallons of Fuel Consumed per Hour	19.0

Table 9: Estimated Cost of Using a 3-bottom 2-way Moldboard Plow for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	215	696	86	73	0	1068	43	42.75	24.49
50	15	215	696	86	180	0	1175	87	23.51	13.47
75	15	215	696	86	304	0	1300	130	17.34	9.93
100	15	215	696	86	442	0	1438	174	14.38	8.24
125	15	215	696	86	591	0	1587	218	12.70	7.27
150	13	283	666	82	723	0	1754	261	11.69	6.70
175	11	330	666	82	844	0	1921	305	10.98	6.29
200	10	378	666	82	965	0	2089	349	10.45	5.99
225	9	425	666	82	1085	0	2257	392	10.03	5.75
250	8	472	666	82	1206	0	2425	436	9.70	5.56
275	7	587	639	79	1326	0	2630	480	9.57	5.48
300	7	640	639	79	1447	0	2804	523	9.35	5.36
325	6	693	639	79	1568	0	2978	567	9.16	5.25
350	6	747	639	79	1688	0	3152	610	9.01	5.16
375	5	800	639	79	1809	0	3326	654	8.87	5.08
400	5	940	615	76	1929	0	3560	698	8.90	5.10
425	5	999	615	76	2050	0	3740	741	8.80	5.04
450	4	1058	615	76	2170	0	3919	785	8.71	4.99
475	4	1117	615	76	2291	0	4099	829	8.63	4.94
500	4	1176	615	76	2412	0	4278	872	8.56	4.90
525	4	1234	615	76	2532	0	4457	916	8.49	4.86
550	4	1399	595	73	2653	0	4719	960	8.58	4.92
575	3	1463	595	73	2773	0	4903	1003	8.53	4.89
600	3	1526	595	73	2894	0	5087	1047	8.48	4.86
625	3	1590	595	73	3014	0	5272	1090	8.44	4.83
650	3	1653	595	73	3135	0	5456	1134	8.39	4.81
675	3	1832	576	71	3256	0	5734	1178	8.50	4.87
700	3	1900	576	71	3376	0	5923	1221	8.46	4.85
725	3	1968	576	71	3497	0	6111	1265	8.43	4.83
750	3	2035	576	71	3617	0	6300	1309	8.40	4.81

Purchase Price	\$8,050
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	7
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.8
Implement Width (Feet)	4

Table 10: Estimated Cost of Using a 4-bottom 2-way Moldboard Plow for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acreage Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	250	810	100	85	0	1244	58	49.76	21.40
50	15	250	810	100	209	0	1368	116	27.37	11.77
75	15	250	810	100	354	0	1513	174	20.18	8.68
100	15	250	810	100	515	0	1674	232	16.74	7.20
125	15	250	810	100	688	0	1847	290	14.78	6.35
150	13	330	775	95	842	0	2041	348	13.61	5.85
175	11	385	775	95	982	0	2237	407	12.78	5.50
200	10	439	775	95	1123	0	2432	465	12.16	5.23
225	9	494	775	95	1263	0	2627	523	11.68	5.02
250	8	549	775	95	1404	0	2822	581	11.29	4.85
275	7	683	744	92	1544	0	3062	639	11.14	4.79
300	7	745	744	92	1684	0	3264	697	10.88	4.68
325	6	807	744	92	1825	0	3467	755	10.67	4.59
350	6	869	744	92	1965	0	3669	814	10.48	4.51
375	5	931	744	92	2105	0	3871	872	10.33	4.44
400	5	1095	716	88	2246	0	4144	930	10.36	4.46
425	5	1163	716	88	2386	0	4353	988	10.24	4.40
450	4	1231	716	88	2526	0	4562	1046	10.14	4.36
475	4	1300	716	88	2667	0	4771	1104	10.04	4.32
500	4	1368	716	88	2807	0	4979	1162	9.96	4.28
525	4	1437	716	88	2947	0	5188	1221	9.88	4.25
550	4	1628	692	85	3088	0	5493	1279	9.99	4.29
575	3	1702	692	85	3228	0	5707	1337	9.93	4.27
600	3	1776	692	85	3368	0	5922	1395	9.87	4.24
625	3	1850	692	85	3509	0	6136	1453	9.82	4.22
650	3	1924	692	85	3649	0	6350	1511	9.77	4.20
675	3	2132	671	83	3789	0	6675	1569	9.89	4.25
700	3	2211	671	83	3930	0	6894	1628	9.85	4.23
725	3	2290	671	83	4070	0	7113	1686	9.81	4.22
750	3	2369	671	83	4211	0	7333	1744	9.78	4.20

Purchase Price	\$9,370
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	7
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.8
Implement Width (Feet)	5.33

Table 11: Estimated Cost of Using a 5-bottom 2-way Moldboard Plow for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	309	1001	123	105	0	1538	72	61.53	21.14
50	15	309	1001	123	259	0	1691	145	33.83	11.62
75	15	309	1001	123	438	0	1871	218	24.95	8.57
100	15	309	1001	123	637	0	2069	291	20.70	7.11
125	15	309	1001	123	851	0	2284	363	18.27	6.28
150	13	408	958	118	1041	0	2524	436	16.83	5.78
175	11	475	958	118	1215	0	2765	509	15.80	5.43
200	10	543	958	118	1388	0	3007	582	15.04	5.17
225	9	611	958	118	1562	0	3248	654	14.44	4.96
250	8	679	958	118	1735	0	3490	727	13.96	4.80
275	7	844	920	113	1909	0	3786	800	13.77	4.73
300	7	921	920	113	2082	0	4036	873	13.45	4.62
325	6	998	920	113	2256	0	4286	945	13.19	4.53
350	6	1075	920	113	2429	0	4536	1018	12.96	4.45
375	5	1151	920	113	2603	0	4787	1091	12.77	4.39
400	5	1353	886	109	2776	0	5124	1164	12.81	4.40
425	5	1438	886	109	2950	0	5382	1236	12.67	4.35
450	4	1523	886	109	3124	0	5640	1309	12.54	4.31
475	4	1607	886	109	3297	0	5899	1382	12.42	4.27
500	4	1692	886	109	3471	0	6157	1455	12.31	4.23
525	4	1776	886	109	3644	0	6415	1528	12.22	4.20
550	4	2013	856	105	3818	0	6792	1600	12.35	4.24
575	3	2105	856	105	3991	0	7057	1673	12.27	4.22
600	3	2196	856	105	4165	0	7322	1746	12.20	4.19
625	3	2288	856	105	4338	0	7587	1819	12.14	4.17
650	3	2379	856	105	4512	0	7852	1891	12.08	4.15
675	3	2636	829	102	4685	0	8253	1964	12.23	4.20
700	3	2734	829	102	4859	0	8524	2037	12.18	4.18
725	3	2832	829	102	5032	0	8795	2110	12.13	4.17
750	3	2929	829	102	5206	0	9066	2182	12.09	4.15

Purchase Price	\$11,585
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	7
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.8
Implement Width (Feet)	6.67

Table 12: Estimated Cost of Using an 8-bottom 2-way Moldboard Plow for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	495	1603	197	168	0	2463	116	98.54	21.16
50	15	495	1603	197	414	0	2709	232	54.19	11.64
75	15	495	1603	197	702	0	2996	349	39.96	8.58
100	15	495	1603	197	1020	0	3315	465	33.15	7.12
125	15	495	1603	197	1363	0	3658	582	29.27	6.29
150	13	653	1534	189	1668	0	4043	698	26.95	5.79
175	11	761	1534	189	1946	0	4429	814	25.31	5.44
200	10	870	1534	189	2223	0	4816	931	24.08	5.17
225	9	979	1534	189	2501	0	5203	1047	23.13	4.97
250	8	1088	1534	189	2779	0	5590	1164	22.36	4.80
275	7	1352	1473	181	3057	0	6063	1280	22.05	4.74
300	7	1475	1473	181	3335	0	6464	1396	21.55	4.63
325	6	1598	1473	181	3613	0	6865	1513	21.12	4.54
350	6	1721	1473	181	3891	0	7266	1629	20.76	4.46
375	5	1844	1473	181	4169	0	7667	1746	20.45	4.39
400	5	2168	1419	175	4447	0	8207	1862	20.52	4.41
425	5	2303	1419	175	4725	0	8621	1978	20.29	4.36
450	4	2439	1419	175	5003	0	9034	2095	20.08	4.31
475	4	2574	1419	175	5281	0	9448	2211	19.89	4.27
500	4	2710	1419	175	5559	0	9861	2328	19.72	4.24
525	4	2845	1419	175	5837	0	10274	2444	19.57	4.20
550	4	3225	1371	169	6114	0	10878	2560	19.78	4.25
575	3	3371	1371	169	6392	0	11303	2677	19.66	4.22
600	3	3518	1371	169	6670	0	11727	2793	19.55	4.20
625	3	3664	1371	169	6948	0	12152	2910	19.44	4.18
650	3	3811	1371	169	7226	0	12576	3026	19.35	4.16
675	3	4222	1328	164	7504	0	13218	3142	19.58	4.21
700	3	4379	1328	164	7782	0	13652	3259	19.50	4.19
725	3	4535	1328	164	8060	0	14087	3375	19.43	4.17
750	3	4692	1328	164	8338	0	14521	3492	19.36	4.16

Purchase Price	\$18,555
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	7
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.8
Implement Width (Feet)	10.67

Table 13: Estimated Cost of Using an 8-ft. Offset Disk for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	160	519	64	54	0	797	92	31.89	8.60
50	15	160	519	64	134	0	876	185	17.54	4.73
75	15	160	519	64	227	0	969	278	12.93	3.49
100	15	160	519	64	330	0	1072	370	10.73	2.89
125	15	160	519	64	441	0	1183	463	9.47	2.55
150	13	211	496	61	540	0	1308	556	8.72	2.35
175	11	246	496	61	630	0	1433	649	8.19	2.21
200	10	282	496	61	720	0	1558	741	7.79	2.10
225	9	317	496	61	810	0	1683	834	7.48	2.02
250	8	352	496	61	899	0	1809	927	7.24	1.95
275	7	438	477	59	989	0	1962	1020	7.14	1.92
300	7	477	477	59	1079	0	2092	1112	6.97	1.88
325	6	517	477	59	1169	0	2221	1205	6.84	1.84
350	6	557	477	59	1259	0	2351	1298	6.72	1.81
375	5	597	477	59	1349	0	2481	1390	6.62	1.78
400	5	702	459	57	1439	0	2656	1483	6.64	1.79
425	5	745	459	57	1529	0	2790	1576	6.57	1.77
450	4	789	459	57	1619	0	2923	1669	6.50	1.75
475	4	833	459	57	1709	0	3057	1761	6.44	1.74
500	4	877	459	57	1799	0	3191	1854	6.38	1.72
525	4	921	459	57	1889	0	3325	1947	6.33	1.71
550	4	1044	444	55	1979	0	3520	2040	6.40	1.73
575	3	1091	444	55	2069	0	3658	2132	6.36	1.72
600	3	1138	444	55	2159	0	3795	2225	6.33	1.71
625	3	1186	444	55	2249	0	3932	2318	6.29	1.70
650	3	1233	444	55	2339	0	4070	2410	6.26	1.69
675	3	1367	430	53	2429	0	4277	2503	6.34	1.71
700	3	1417	430	53	2519	0	4418	2596	6.31	1.70
725	3	1468	430	53	2608	0	4559	2689	6.29	1.70
750	3	1518	430	53	2698	0	4699	2781	6.27	1.69

Purchase Price	\$6,005
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	7
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.85
Implement Width (Feet)	8

Table 14: Estimated Cost of Using a 14-ft. Offset Disk for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	363	1176	145	123	0	1807	162	72.31	11.14
50	15	363	1176	145	304	0	1988	324	39.76	6.13
75	15	363	1176	145	515	0	2199	486	29.32	4.52
100	15	363	1176	145	748	0	2432	649	24.33	3.75
125	15	363	1176	145	1000	0	2684	811	21.48	3.31
150	13	479	1126	139	1224	0	2966	973	19.78	3.05
175	11	559	1126	139	1428	0	3250	1135	18.57	2.86
200	10	639	1126	139	1631	0	3534	1298	17.67	2.72
225	9	718	1126	139	1835	0	3818	1460	16.97	2.61
250	8	798	1126	139	2039	0	4101	1622	16.41	2.53
275	7	992	1081	133	2243	0	4449	1785	16.18	2.49
300	7	1083	1081	133	2447	0	4743	1947	15.81	2.44
325	6	1173	1081	133	2651	0	5037	2109	15.50	2.39
350	6	1263	1081	133	2855	0	5331	2271	15.23	2.35
375	5	1353	1081	133	3059	0	5625	2434	15.00	2.31
400	5	1591	1041	128	3263	0	6022	2596	15.06	2.32
425	5	1690	1041	128	3467	0	6326	2758	14.88	2.29
450	4	1789	1041	128	3671	0	6629	2920	14.73	2.27
475	4	1889	1041	128	3875	0	6932	3083	14.60	2.25
500	4	1988	1041	128	4079	0	7236	3245	14.47	2.23
525	4	2088	1041	128	4283	0	7539	3407	14.36	2.21
550	4	2366	1006	124	4487	0	7982	3570	14.51	2.24
575	3	2474	1006	124	4691	0	8293	3732	14.42	2.22
600	3	2581	1006	124	4894	0	8605	3894	14.34	2.21
625	3	2689	1006	124	5098	0	8916	4056	14.27	2.20
650	3	2796	1006	124	5302	0	9228	4219	14.20	2.19
675	3	3098	975	120	5506	0	9699	4381	14.37	2.21
700	3	3213	975	120	5710	0	10017	4543	14.31	2.20
725	3	3328	975	120	5914	0	10336	4705	14.26	2.20
750	3	3443	975	120	6118	0	10655	4868	14.21	2.19

Purchase Price	\$13,615
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	7
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.85
Implement Width (Feet)	14

Table 15: Estimated Cost of Using a 16-ft. Offset Disk for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	414	1341	165	141	0	2061	191	82.45	10.78
50	15	414	1341	165	347	0	2267	382	45.34	5.93
75	15	414	1341	165	587	0	2507	573	33.43	4.37
100	15	414	1341	165	853	0	2773	765	27.74	3.63
125	15	414	1341	165	1140	0	3060	956	24.49	3.20
150	13	546	1284	158	1395	0	3382	1147	22.55	2.95
175	11	637	1284	158	1628	0	3706	1338	21.18	2.77
200	10	728	1284	158	1860	0	4030	1530	20.15	2.63
225	9	819	1284	158	2093	0	4353	1721	19.35	2.53
250	8	910	1284	158	2325	0	4677	1912	18.71	2.45
275	7	1132	1232	152	2558	0	5073	2103	18.45	2.41
300	7	1234	1232	152	2791	0	5409	2295	18.03	2.36
325	6	1337	1232	152	3023	0	5744	2486	17.68	2.31
350	6	1440	1232	152	3256	0	6079	2677	17.37	2.27
375	5	1543	1232	152	3488	0	6415	2868	17.11	2.24
400	5	1814	1187	146	3721	0	6867	3060	17.17	2.24
425	5	1927	1187	146	3953	0	7213	3251	16.97	2.22
450	4	2040	1187	146	4186	0	7559	3442	16.80	2.20
475	4	2154	1187	146	4418	0	7905	3633	16.64	2.18
500	4	2267	1187	146	4651	0	8251	3825	16.50	2.16
525	4	2380	1187	146	4883	0	8597	4016	16.38	2.14
550	4	2698	1147	141	5116	0	9102	4207	16.55	2.16
575	3	2821	1147	141	5349	0	9457	4398	16.45	2.15
600	3	2943	1147	141	5581	0	9812	4590	16.35	2.14
625	3	3066	1147	141	5814	0	10167	4781	16.27	2.13
650	3	3189	1147	141	6046	0	10522	4972	16.19	2.12
675	3	3533	1111	137	6279	0	11059	5163	16.39	2.14
700	3	3664	1111	137	6511	0	11423	5355	16.32	2.13
725	3	3795	1111	137	6744	0	11786	5546	16.26	2.13
750	3	3925	1111	137	6976	0	12150	5737	16.20	2.12

Purchase Price	\$15,525
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	7
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.85
Implement Width (Feet)	16.5

Table 16: Estimated Cost of Using a 21-ft. Offset Wing Disk for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	505	1635	201	172	0	2512	243	100.48	10.32
50	15	505	1635	201	422	0	2762	486	55.26	5.68
75	15	505	1635	201	715	0	3055	730	40.75	4.18
100	15	505	1635	201	1040	0	3380	973	33.80	3.47
125	15	505	1635	201	1390	0	3730	1217	29.84	3.07
150	13	666	1564	193	1700	0	4122	1460	27.48	2.82
175	11	776	1564	193	1984	0	4517	1703	25.81	2.65
200	10	887	1564	193	2267	0	4911	1947	24.56	2.52
225	9	998	1564	193	2551	0	5305	2190	23.58	2.42
250	8	1109	1564	193	2834	0	5699	2434	22.80	2.34
275	7	1379	1502	185	3117	0	6183	2677	22.48	2.31
300	7	1504	1502	185	3401	0	6591	2920	21.97	2.26
325	6	1630	1502	185	3684	0	7000	3164	21.54	2.21
350	6	1755	1502	185	3968	0	7409	3407	21.17	2.17
375	5	1880	1502	185	4251	0	7818	3651	20.85	2.14
400	5	2210	1447	178	4534	0	8369	3894	20.92	2.15
425	5	2348	1447	178	4818	0	8790	4137	20.68	2.12
450	4	2487	1447	178	5101	0	9212	4381	20.47	2.10
475	4	2625	1447	178	5385	0	9633	4624	20.28	2.08
500	4	2763	1447	178	5668	0	10055	4868	20.11	2.07
525	4	2901	1447	178	5951	0	10477	5111	19.96	2.05
550	4	3288	1398	172	6235	0	11092	5355	20.17	2.07
575	3	3437	1398	172	6518	0	11525	5598	20.04	2.06
600	3	3587	1398	172	6802	0	11958	5841	19.93	2.05
625	3	3736	1398	172	7085	0	12391	6085	19.83	2.04
650	3	3886	1398	172	7368	0	12823	6328	19.73	2.03
675	3	4306	1354	167	7652	0	13478	6572	19.97	2.05
700	3	4465	1354	167	7935	0	13921	6815	19.89	2.04
725	3	4624	1354	167	8219	0	14364	7058	19.81	2.03
750	3	4784	1354	167	8502	0	14807	7302	19.74	2.03

Purchase Price	\$18,920
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	7
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.85
Implement Width (Feet)	21

Table 17: Estimated Cost of Using a 23-ft. Offset Wing Disk for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	567	1838	226	193	0	2824	405	112.96	6.96
50	15	567	1838	226	475	0	3106	811	62.12	3.83
75	15	567	1838	226	804	0	3435	1217	45.81	2.82
100	15	567	1838	226	1169	0	3800	1622	38.00	2.34
125	15	567	1838	226	1562	0	4193	2028	33.55	2.07
150	13	748	1758	217	1912	0	4634	2434	30.90	1.90
175	11	873	1758	217	2230	0	5078	2839	29.02	1.79
200	10	998	1758	217	2549	0	5521	3245	27.61	1.70
225	9	1122	1758	217	2867	0	5964	3651	26.51	1.63
250	8	1247	1758	217	3186	0	6407	4056	25.63	1.58
275	7	1550	1688	208	3505	0	6951	4462	25.28	1.56
300	7	1691	1688	208	3823	0	7410	4868	24.70	1.52
325	6	1832	1688	208	4142	0	7870	5273	24.22	1.49
350	6	1973	1688	208	4460	0	8329	5679	23.80	1.47
375	5	2114	1688	208	4779	0	8789	6085	23.44	1.44
400	5	2485	1626	200	5098	0	9408	6490	23.52	1.45
425	5	2640	1626	200	5416	0	9882	6896	23.25	1.43
450	4	2795	1626	200	5735	0	10356	7302	23.01	1.42
475	4	2951	1626	200	6053	0	10830	7707	22.80	1.41
500	4	3106	1626	200	6372	0	11304	8113	22.61	1.39
525	4	3261	1626	200	6691	0	11778	8519	22.44	1.38
550	4	3696	1571	194	7009	0	12470	8925	22.67	1.40
575	3	3864	1571	194	7328	0	12956	9330	22.53	1.39
600	3	4032	1571	194	7646	0	13443	9736	22.41	1.38
625	3	4200	1571	194	7965	0	13930	10142	22.29	1.37
650	3	4368	1571	194	8284	0	14416	10547	22.18	1.37
675	3	4840	1523	188	8602	0	15152	10953	22.45	1.38
700	3	5020	1523	188	8921	0	15650	11359	22.36	1.38
725	3	5199	1523	188	9239	0	16148	11764	22.27	1.37
750	3	5378	1523	188	9558	0	16646	12170	22.20	1.37

Purchase Price	\$21,270
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	7
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.85
Implement Width (Feet)	35

**Table 18: Estimated Cost of Using a 21-ft. Tandem Disk for Specified Levels of Use
Annually, Utah, 1997**

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	463	1500	185	157	0	2305	243	92.22	9.47
50	15	463	1500	185	388	0	2535	486	50.72	5.21
75	15	463	1500	185	657	0	2804	730	37.40	3.84
100	15	463	1500	185	954	0	3102	973	31.03	3.19
125	15	463	1500	185	1276	0	3423	1217	27.39	2.81
150	13	611	1436	177	1561	0	3783	1460	25.23	2.59
175	11	713	1436	177	1821	0	4145	1703	23.69	2.43
200	10	814	1436	177	2081	0	4507	1947	22.54	2.31
225	9	916	1436	177	2341	0	4869	2190	21.64	2.22
250	8	1018	1436	177	2601	0	5231	2434	20.93	2.15
275	7	1266	1378	170	2861	0	5674	2677	20.64	2.12
300	7	1381	1378	170	3121	0	6050	2920	20.17	2.07
325	6	1496	1378	170	3381	0	6425	3164	19.77	2.03
350	6	1611	1378	170	3641	0	6800	3407	19.43	2.00
375	5	1726	1378	170	3902	0	7175	3651	19.13	1.97
400	5	2029	1328	164	4162	0	7681	3894	19.20	1.97
425	5	2155	1328	164	4422	0	8068	4137	18.98	1.95
450	4	2282	1328	164	4682	0	8455	4381	18.79	1.93
475	4	2409	1328	164	4942	0	8842	4624	18.62	1.91
500	4	2536	1328	164	5202	0	9229	4868	18.46	1.90
525	4	2663	1328	164	5462	0	9615	5111	18.32	1.88
550	4	3018	1283	158	5722	0	10180	5355	18.51	1.90
575	3	3155	1283	158	5982	0	10578	5598	18.40	1.89
600	3	3292	1283	158	6243	0	10975	5841	18.29	1.88
625	3	3429	1283	158	6503	0	11372	6085	18.20	1.87
650	3	3566	1283	158	6763	0	11770	6328	18.11	1.86
675	3	3952	1243	153	7023	0	12370	6572	18.33	1.88
700	3	4098	1243	153	7283	0	12777	6815	18.25	1.87
725	3	4244	1243	153	7543	0	13183	7058	18.18	1.87
750	3	4391	1243	153	7803	0	13590	7302	18.12	1.86

Purchase Price	\$17,365
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	7
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.85
Implement Width (Feet)	21

**Table 19: Estimated Cost of Using a 24-ft. Tandem Disk for Specified Levels of Use
Annually, Utah, 1997**

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	513	1663	205	174	0	2555	278	102.21	9.19
50	15	513	1663	205	430	0	2810	556	56.21	5.05
75	15	513	1663	205	728	0	3108	834	41.45	3.72
100	15	513	1663	205	1058	0	3438	1112	34.38	3.09
125	15	513	1663	205	1414	0	3794	1390	30.36	2.73
150	13	677	1591	196	1730	0	4193	1669	27.96	2.51
175	11	790	1591	196	2018	0	4594	1947	26.26	2.36
200	10	903	1591	196	2306	0	4995	2225	24.98	2.24
225	9	1015	1591	196	2594	0	5396	2503	23.99	2.16
250	8	1128	1591	196	2883	0	5797	2781	23.19	2.08
275	7	1403	1528	188	3171	0	6289	3060	22.87	2.06
300	7	1530	1528	188	3459	0	6705	3338	22.35	2.01
325	6	1658	1528	188	3747	0	7120	3616	21.91	1.97
350	6	1785	1528	188	4036	0	7536	3894	21.53	1.94
375	5	1913	1528	188	4324	0	7952	4172	21.21	1.91
400	5	2248	1471	181	4612	0	8513	4450	21.28	1.91
425	5	2389	1471	181	4901	0	8941	4729	21.04	1.89
450	4	2529	1471	181	5189	0	9370	5007	20.82	1.87
475	4	2670	1471	181	5477	0	9799	5285	20.63	1.85
500	4	2810	1471	181	5765	0	10228	5563	20.46	1.84
525	4	2951	1471	181	6054	0	10657	5841	20.30	1.82
550	4	3344	1422	175	6342	0	11283	6120	20.51	1.84
575	3	3496	1422	175	6630	0	11723	6398	20.39	1.83
600	3	3648	1422	175	6918	0	12163	6676	20.27	1.82
625	3	3800	1422	175	7207	0	12603	6954	20.17	1.81
650	3	3953	1422	175	7495	0	13044	7232	20.07	1.80
675	3	4379	1378	170	7783	0	13710	7510	20.31	1.83
700	3	4542	1378	170	8071	0	14160	7789	20.23	1.82
725	3	4704	1378	170	8360	0	14611	8067	20.15	1.81
750	3	4866	1378	170	8648	0	15061	8345	20.08	1.80

Purchase Price	\$19,245
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	7
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.85
Implement Width (Feet)	24

Table 20: Estimated Cost of Using a 24-ft. Winged Danish Digger for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	179	579	71	61	0	889	278	35.58	3.20
50	15	179	579	71	150	0	978	556	19.57	1.76
75	15	179	579	71	253	0	1082	834	14.43	1.30
100	15	179	579	71	368	0	1197	1112	11.97	1.08
125	15	179	579	71	492	0	1321	1390	10.57	0.95
150	13	236	554	68	602	0	1459	1669	9.73	0.87
175	11	275	554	68	703	0	1599	1947	9.14	0.82
200	10	314	554	68	803	0	1739	2225	8.70	0.78
225	9	354	554	68	903	0	1878	2503	8.35	0.75
250	8	393	554	68	1004	0	2018	2781	8.07	0.73
275	7	488	532	65	1104	0	2189	3060	7.96	0.72
300	7	533	532	65	1204	0	2334	3338	7.78	0.70
325	6	577	532	65	1305	0	2479	3616	7.63	0.69
350	6	622	532	65	1405	0	2623	3894	7.50	0.67
375	5	666	532	65	1505	0	2768	4172	7.38	0.66
400	5	783	512	63	1606	0	2963	4450	7.41	0.67
425	5	832	512	63	1706	0	3113	4729	7.32	0.66
450	4	881	512	63	1806	0	3262	5007	7.25	0.65
475	4	929	512	63	1907	0	3411	5285	7.18	0.65
500	4	978	512	63	2007	0	3560	5563	7.12	0.64
525	4	1027	512	63	2108	0	3710	5841	7.07	0.64
550	4	1164	495	61	2208	0	3928	6120	7.14	0.64
575	3	1217	495	61	2308	0	4081	6398	7.10	0.64
600	3	1270	495	61	2409	0	4234	6676	7.06	0.63
625	3	1323	495	61	2509	0	4387	6954	7.02	0.63
650	3	1376	495	61	2609	0	4541	7232	6.99	0.63
675	3	1525	480	59	2710	0	4773	7510	7.07	0.64
700	3	1581	480	59	2810	0	4929	7789	7.04	0.63
725	3	1638	480	59	2910	0	5086	8067	7.02	0.63
750	3	1694	480	59	3011	0	5243	8345	6.99	0.63

Purchase Price	\$6,700
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	7
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.85
Implement Width (Feet)	24

Table 21: Estimated Cost of Using a 6-row Cultivator for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
10	15	111	358	44	11	0	524	16	52.42	32.18
20	15	111	358	44	28	0	540	32	27.04	16.60
30	15	111	358	44	48	0	560	48	18.68	11.47
40	15	111	358	44	69	0	581	65	14.55	8.93
50	15	111	358	44	93	0	605	81	12.11	7.43
60	15	111	358	44	117	0	630	97	10.50	6.45
70	15	111	358	44	143	0	656	114	9.37	5.75
80	15	111	358	44	170	0	683	130	8.54	5.24
90	15	111	358	44	199	0	711	146	7.90	4.85
100	15	111	358	44	228	0	740	162	7.41	4.55
110	15	111	358	44	258	0	770	179	7.01	4.30
120	15	111	358	44	289	0	801	195	6.68	4.10
130	15	111	358	44	320	0	833	211	6.41	3.93
140	14	136	343	42	348	0	868	228	6.20	3.81
150	13	146	343	42	373	0	903	244	6.02	3.70
160	13	156	343	42	397	0	937	260	5.86	3.60
170	12	165	343	42	422	0	972	276	5.72	3.51
180	11	175	343	42	447	0	1006	293	5.59	3.43
190	11	185	343	42	472	0	1041	309	5.48	3.36
200	10	194	343	42	497	0	1075	325	5.38	3.30
210	10	204	343	42	522	0	1110	342	5.29	3.25
220	9	214	343	42	546	0	1145	358	5.20	3.20
230	9	224	343	42	571	0	1179	374	5.13	3.15
240	8	233	343	42	596	0	1214	390	5.06	3.11
250	8	243	343	42	621	0	1248	407	5.00	3.07
260	8	253	343	42	646	0	1283	423	4.94	3.03
270	7	297	329	41	671	0	1336	439	4.95	3.04
280	7	308	329	41	695	0	1372	456	4.90	3.01
290	7	319	329	41	720	0	1408	472	4.86	2.98
300	7	330	329	41	745	0	1444	488	4.81	2.95

Purchase Price	\$4,145
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	7
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	1.4
Field Efficiency	.8
Implement Width (Feet)	12

Table 22: Estimated Cost of Using a 13-ft. Cultipacker, Mechanical for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
10	15	85	276	34	9	0	404	56	40.47	7.13
20	15	85	276	34	22	0	417	113	20.88	3.68
30	15	85	276	34	37	0	432	170	14.42	2.54
40	15	85	276	34	53	0	449	226	11.23	1.98
50	15	85	276	34	71	0	467	283	9.35	1.65
60	15	85	276	34	91	0	486	340	8.11	1.43
70	15	85	276	34	111	0	506	397	7.24	1.28
80	15	85	276	34	132	0	527	453	6.59	1.16
90	15	85	276	34	153	0	549	510	6.10	1.08
100	15	85	276	34	176	0	571	567	5.72	1.01
110	15	85	276	34	199	0	594	624	5.41	0.95
120	15	85	276	34	223	0	618	680	5.16	0.91
130	15	85	276	34	247	0	643	737	4.95	0.87
140	14	105	265	33	268	0	670	794	4.79	0.84
150	13	113	265	33	288	0	697	850	4.65	0.82
160	13	120	265	33	307	0	723	907	4.52	0.80
170	12	128	265	33	326	0	750	964	4.42	0.78
180	11	135	265	33	345	0	777	1021	4.32	0.76
190	11	143	265	33	364	0	803	1077	4.23	0.75
200	10	150	265	33	383	0	830	1134	4.15	0.73
210	10	158	265	33	403	0	857	1191	4.08	0.72
220	9	165	265	33	422	0	884	1248	4.02	0.71
230	9	173	265	33	441	0	910	1304	3.96	0.70
240	8	180	265	33	460	0	937	1361	3.91	0.69
250	8	188	265	33	479	0	964	1418	3.86	0.68
260	8	195	265	33	498	0	990	1474	3.81	0.67
270	7	229	254	31	518	0	1031	1531	3.82	0.67
280	7	237	254	31	537	0	1059	1588	3.78	0.67
290	7	246	254	31	556	0	1087	1645	3.75	0.66
300	7	254	254	31	575	0	1114	1701	3.72	0.66

Purchase Price	\$3,200
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	7
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.8
Implement Width (Feet)	13

Table 23: Estimated Cost of Using a 13-ft. Cultipacker, Hydraulic for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
10	15	243	786	97	25	0	1150	56	115.08	20.29
20	15	243	786	97	62	0	1187	113	59.37	10.47
30	15	243	786	97	105	0	1230	170	41.01	7.23
40	15	243	786	97	152	0	1277	226	31.94	5.63
50	15	243	786	97	203	0	1328	283	26.58	4.69
60	15	243	786	97	257	0	1383	340	23.05	4.06
70	15	243	786	97	315	0	1440	397	20.58	3.63
80	15	243	786	97	374	0	1499	453	18.75	3.31
90	15	243	786	97	436	0	1561	510	17.35	3.06
100	15	243	786	97	500	0	1625	567	16.26	2.87
110	15	243	786	97	566	0	1691	624	15.38	2.71
120	15	243	786	97	634	0	1759	680	14.66	2.58
130	15	243	786	97	703	0	1829	737	14.07	2.48
140	14	299	752	93	763	0	1907	794	13.62	2.40
150	13	320	752	93	818	0	1982	850	13.22	2.33
160	13	341	752	93	872	0	2058	907	12.87	2.27
170	12	363	752	93	927	0	2134	964	12.56	2.21
180	11	384	752	93	981	0	2210	1021	12.28	2.16
190	11	405	752	93	1036	0	2286	1077	12.03	2.12
200	10	427	752	93	1090	0	2362	1134	11.81	2.08
210	10	448	752	93	1145	0	2438	1191	11.61	2.05
220	9	469	752	93	1200	0	2513	1248	11.43	2.01
230	9	491	752	93	1254	0	2589	1304	11.26	1.98
240	8	512	752	93	1309	0	2665	1361	11.11	1.96
250	8	533	752	93	1363	0	2741	1418	10.97	1.93
260	8	555	752	93	1418	0	2817	1474	10.84	1.91
270	7	651	722	89	1472	0	2934	1531	10.87	1.92
280	7	675	722	89	1527	0	3013	1588	10.76	1.90
290	7	699	722	89	1581	0	3091	1645	10.66	1.88
300	7	724	722	89	1636	0	3170	1701	10.57	1.86

Purchase Price	\$9,100
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	7
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.8
Implement Width (Feet)	13

**Table 24: Estimated Cost of Using a 12 X 45 Ft. Landplane for Specified Levels of Use
Annually, Utah, 1997**

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
10	15	212	686	85	9	0	991	52	99.14	18.93
20	15	212	686	85	23	0	1005	104	50.27	9.60
30	15	212	686	85	40	0	1022	157	34.09	6.51
40	15	212	686	85	59	0	1042	209	26.06	4.98
50	15	212	686	85	81	0	1064	261	21.28	4.06
60	15	212	686	85	105	0	1087	314	18.13	3.46
70	15	212	686	85	130	0	1113	366	15.90	3.04
80	15	212	686	85	157	0	1139	418	14.25	2.72
90	15	212	686	85	185	0	1167	471	12.98	2.48
100	15	212	686	85	214	0	1197	523	11.97	2.29
110	15	212	686	85	245	0	1227	576	11.16	2.13
120	15	212	686	85	277	0	1259	628	10.50	2.00
130	15	212	686	85	310	0	1292	680	9.94	1.90
140	14	261	657	81	337	0	1335	733	9.54	1.82
150	13	279	657	81	361	0	1378	785	9.19	1.75
160	13	298	657	81	385	0	1420	837	8.88	1.70
170	12	317	657	81	409	0	1463	890	8.61	1.64
180	11	335	657	81	433	0	1506	942	8.37	1.60
190	11	354	657	81	457	0	1548	994	8.15	1.56
200	10	373	657	81	481	0	1591	1047	7.96	1.52
210	10	391	657	81	505	0	1634	1099	7.78	1.49
220	9	410	657	81	529	0	1676	1152	7.62	1.46
230	9	429	657	81	553	0	1719	1204	7.48	1.43
240	8	447	657	81	577	0	1762	1256	7.34	1.40
250	8	466	657	81	602	0	1805	1309	7.22	1.38
260	8	484	657	81	626	0	1847	1361	7.11	1.36
270	7	569	631	78	650	0	1926	1413	7.14	1.36
280	7	590	631	78	674	0	1971	1466	7.04	1.34
290	7	611	631	78	698	0	2016	1518	6.95	1.33
300	7	632	631	78	722	0	2061	1570	6.87	1.31

Purchase Price	\$7,945
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	3
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4
Field Efficiency	.9
Implement Width (Feet)	12

**Table 25: Estimated Cost of Using a 14 X 55 Ft. Landplane for Specified Levels of Use
Annually, Utah, 1997**

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
10	15	454	1472	181	18	0	2126	61	212.63	34.81
20	15	454	1472	181	48	0	2156	122	107.81	17.65
30	15	454	1472	181	85	0	2193	183	73.11	11.97
40	15	454	1472	181	128	0	2235	244	55.89	9.15
50	15	454	1472	181	174	0	2282	305	45.65	7.47
60	15	454	1472	181	225	0	2332	366	38.88	6.36
70	15	454	1472	181	279	0	2387	427	34.10	5.58
80	15	454	1472	181	337	0	2444	488	30.56	5.00
90	15	454	1472	181	397	0	2504	549	27.83	4.56
100	15	454	1472	181	460	0	2567	610	25.68	4.20
110	15	454	1472	181	526	0	2633	672	23.94	3.92
120	15	454	1472	181	594	0	2701	733	22.51	3.69
130	15	454	1472	181	664	0	2772	794	21.32	3.49
140	14	559	1409	173	723	0	2864	855	20.46	3.35
150	13	599	1409	173	774	0	2955	916	19.70	3.23
160	13	639	1409	173	826	0	3047	977	19.05	3.12
170	12	679	1409	173	877	0	3138	1038	18.46	3.02
180	11	719	1409	173	929	0	3230	1099	17.95	2.94
190	11	759	1409	173	981	0	3322	1160	17.48	2.86
200	10	799	1409	173	1032	0	3413	1221	17.07	2.79
210	10	839	1409	173	1084	0	3505	1282	16.69	2.73
220	9	879	1409	173	1135	0	3596	1344	16.35	2.68
230	9	919	1409	173	1187	0	3688	1405	16.04	2.62
240	8	959	1409	173	1239	0	3779	1466	15.75	2.58
250	8	999	1409	173	1290	0	3871	1527	15.49	2.53
260	8	1039	1409	173	1342	0	3962	1588	15.24	2.50
270	7	1219	1353	167	1393	0	4131	1649	15.30	2.51
280	7	1265	1353	167	1445	0	4228	1710	15.10	2.47
290	7	1310	1353	167	1497	0	4325	1771	14.92	2.44
300	7	1355	1353	167	1548	0	4422	1832	14.74	2.41

Purchase Price	\$17,040
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	3
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4
Field Efficiency	.9
Implement Width (Feet)	14

Table 26: Estimated Cost of Using a 12-ft. Drill for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
10	15	247	799	98	34	0	1177	40	117.79	28.92
20	15	247	799	98	89	0	1233	81	61.66	15.14
30	15	247	799	98	157	0	1300	122	43.37	10.65
40	15	247	799	98	234	0	1378	162	34.47	8.46
50	15	247	799	98	320	0	1464	203	29.29	7.19
60	15	247	799	98	414	0	1557	244	25.96	6.38
70	15	247	799	98	513	0	1657	285	23.68	5.81
80	15	289	765	94	619	0	1766	325	22.08	5.42
90	13	325	765	94	696	0	1880	366	20.89	5.13
100	12	362	765	94	773	0	1993	407	19.94	4.90
110	11	398	765	94	851	0	2107	448	19.16	4.70
120	10	434	765	94	928	0	2220	488	18.51	4.54
130	9	470	765	94	1005	0	2334	529	17.96	4.41
140	9	506	765	94	1083	0	2447	570	17.48	4.29
150	8	542	765	94	1160	0	2561	610	17.07	4.19
160	8	654	734	90	1237	0	2715	651	16.97	4.17
170	7	695	734	90	1315	0	2833	692	16.67	4.09
180	7	735	734	90	1392	0	2952	733	16.40	4.03
190	6	776	734	90	1469	0	3070	773	16.16	3.97
200	6	817	734	90	1547	0	3188	814	15.94	3.91
210	6	858	734	90	1624	0	3306	855	15.75	3.87
220	5	899	734	90	1701	0	3424	896	15.57	3.82
230	5	940	734	90	1779	0	3543	936	15.40	3.78
240	5	1081	707	87	1856	0	3730	977	15.55	3.82
250	5	1126	707	87	1933	0	3853	1018	15.41	3.78
260	5	1171	707	87	2011	0	3975	1058	15.29	3.75
270	4	1216	707	87	2088	0	4097	1099	15.18	3.73
280	4	1261	707	87	2165	0	4220	1140	15.07	3.70
290	4	1306	707	87	2243	0	4342	1181	14.97	3.68
300	4	1351	707	87	2320	0	4465	1221	14.88	3.65

Purchase Price	\$9,250
Hours to Wear out or 12 Year Life	1,200
RFV Equation Number	2
TAR Equation Number	5
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4
Field Efficiency	.7
Implement Width (Feet)	12

Table 27: Estimated Cost of Using a 14-ft. Grain Drill for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
10	15	290	938	116	40	0	1382	47	138.30	29.11
20	15	290	938	116	104	0	1447	95	72.39	15.23
30	15	290	938	116	184	0	1527	142	50.91	10.72
40	15	290	938	116	275	0	1618	190	40.47	8.52
50	15	290	938	116	376	0	1719	237	34.39	7.24
60	15	290	938	116	486	0	1828	285	30.48	6.42
70	15	290	938	116	602	0	1945	332	27.80	5.85
80	15	340	898	111	726	0	2074	380	25.93	5.46
90	13	382	898	111	817	0	2207	427	24.53	5.16
100	12	424	898	111	908	0	2340	475	23.41	4.93
110	11	467	898	111	999	0	2474	522	22.49	4.73
120	10	509	898	111	1089	0	2607	570	21.73	4.57
130	9	552	898	111	1180	0	2740	617	21.08	4.44
140	9	594	898	111	1271	0	2873	665	20.53	4.32
150	8	637	898	111	1362	0	3006	712	20.05	4.22
160	8	768	862	106	1453	0	3188	760	19.93	4.19
170	7	816	862	106	1543	0	3327	807	19.57	4.12
180	7	863	862	106	1634	0	3465	855	19.26	4.05
190	6	911	862	106	1725	0	3604	902	18.97	3.99
200	6	959	862	106	1816	0	3743	950	18.72	3.94
210	6	1007	862	106	1907	0	3882	997	18.49	3.89
220	5	1055	862	106	1997	0	4020	1045	18.28	3.85
230	5	1103	862	106	2088	0	4159	1092	18.09	3.81
240	5	1269	830	102	2179	0	4380	1140	18.25	3.84
250	5	1322	830	102	2270	0	4523	1187	18.10	3.81
260	5	1374	830	102	2361	0	4667	1235	17.95	3.78
270	4	1427	830	102	2451	0	4811	1282	17.82	3.75
280	4	1480	830	102	2542	0	4954	1330	17.70	3.72
290	4	1533	830	102	2633	0	5098	1377	17.58	3.70
300	4	1586	830	102	2724	0	5242	1425	17.47	3.68

Purchase Price	\$10,860
Hours to Wear out or 12 Year Life	1,200
RFV Equation Number	2
TAR Equation Number	5
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4
Field Efficiency	.7
Implement Width (Feet)	14

Table 28: Estimated Cost of Using a 12-ft. Deep Furrow Grain Drill for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	312	1012	125	154	0	1602	101	64.09	15.74
50	15	312	1012	125	406	0	1854	203	37.08	9.11
75	15	312	1012	125	716	0	2164	305	28.86	7.08
100	12	458	968	119	979	0	2523	407	25.24	6.20
125	10	572	968	119	1224	0	2883	509	23.07	5.66
150	8	686	968	119	1468	0	3242	610	21.62	5.31
175	7	905	929	114	1713	0	3662	712	20.93	5.14
200	6	1035	929	114	1958	0	4036	814	20.18	4.96
225	5	1164	929	114	2203	0	4410	916	19.60	4.81
250	5	1425	895	110	2447	0	4878	1018	19.51	4.79
275	4	1567	895	110	2692	0	5265	1120	19.15	4.70
300	4	1710	895	110	2937	0	5652	1221	18.84	4.63
325	4	2004	865	107	3182	0	6157	1323	18.95	4.65
350	3	2158	865	107	3426	0	6556	1425	18.73	4.60
375	3	2312	865	107	3671	0	6955	1527	18.55	4.55
400	3	2632	838	103	3916	0	7489	1629	18.72	4.60
425	3	2796	838	103	4161	0	7898	1730	18.58	4.56
450	3	2961	838	103	4405	0	8307	1832	18.46	4.53
475	3	3125	838	103	4650	0	8717	1934	18.35	4.51
500	2	3473	815	100	4895	0	9282	2036	18.56	4.56
525	2	3646	815	100	5140	0	9700	2138	18.48	4.54
550	2	3820	815	100	5384	0	10119	2240	18.40	4.52
575	2	4180	794	98	5629	0	10700	2341	18.61	4.57
600	2	4361	794	98	5874	0	11126	2443	18.54	4.55
625	2	4543	794	98	6119	0	11552	2545	18.48	4.54
650	2	4911	775	95	6363	0	12144	2647	18.68	4.59
675	2	5100	775	95	6608	0	12578	2749	18.63	4.58
700	2	5289	775	95	6853	0	13011	2850	18.59	4.56
725	2	5661	759	93	7098	0	13610	2952	18.77	4.61
750	2	5856	759	93	7342	0	14050	3054	18.73	4.60

Purchase Price	\$11,710
Hours to Wear Out or 12 Year Life	1,200
RFV Equation Number	2
TAR Equation Number	5
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4
Field Efficiency	.7
Implement Width (Feet)	12

**Table 29: Estimated Cost of Using a 6-row Corn Planter for Specified Levels of Use
Annually, Utah, 1997**

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
10	15	370	1199	148	51	0	1767	33	176.76	52.08
20	15	370	1199	148	133	0	1850	67	92.52	27.26
30	15	370	1199	148	235	0	1952	101	65.07	19.17
40	15	370	1199	148	352	0	2068	135	51.72	15.24
50	15	370	1199	148	481	0	2197	169	43.96	12.95
60	15	370	1199	148	621	0	2337	203	38.96	11.48
70	15	370	1199	148	770	0	2487	237	35.53	10.47
80	15	434	1148	141	928	0	2651	271	33.14	9.76
90	13	488	1148	141	1044	0	2821	305	31.35	9.24
100	12	542	1148	141	1160	0	2991	339	29.92	8.81
110	11	597	1148	141	1276	0	3161	373	28.75	8.47
120	10	651	1148	141	1392	0	3332	407	27.77	8.18
130	9	705	1148	141	1509	0	3502	441	26.94	7.94
140	9	759	1148	141	1625	0	3672	475	26.23	7.73
150	8	814	1148	141	1741	0	3843	509	25.62	7.55
160	8	981	1102	136	1857	0	4075	543	25.47	7.50
170	7	1042	1102	136	1973	0	4252	576	25.01	7.37
180	7	1104	1102	136	2089	0	4429	610	24.61	7.25
190	6	1165	1102	136	2205	0	4607	644	24.25	7.14
200	6	1226	1102	136	2321	0	4784	678	23.92	7.05
210	6	1288	1102	136	2437	0	4961	712	23.63	6.96
220	5	1349	1102	136	2553	0	5139	746	23.36	6.88
230	5	1410	1102	136	2669	0	5316	780	23.12	6.81
240	5	1621	1061	131	2785	0	5598	814	23.33	6.87
250	5	1689	1061	131	2901	0	5781	848	23.13	6.81
260	5	1757	1061	131	3017	0	5965	882	22.94	6.76
270	4	1824	1061	131	3133	0	6149	916	22.77	6.71
280	4	1892	1061	131	3249	0	6332	950	22.62	6.66
290	4	1959	1061	131	3365	0	6516	984	22.47	6.62
300	4	2027	1061	131	3481	0	6699	1018	22.33	6.58

Purchase Price	\$13,880
Hours to Wear out or 12 Year Life	1,200
RFV Equation Number	2
TAR Equation Number	5
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4
Field Efficiency	.7
Implement Width (Feet)	10

Table 30: Estimated Cost of Using a 300-gallon Sprayer W/30-ft Boom for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
10	15	104	336	41	14	0	495	153	49.54	3.22
20	15	104	336	41	37	0	518	307	25.93	1.69
30	15	104	336	41	66	0	547	460	18.24	1.19
40	15	104	336	41	99	0	579	614	14.50	0.94
50	15	104	336	41	135	0	615	768	12.32	0.80
60	15	104	336	41	174	0	655	921	10.92	0.71
70	15	104	336	41	216	0	697	1075	9.96	0.65
80	15	122	322	40	260	0	743	1229	9.29	0.60
90	13	137	322	40	293	0	790	1382	8.79	0.57
100	12	152	322	40	325	0	838	1536	8.38	0.55
110	11	167	322	40	358	0	886	1690	8.06	0.52
120	10	182	322	40	390	0	933	1843	7.78	0.51
130	9	198	322	40	423	0	981	1997	7.55	0.49
140	9	213	322	40	455	0	1029	2150	7.35	0.48
150	8	228	322	40	488	0	1077	2304	7.18	0.47
160	8	275	309	38	520	0	1142	2458	7.14	0.46
170	7	292	309	38	553	0	1191	2611	7.01	0.46
180	7	309	309	38	585	0	1241	2765	6.90	0.45
190	6	326	309	38	618	0	1291	2919	6.80	0.44
200	6	344	309	38	650	0	1340	3072	6.70	0.44
210	6	361	309	38	683	0	1390	3226	6.62	0.43
220	5	378	309	38	715	0	1440	3380	6.55	0.43
230	5	395	309	38	748	0	1489	3533	6.48	0.42
240	5	454	297	37	781	0	1568	3687	6.54	0.43
250	5	473	297	37	813	0	1620	3840	6.48	0.42
260	5	492	297	37	846	0	1671	3994	6.43	0.42
270	4	511	297	37	878	0	1723	4148	6.38	0.42
280	4	530	297	37	911	0	1774	4301	6.34	0.41
290	4	549	297	37	943	0	1826	4455	6.30	0.41
300	4	568	297	37	976	0	1877	4609	6.26	0.41

Purchase Price	\$3,890
Hours to Wear out or 12 Year Life	1,200
RFV Equation Number	2
TAR Equation Number	5
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	6.5
Field Efficiency	.65
Implement Width (Feet)	30

Table 31: Estimated Cost of Using a 300-gallon Sprayer W/50-ft Boom for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
10	15	116	375	46	16	0	552	256	55.27	2.16
20	15	116	375	46	42	0	578	512	28.93	1.13
30	15	116	375	46	74	0	610	768	20.35	0.79
40	15	116	375	46	110	0	646	1024	16.17	0.63
50	15	116	375	46	150	0	687	1280	13.74	0.54
60	15	116	375	46	194	0	730	1536	12.18	0.48
70	15	116	375	46	241	0	777	1792	11.11	0.43
80	15	136	359	44	290	0	828	2048	10.36	0.40
90	13	153	359	44	327	0	882	2304	9.80	0.38
100	12	170	359	44	363	0	935	2560	9.35	0.37
110	11	187	359	44	399	0	988	2816	8.99	0.35
120	10	204	359	44	435	0	1041	3072	8.68	0.34
130	9	221	359	44	472	0	1095	3328	8.42	0.33
140	9	237	359	44	508	0	1148	3584	8.20	0.32
150	8	254	359	44	544	0	1201	3840	8.01	0.31
160	8	307	344	42	581	0	1274	4096	7.96	0.31
170	7	326	344	42	617	0	1329	4353	7.82	0.31
180	7	345	344	42	653	0	1385	4609	7.69	0.30
190	6	364	344	42	689	0	1440	4865	7.58	0.30
200	6	383	344	42	726	0	1495	5121	7.48	0.29
210	6	403	344	42	762	0	1551	5377	7.39	0.29
220	5	422	344	42	798	0	1606	5633	7.30	0.29
230	5	441	344	42	835	0	1662	5889	7.23	0.28
240	5	507	332	41	871	0	1750	6145	7.29	0.28
250	5	528	332	41	907	0	1807	6401	7.23	0.28
260	5	549	332	41	943	0	1865	6657	7.17	0.28
270	4	570	332	41	980	0	1922	6913	7.12	0.28
280	4	592	332	41	1016	0	1980	7169	7.07	0.28
290	4	613	332	41	1052	0	2037	7425	7.03	0.27
300	4	634	332	41	1088	0	2094	7681	6.98	0.27

Purchase Price	\$4,340
Hours to Wear out or 12 Year Life	1,200
RFV Equation Number	2
TAR Equation Number	5
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	6.5
Field Efficiency	.65
Implement Width (Feet)	50

Table 32: Estimated Cost of Using a 14-ft Self-propelled Windrower for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	1066	3933	484	285	38	5807	143	232.31	40.56
50	15	1066	3933	484	752	77	6314	286	126.28	22.05
75	15	1066	3933	484	1327	116	6927	429	92.37	16.13
100	15	1066	3933	484	1986	155	7625	572	76.25	13.31
125	15	1066	3933	484	2714	194	8392	715	67.14	11.72
150	13	1444	3757	463	3342	233	9239	859	61.60	10.75
175	11	1685	3757	463	3899	272	10075	1002	57.58	10.05
200	10	1926	3757	463	4456	311	10912	1145	54.56	9.53
225	9	2167	3757	463	5013	350	11749	1288	52.22	9.12
250	8	2407	3757	463	5570	389	12585	1431	50.34	8.79
275	7	3046	3601	443	6127	428	13644	1575	49.62	8.66
300	7	3323	3601	443	6684	467	14517	1718	48.39	8.45
325	6	3600	3601	443	7241	506	15390	1861	47.36	8.27
350	6	3876	3601	443	7798	545	16263	2004	46.47	8.11
375	5	4153	3601	443	8355	583	17136	2147	45.70	7.98
400	5	4942	3462	426	8912	622	18365	2290	45.91	8.02
425	5	5251	3462	426	9469	661	19270	2434	45.34	7.92
450	4	5560	3462	426	10026	700	20175	2577	44.83	7.83
475	4	5869	3462	426	10583	739	21080	2720	44.38	7.75
500	4	6178	3462	426	11140	778	21984	2863	43.97	7.68
525	4	6487	3462	426	11697	817	22889	3006	43.60	7.61
550	4	7419	3340	411	12253	856	24280	3150	44.15	7.71
575	3	7756	3340	411	12810	895	25213	3293	43.85	7.66
600	3	8093	3340	411	13367	934	26146	3436	43.58	7.61
625	3	8430	3340	411	13924	973	27079	3579	43.33	7.57
650	3	8768	3340	411	14481	1012	28012	3722	43.10	7.52

Purchase Price	\$44,415
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	1
TAR Equation Number	5
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
PTO Horsepower	1
Engine Load Factor	1
Price per Gallon of Diesel Fuel	\$0.99
Gallons of Fuel Consumed per Hour	1.4
Field Speed (Mph)	4.5
Field Efficiency	.75
Implement Width (Feet)	14

Table 33: Estimated Cost of Using a 12-ft Hydroswing Mower/Conditioner for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	572	1641	202	100	0	2515	122	100.60	20.49
50	15	572	1641	202	264	0	2678	245	53.58	10.91
75	15	572	1641	202	465	0	2880	368	38.40	7.82
100	15	572	1641	202	696	0	3110	490	31.11	6.34
125	15	572	1641	202	951	0	3366	613	26.93	5.49
150	13	737	1574	194	1171	0	3675	736	24.50	4.99
175	11	860	1574	194	1366	0	3993	859	22.82	4.65
200	10	983	1574	194	1561	0	4311	981	21.56	4.39
225	9	1106	1574	194	1757	0	4629	1104	20.58	4.19
250	8	1229	1574	194	1952	0	4947	1227	19.79	4.03
275	7	1504	1514	186	2147	0	5351	1350	19.46	3.96
300	7	1641	1514	186	2342	0	5682	1472	18.94	3.86
325	6	1778	1514	186	2537	0	6014	1595	18.51	3.77
350	6	1914	1514	186	2732	0	6346	1718	18.13	3.69
375	5	2051	1514	186	2928	0	6678	1840	17.81	3.63
400	5	2384	1461	180	3123	0	7147	1963	17.87	3.64
425	5	2533	1461	180	3318	0	7491	2086	17.63	3.59
450	4	2682	1461	180	3513	0	7835	2209	17.41	3.55
475	4	2831	1461	180	3708	0	8180	2331	17.22	3.51
500	4	2980	1461	180	3903	0	8524	2454	17.05	3.47
525	4	3129	1461	180	4099	0	8868	2577	16.89	3.44
550	4	3518	1414	174	4294	0	9399	2700	17.09	3.48
575	3	3678	1414	174	4489	0	9754	2822	16.96	3.46
600	3	3837	1414	174	4684	0	10109	2945	16.85	3.43
625	3	3997	1414	174	4879	0	10464	3068	16.74	3.41
650	3	4157	1414	174	5074	0	10819	3190	16.65	3.39
675	3	4577	1372	169	5270	0	11387	3313	16.87	3.44
700	3	4746	1372	169	5465	0	11752	3436	16.79	3.42
725	3	4916	1372	169	5660	0	12116	3559	16.71	3.40
750	3	5085	1372	169	5855	0	12481	3681	16.64	3.39

Purchase Price	\$19,485
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	3
TAR Equation Number	4
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.75
Implement Width (Feet)	12

**Table 34: Estimated Cost of Using a Windrow Turner for Specified Levels of Use
Annually, Utah, 1997**

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re- Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
10	15	13	43	5	1	0	62	19	6.27	3.20
20	15	13	43	5	2	0	64	39	3.21	1.63
30	15	13	43	5	4	0	65	58	2.20	1.12
40	15	13	43	5	6	0	68	78	1.70	0.87
50	15	13	43	5	8	0	70	98	1.41	0.72
60	15	13	43	5	11	0	72	117	1.21	0.62
70	15	13	43	5	14	0	75	137	1.08	0.55
80	15	13	43	5	16	0	78	157	0.98	0.50
90	15	13	43	5	19	0	81	176	0.90	0.46
100	15	13	43	5	22	0	84	196	0.84	0.43
110	15	13	43	5	26	0	87	215	0.79	0.40
120	15	13	43	5	29	0	90	235	0.76	0.38
130	15	13	43	5	32	0	94	255	0.72	0.37
140	14	16	41	5	35	0	97	274	0.70	0.36
150	13	18	41	5	38	0	101	294	0.68	0.35
160	13	19	41	5	40	0	105	314	0.66	0.34
170	12	20	41	5	43	0	108	333	0.64	0.33
180	11	21	41	5	45	0	112	353	0.63	0.32
190	11	22	41	5	48	0	116	373	0.61	0.31
200	10	23	41	5	50	0	120	392	0.60	0.31
210	10	25	41	5	53	0	123	412	0.59	0.30
220	9	26	41	5	55	0	127	431	0.58	0.29
230	9	27	41	5	58	0	131	451	0.57	0.29
240	8	28	41	5	60	0	134	471	0.56	0.29
250	8	29	41	5	63	0	138	490	0.55	0.28
260	8	30	41	5	65	0	142	510	0.55	0.28
270	7	36	40	5	68	0	148	530	0.55	0.28
280	7	37	40	5	70	0	151	549	0.54	0.28
290	7	38	40	5	73	0	155	569	0.54	0.27
300	7	40	40	5	75	0	159	589	0.53	0.27

Purchase Price	\$500
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	5
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.9
Implement Width (Feet)	4

Table 35: Estimated Cost of Using a V-rake, 28 Ft. for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
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Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
10	15	165	536	66	11	0	778	122	77.80	6.37
20	15	165	536	66	29	0	796	244	39.81	3.26
30	15	165	536	66	51	0	818	366	27.28	2.23
40	15	165	536	66	77	0	843	488	21.10	1.73
50	15	165	536	66	105	0	872	610	17.44	1.43
60	15	165	536	66	136	0	902	733	15.04	1.23
70	15	165	536	66	168	0	935	855	13.36	1.09
80	15	165	536	66	203	0	969	977	12.12	0.99
90	15	165	536	66	239	0	1006	1099	11.18	0.91
100	15	165	536	66	277	0	1044	1221	10.44	0.85
110	15	165	536	66	317	0	1083	1344	9.85	0.81
120	15	165	536	66	358	0	1124	1466	9.37	0.77
130	15	165	536	66	400	0	1167	1588	8.98	0.73
140	14	204	513	63	435	0	1214	1710	8.68	0.71
150	13	218	513	63	466	0	1260	1832	8.40	0.69
160	13	233	513	63	498	0	1305	1954	8.16	0.67
170	12	247	513	63	529	0	1351	2077	7.95	0.65
180	11	262	513	63	560	0	1397	2199	7.76	0.64
190	11	276	513	63	591	0	1442	2321	7.59	0.62
200	10	291	513	63	622	0	1488	2443	7.44	0.61
210	10	305	513	63	653	0	1534	2565	7.31	0.60
220	9	320	513	63	684	0	1579	2688	7.18	0.59
230	9	334	513	63	715	0	1625	2810	7.07	0.58
240	8	349	513	63	746	0	1671	2932	6.96	0.57
250	8	363	513	63	777	0	1716	3054	6.87	0.56
260	8	378	513	63	809	0	1762	3176	6.78	0.55
270	7	444	492	61	840	0	1836	3298	6.80	0.56
280	7	460	492	61	871	0	1883	3421	6.73	0.55
290	7	477	492	61	902	0	1931	3543	6.66	0.55
300	7	493	492	61	933	0	1978	3665	6.60	0.54

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Purchase Price	\$6,200
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	5
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4.5
Field Efficiency	.8
Implement Width (Feet)	28

Table 36: Estimated Cost of Using a 2-string PTO-drive Baler for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	491	1410	174	86	0	2160	44	86.43	48.51
50	15	491	1410	174	227	0	2301	89	46.03	25.83
75	15	491	1410	174	400	0	2474	133	32.99	18.52
100	15	491	1410	174	598	0	2672	178	26.73	15.00
125	15	491	1410	174	817	0	2891	222	23.14	12.98
150	13	633	1352	166	1006	0	3157	267	21.05	11.81
175	11	739	1352	166	1174	0	3431	311	19.61	11.00
200	10	844	1352	166	1341	0	3704	356	18.52	10.39
225	9	950	1352	166	1509	0	3977	400	17.68	9.92
250	8	1055	1352	166	1677	0	4250	445	17.00	9.54
275	7	1292	1300	160	1844	0	4597	490	16.72	9.38
300	7	1410	1300	160	2012	0	4882	534	16.27	9.13
325	6	1527	1300	160	2180	0	5167	579	15.90	8.92
350	6	1645	1300	160	2347	0	5452	623	15.58	8.74
375	5	1762	1300	160	2515	0	5737	668	15.30	8.59
400	5	2048	1255	155	2683	0	6140	712	15.35	8.62
425	5	2176	1255	155	2850	0	6436	757	15.14	8.50
450	4	2304	1255	155	3018	0	6732	801	14.96	8.40
475	4	2432	1255	155	3186	0	7027	846	14.80	8.30
500	4	2561	1255	155	3354	0	7323	890	14.65	8.22
525	4	2689	1255	155	3521	0	7619	935	14.51	8.14
550	4	3022	1214	150	3689	0	8074	980	14.68	8.24
575	3	3159	1214	150	3857	0	8380	1024	14.57	8.18
600	3	3297	1214	150	4024	0	8685	1069	14.48	8.12
625	3	3434	1214	150	4192	0	8990	1113	14.38	8.07
650	3	3572	1214	150	4360	0	9295	1158	14.30	8.03
675	3	3932	1179	145	4527	0	9783	1202	14.49	8.13
700	3	4078	1179	145	4695	0	10096	1247	14.42	8.09
725	3	4223	1179	145	4863	0	10409	1291	14.36	8.06
750	3	4369	1179	145	5030	0	10723	1336	14.30	8.02

Purchase Price	\$16,740
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	3
TAR Equation Number	4
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	1.4
Field Efficiency	.75
Implement Width (Feet)	14

Table 37: Estimated Cost of Using a Large Square 4 X 4 X 8 Ft. Baler for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	1889	5425	668	330	0	8313	44	332.52	186.62
50	15	1889	5425	668	872	0	8854	89	177.09	99.39
75	15	1889	5425	668	1537	0	9520	133	126.94	71.24
100	15	1889	5425	668	2300	0	10282	178	102.83	57.71
125	15	1889	5425	668	3143	0	11126	222	89.01	49.95
150	13	2436	5202	641	3871	0	12149	267	80.99	45.46
175	11	2843	5202	641	4516	0	13200	311	75.43	42.33
200	10	3249	5202	641	5161	0	14251	356	71.26	39.99
225	9	3655	5202	641	5806	0	15302	400	68.01	38.17
250	8	4061	5202	641	6451	0	16353	445	65.42	36.71
275	7	4972	5003	616	7096	0	17687	490	64.32	36.10
300	7	5423	5003	616	7741	0	18784	534	62.61	35.14
325	6	5875	5003	616	8386	0	19881	579	61.17	34.33
350	6	6327	5003	616	9032	0	20978	623	59.94	33.64
375	5	6779	5003	616	9677	0	22075	668	58.87	33.04
400	5	7881	4828	595	10322	0	23625	712	59.06	33.15
425	5	8374	4828	595	10967	0	24762	757	58.27	32.70
450	4	8866	4828	595	11612	0	25900	801	57.56	32.30
475	4	9359	4828	595	12257	0	27038	846	56.92	31.95
500	4	9851	4828	595	12902	0	28175	890	56.35	31.63
525	4	10344	4828	595	13547	0	29313	935	55.84	31.34
550	4	11627	4673	575	14192	0	31067	980	56.49	31.70
575	3	12156	4673	575	14838	0	32241	1024	56.07	31.47
600	3	12684	4673	575	15483	0	33414	1069	55.69	31.26
625	3	13213	4673	575	16128	0	34588	1113	55.34	31.06
650	3	13741	4673	575	16773	0	35761	1158	55.02	30.88
675	3	15128	4535	559	17418	0	37639	1202	55.76	31.30
700	3	15689	4535	559	18063	0	38845	1247	55.49	31.14
725	3	16249	4535	559	18708	0	40050	1291	55.24	31.00
750	3	16809	4535	559	19353	0	41256	1336	55.01	30.87

Purchase Price	\$64,405
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	3
TAR Equation Number	4
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	1.4
Field Efficiency	.75
Implement Width (Feet)	14

Table 38: Estimated Cost of Using a Round Baler 1500 Lb. for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	645	1853	228	113	0	2839	44	113.59	63.75
50	15	645	1853	228	298	0	3024	89	60.49	33.95
75	15	645	1853	228	525	0	3252	133	43.36	24.33
100	15	645	1853	228	786	0	3512	178	35.12	19.71
125	15	645	1853	228	1074	0	3800	222	30.40	17.06
150	13	832	1777	219	1322	0	4150	267	27.67	15.53
175	11	971	1777	219	1543	0	4509	311	25.77	14.46
200	10	1110	1777	219	1763	0	4868	356	24.34	13.66
225	9	1248	1777	219	1983	0	5227	400	23.23	13.04
250	8	1387	1777	219	2204	0	5586	445	22.35	12.54
275	7	1698	1709	210	2424	0	6041	490	21.97	12.33
300	7	1853	1709	210	2644	0	6416	534	21.39	12.00
325	6	2007	1709	210	2865	0	6791	579	20.90	11.73
350	6	2161	1709	210	3085	0	7165	623	20.47	11.49
375	5	2316	1709	210	3305	0	7540	668	20.11	11.29
400	5	2692	1649	203	3526	0	8070	712	20.18	11.32
425	5	2860	1649	203	3746	0	8458	757	19.90	11.17
450	4	3029	1649	203	3967	0	8847	801	19.66	11.03
475	4	3197	1649	203	4187	0	9235	846	19.44	10.91
500	4	3365	1649	203	4407	0	9624	890	19.25	10.80
525	4	3533	1649	203	4628	0	10013	935	19.07	10.70
550	4	3972	1596	197	4848	0	10612	980	19.30	10.83
575	3	4152	1596	197	5068	0	11013	1024	19.15	10.75
600	3	4333	1596	197	5289	0	11414	1069	19.02	10.68
625	3	4513	1596	197	5509	0	11814	1113	18.90	10.61
650	3	4694	1596	197	5729	0	12215	1158	18.79	10.55
675	3	5168	1549	191	5950	0	12857	1202	19.05	10.69
700	3	5359	1549	191	6170	0	13269	1247	18.96	10.64
725	3	5550	1549	191	6390	0	13680	1291	18.87	10.59
750	3	5742	1549	191	6611	0	14092	1336	18.79	10.55

Purchase Price	\$22,000
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	3
TAR Equation Number	4
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	1.4
Field Efficiency	.75
Implement Width (Feet)	14

Table 39: Estimated Cost of Using a Pull-type Automatic Balewagon for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
100	15	533	1728	213	714	0	3188	593	31.88	5.37
125	15	533	1728	213	976	0	3450	742	27.60	4.65
150	13	704	1653	204	1202	0	3762	890	25.08	4.22
175	11	821	1653	204	1402	0	4080	1039	23.32	3.93
200	10	938	1653	204	1603	0	4397	1187	21.99	3.70
225	9	1055	1653	204	1803	0	4715	1336	20.96	3.53
250	8	1173	1653	204	2003	0	5032	1484	20.13	3.39
275	7	1458	1588	196	2204	0	5444	1633	19.80	3.33
300	7	1590	1588	196	2404	0	5777	1781	19.26	3.24
325	6	1723	1588	196	2604	0	6110	1930	18.80	3.17
350	6	1855	1588	196	2805	0	6442	2078	18.41	3.10
375	5	1988	1588	196	3005	0	6775	2227	18.07	3.04
400	5	2336	1529	188	3205	0	7259	2375	18.15	3.06
425	5	2482	1529	188	3406	0	7605	2524	17.90	3.01
450	4	2628	1529	188	3606	0	7951	2672	17.67	2.98
475	4	2775	1529	188	3806	0	8298	2821	17.47	2.94
500	4	2921	1529	188	4007	0	8644	2969	17.29	2.91
525	4	3067	1529	188	4207	0	8990	3118	17.13	2.88
550	4	3476	1478	182	4407	0	9542	3266	17.35	2.92
575	3	3634	1478	182	4608	0	9900	3415	17.22	2.90
600	3	3792	1478	182	4808	0	10258	3563	17.10	2.88
625	3	3950	1478	182	5008	0	10617	3712	16.99	2.86
650	3	4108	1478	182	5209	0	10975	3860	16.89	2.84
675	3	4551	1432	176	5409	0	11568	4009	17.14	2.89
700	3	4720	1432	176	5609	0	11937	4157	17.05	2.87

Purchase Price	\$20,000
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	2
TAR Equation Number	4
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	5
Field Efficiency	.7
Implement Width (Feet)	14

Table 40: Estimated Cost of Using a Self-propelled Automatic Balewagon for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
100	15	1440	5314	654	2143	577	10127	593	101.28	17.05
125	15	1440	5314	654	2928	721	11057	742	88.46	14.89
150	13	1951	5075	625	3606	865	12123	890	80.82	13.61
175	11	2276	5075	625	4207	1010	13193	1039	75.39	12.69
200	10	2602	5075	625	4808	1154	14263	1187	71.32	12.01
225	9	2927	5075	625	5409	1298	15334	1336	68.15	11.47
250	8	3252	5075	625	6010	1442	16404	1484	65.62	11.05
275	7	4115	4864	599	6611	1587	17775	1633	64.64	10.88
300	7	4489	4864	599	7212	1731	18895	1781	62.98	10.60
325	6	4863	4864	599	7813	1875	20014	1930	61.58	10.37
350	6	5237	4864	599	8414	2020	21133	2078	60.38	10.17
375	5	5611	4864	599	9015	2164	22253	2227	59.34	9.99
400	5	6677	4677	576	9616	2308	23854	2375	59.64	10.04
425	5	7094	4677	576	10217	2452	25016	2524	58.86	9.91
450	4	7511	4677	576	10818	2597	26179	2672	58.18	9.80
475	4	7928	4677	576	11419	2741	27342	2821	57.56	9.69
500	4	8346	4677	576	12020	2885	28504	2969	57.01	9.60
525	4	8763	4677	576	12621	3030	29667	3118	56.51	9.51
550	4	10022	4512	556	13222	3174	31485	3266	57.25	9.64
575	3	10478	4512	556	13823	3318	32686	3415	56.85	9.57
600	3	10933	4512	556	14424	3463	33887	3563	56.48	9.51
625	3	11389	4512	556	15025	3607	35088	3712	56.14	9.45
650	3	11844	4512	556	15626	3751	36289	3860	55.83	9.40
675	3	13214	4366	538	16227	3895	38239	4009	56.65	9.54
700	3	13703	4366	538	16828	4040	39474	4157	56.39	9.49

Purchase Price	\$60,000
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	1
TAR Equation Number	4
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
PTO Horsepower	1
Engine Load Factor	1
Price per Gallon of Diesel Fuel	\$0.99
Gallons of Fuel Consumed per Hour	5.3
Field Speed (Mph)	5
Field Efficiency	.7
Implement Width (Feet)	14

Table 41: Estimated Cost of Using a 3-row Corn Chopper for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
10	15	1017	2921	360	49	0	4347	20	434.78	213.51
20	15	1017	2921	360	130	0	4428	40	221.43	108.74
30	15	1017	2921	360	230	0	4528	61	150.93	74.12
40	15	1017	2921	360	343	0	4641	81	116.05	56.99
50	15	1017	2921	360	469	0	4767	101	95.36	46.83
60	15	1017	2921	360	606	0	4904	122	81.74	40.14
70	15	1017	2921	360	752	0	5050	142	72.14	35.43
80	15	1017	2921	360	906	0	5204	162	65.06	31.95
90	15	1017	2921	360	1069	0	5367	183	59.63	29.28
100	15	1017	2921	360	1238	0	5536	203	55.37	27.19
110	15	1017	2921	360	1415	0	5713	224	51.94	25.51
120	15	1017	2921	360	1599	0	5897	244	49.14	24.13
130	15	1017	2921	360	1788	0	6086	264	46.82	22.99
140	14	1224	2801	345	1945	0	6315	285	45.11	22.15
150	13	1312	2801	345	2084	0	6541	305	43.61	21.42
160	13	1399	2801	345	2223	0	6768	325	42.30	20.77
170	12	1487	2801	345	2362	0	6994	346	41.15	20.21
180	11	1574	2801	345	2501	0	7221	366	40.12	19.70
190	11	1662	2801	345	2640	0	7447	386	39.20	19.25
200	10	1749	2801	345	2779	0	7673	407	38.37	18.84
210	10	1837	2801	345	2918	0	7900	427	37.62	18.47
220	9	1924	2801	345	3057	0	8126	448	36.94	18.14
230	9	2012	2801	345	3196	0	8353	468	36.32	17.83
240	8	2099	2801	345	3335	0	8579	488	35.75	17.56
250	8	2187	2801	345	3474	0	8806	509	35.22	17.30
260	8	2274	2801	345	3613	0	9032	529	34.74	17.06
270	7	2628	2694	332	3752	0	9405	549	34.84	17.11
280	7	2726	2694	332	3891	0	9642	570	34.44	16.91
290	7	2823	2694	332	4029	0	9878	590	34.06	16.73
300	7	2920	2694	332	4168	0	10114	610	33.72	16.56

Purchase Price	\$34,680
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	3
TAR Equation Number	4
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4
Field Efficiency	.7
Implement Width (Feet)	6

Table 42: Estimated Cost of Using a 2-row Forage Harvester for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
10	15	676	1942	239	33	0	2889	20	288.98	141.91
20	15	676	1942	239	86	0	2943	40	147.17	72.27
30	15	676	1942	239	153	0	3009	61	100.32	49.26
40	15	676	1942	239	228	0	3085	81	77.13	37.88
50	15	676	1942	239	312	0	3168	101	63.38	31.12
60	15	676	1942	239	403	0	3259	122	54.33	26.68
70	15	676	1942	239	500	0	3356	142	47.95	23.55
80	15	676	1942	239	602	0	3459	162	43.24	21.23
90	15	676	1942	239	710	0	3567	183	39.64	19.46
100	15	676	1942	239	823	0	3680	203	36.80	18.07
110	15	676	1942	239	941	0	3797	224	34.52	16.95
120	15	676	1942	239	1062	0	3919	244	32.66	16.04
130	15	676	1942	239	1188	0	4045	264	31.12	15.28
140	14	814	1862	229	1293	0	4197	285	29.98	14.72
150	13	872	1862	229	1385	0	4348	305	28.99	14.23
160	13	930	1862	229	1478	0	4498	325	28.12	13.81
170	12	988	1862	229	1570	0	4649	346	27.35	13.43
180	11	1046	1862	229	1662	0	4799	366	26.66	13.09
190	11	1105	1862	229	1755	0	4950	386	26.05	12.79
200	10	1163	1862	229	1847	0	5100	407	25.50	12.52
210	10	1221	1862	229	1939	0	5250	427	25.00	12.28
220	9	1279	1862	229	2032	0	5401	448	24.55	12.06
230	9	1337	1862	229	2124	0	5551	468	24.14	11.85
240	8	1395	1862	229	2216	0	5702	488	23.76	11.67
250	8	1453	1862	229	2309	0	5852	509	23.41	11.50
260	8	1511	1862	229	2401	0	6003	529	23.09	11.34
270	7	1747	1791	221	2493	0	6251	549	23.15	11.37
280	7	1812	1791	221	2586	0	6408	570	22.89	11.24
290	7	1876	1791	221	2678	0	6565	590	22.64	11.12
300	7	1941	1791	221	2771	0	6722	610	22.41	11.00

Purchase Price	\$23,050
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	3
TAR Equation Number	4
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4
Field Efficiency	.7
Implement Width (Feet)	6

Table 43: Estimated Cost of Using a 15-ft. Small Combine for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
25	15	2647	9766	1203	427	136	14178	177	567.15	79.98
50	15	2647	9766	1203	1128	272	15015	354	300.31	42.35
75	15	2647	9766	1203	1990	408	16013	531	213.51	30.11
100	15	2647	9766	1203	2977	544	17136	709	171.36	24.17
125	15	2647	9766	1203	4068	680	18364	886	146.91	20.72
150	13	3586	9328	1149	5010	816	19888	1063	132.59	18.70
175	11	4184	9328	1149	5845	952	21457	1240	122.62	17.29
200	10	4782	9328	1149	6680	1089	23026	1418	115.13	16.24
225	9	5379	9328	1149	7515	1225	24595	1595	109.31	15.42
250	8	5977	9328	1149	8349	1361	26163	1772	104.66	14.76
275	7	7562	8940	1101	9184	1497	28284	1950	102.85	14.50
300	7	8250	8940	1101	10019	1633	29943	2127	99.81	14.08
325	6	8937	8940	1101	10854	1769	31601	2304	97.24	13.71
350	6	9625	8940	1101	11689	1905	33260	2481	95.03	13.40
375	5	10312	8940	1101	12524	2041	34918	2659	93.12	13.13
400	5	12271	8597	1059	13359	2178	37463	2836	93.66	13.21
425	5	13038	8597	1059	14194	2314	39201	3013	92.24	13.01
450	4	13805	8597	1059	15029	2450	40939	3190	90.98	12.83
475	4	14572	8597	1059	15864	2586	42677	3368	89.85	12.67
500	4	15339	8597	1059	16699	2722	44415	3545	88.83	12.53
525	4	16106	8597	1059	17534	2858	46153	3722	87.91	12.40
550	4	18420	8293	1021	18369	2994	49097	3900	89.27	12.59
575	3	19257	8293	1021	19204	3130	50905	4077	88.53	12.49
600	3	20094	8293	1021	20039	3267	52713	4254	87.86	12.39
625	3	20931	8293	1021	20874	3403	54522	4431	87.24	12.30
650	3	21769	8293	1021	21709	3539	56330	4609	86.66	12.22

Purchase Price	\$110,275
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	1
TAR Equation Number	3
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
PTO Horsepower	1
Engine Load Factor	1
Price per Gallon of Diesel Fuel	\$0.99
Gallons of Fuel Consumed per Hour	5.0
Field Speed (Mph)	3
Field Efficiency	.75
Implement Width (Feet)	26

Table 44: Estimated Cost of Using a 26-ft. Medium Size Combine for Specified Levels of Use Annually, Utah, 1997

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
100	15	2980	10996	1354	3352	544	19226	709	192.26	27.11
150	13	4038	10503	1293	5641	816	22291	1063	148.61	20.96
200	10	5384	10503	1293	7521	1089	25789	1418	128.95	18.19
250	8	6730	10503	1293	9401	1361	29288	1772	117.15	16.52
300	7	9289	10066	1240	11281	1633	33509	2127	111.70	15.75
350	6	10837	10066	1240	13162	1905	37209	2481	106.31	14.99
400	5	13817	9679	1192	15042	2178	41907	2836	104.77	14.78
450	4	15544	9679	1192	16922	2450	45787	3190	101.75	14.35
500	4	17271	9679	1192	18802	2722	49666	3545	99.33	14.01
550	4	20740	9337	1150	20683	2994	54904	3900	99.83	14.08
600	3	22625	9337	1150	22563	3267	58942	4254	98.24	13.85
650	3	24511	9337	1150	24443	3539	62980	4609	96.89	13.66
700	3	28358	9035	1113	26323	3811	68640	4963	98.06	13.83
750	3	30384	9035	1113	28203	4083	72818	5318	97.09	13.69
800	3	34394	8767	1080	30084	4356	78679	5672	98.35	13.87
850	2	36544	8767	1080	31964	4628	82981	6027	97.63	13.77
900	2	38693	8767	1080	33844	4900	87283	6381	96.98	13.68
950	2	42928	8530	1050	35724	5172	93405	6736	98.32	13.87
1000	2	45188	8530	1050	37605	5445	97817	7090	97.82	13.79
1050	2	47447	8530	1050	39485	5717	102229	7445	97.36	13.73
1100	2	51844	8320	1025	41365	5989	108542	7800	98.67	13.92
1150	2	54200	8320	1025	43245	6261	113051	8154	98.31	13.86
1200	2	58620	8134	1002	45125	6534	119415	8509	99.51	14.03
1250	2	61063	8134	1002	47006	6806	124010	8863	99.21	13.99
1300	2	63505	8134	1002	48886	7078	128605	9218	98.93	13.95
1350	1	68002	7970	981	50766	7350	135069	9572	100.05	14.11

Purchase Price	\$124,165
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	1
TAR Equation Number	3
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
PTO Horsepower	1
Engine Load Factor	1
Price per Gallon of Diesel Fuel	\$0.99
Gallons of Fuel Consumed per Hour	5.0
Field Speed (Mph)	3
Field Efficiency	.75
Implement Width (Feet)	26

**Table 45: Estimated Cost of Using a Dump Wagon for Specified Levels of Use Annually,
Utah, 1997**

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
10	15	473	1745	215	28	0	2460	20	246.03	120.82
20	15	473	1745	215	74	0	2506	40	125.31	61.54
30	15	473	1745	215	130	0	2562	61	85.42	41.95
40	15	473	1745	215	195	0	2627	81	65.68	32.26
50	15	473	1745	215	267	0	2698	101	53.98	26.51
60	15	473	1745	215	344	0	2776	122	46.27	22.72
70	15	473	1745	215	427	0	2859	142	40.85	20.06
80	15	473	1745	215	515	0	2947	162	36.84	18.09
90	15	473	1745	215	607	0	3039	183	33.77	16.58
100	15	473	1745	215	704	0	3135	203	31.36	15.40
110	15	473	1745	215	804	0	3236	224	29.42	14.45
120	15	473	1745	215	908	0	3340	244	27.84	13.67
130	15	473	1745	215	1016	0	3448	264	26.52	13.02
140	14	598	1666	205	1105	0	3574	285	25.53	12.54
150	13	641	1666	205	1184	0	3696	305	24.64	12.10
160	13	683	1666	205	1263	0	3817	325	23.86	11.72
170	12	726	1666	205	1342	0	3939	346	23.17	11.38
180	11	769	1666	205	1421	0	4061	366	22.56	11.08
190	11	811	1666	205	1500	0	4182	386	22.01	10.81
200	10	854	1666	205	1579	0	4304	407	21.52	10.57
210	10	897	1666	205	1658	0	4425	427	21.08	10.35
220	9	940	1666	205	1736	0	4547	448	20.67	10.15
230	9	982	1666	205	1815	0	4669	468	20.30	9.97
240	8	1025	1666	205	1894	0	4790	488	19.96	9.80
250	8	1068	1666	205	1973	0	4912	509	19.65	9.65
260	8	1110	1666	205	2052	0	5034	529	19.36	9.51
270	7	1326	1597	197	2131	0	5251	549	19.45	9.55
280	7	1376	1597	197	2210	0	5379	570	19.21	9.43
290	7	1425	1597	197	2289	0	5507	590	18.99	9.33
300	7	1474	1597	197	2368	0	5635	610	18.78	9.22

Purchase Price	\$19,700
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	1
TAR Equation Number	4
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	4
Field Efficiency	.7
Implement Width (Feet)	6

**Table 46: Estimated Cost of Using a Forage Bagger for Specified Levels of Use Annually,
Utah, 1997**

Hours Used /Yr	Years to Trade	Depr.	Int.	Taxes, Housing, & Ins.	Re-Pairs	Fuel and Oil	Total Cost	Annual Acre. Use	Cost /Hr	Cost /Acre
Hrs	Yrs	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	Acres	(\$)	(\$)
5	15	528	1948	240	9	0	2725	23	545.04	115.65
10	15	528	1948	240	24	0	2739	47	273.99	58.14
15	15	528	1948	240	42	0	2757	70	183.86	39.01
20	15	528	1948	240	62	0	2778	94	138.93	29.48
25	15	528	1948	240	85	0	2801	117	112.06	23.78
30	15	528	1948	240	110	0	2826	141	94.21	19.99
35	15	528	1948	240	137	0	2852	164	81.51	17.30
40	15	528	1948	240	165	0	2880	188	72.02	15.28
45	15	528	1948	240	194	0	2910	212	64.68	13.72
50	15	528	1948	240	225	0	2941	235	58.83	12.48
55	15	528	1948	240	257	0	2973	259	54.06	11.47
60	15	528	1948	240	290	0	3006	282	50.11	10.63
65	15	528	1948	240	325	0	3041	306	46.79	9.93
70	15	528	1948	240	360	0	3076	329	43.95	9.33
75	15	528	1948	240	397	0	3113	353	41.51	8.81
80	15	528	1948	240	435	0	3150	377	39.38	8.36
85	15	528	1948	240	473	0	3189	400	37.52	7.96
90	15	528	1948	240	512	0	3228	424	35.87	7.61
95	15	528	1948	240	553	0	3268	447	34.41	7.30
100	15	528	1948	240	594	0	3310	471	33.10	7.02
105	15	528	1948	240	636	0	3352	494	31.92	6.77
110	15	528	1948	240	679	0	3394	518	30.86	6.55
115	15	528	1948	240	722	0	3438	541	29.90	6.34
120	15	528	1948	240	767	0	3482	565	29.02	6.16
125	15	528	1948	240	812	0	3527	589	28.22	5.99
130	15	528	1948	240	857	0	3573	612	27.49	5.83
135	15	644	1861	229	899	0	3633	636	26.91	5.71
140	14	668	1861	229	933	0	3690	659	26.36	5.59
145	14	692	1861	229	966	0	3747	683	25.85	5.48
150	13	715	1861	229	999	0	3804	706	25.37	5.38

Purchase Price	\$22,000
Hours to Wear out or 12 Year Life	2,000
RFV Equation Number	1
TAR Equation Number	3
Interest Rate Charged	10.8
Taxes, Housing, Insurance Factor (%)	1.33
Field Speed (Mph)	5.4
Field Efficiency	.9
Implement Width (Feet)	8

References

- American Society of Agricultural Engineers. 1985. ASAE Agricultural Yearbook. American Society of Agricultural Engineers.
- Bond, Larry K. and Darwin Jolley. 1991. The Cost of Owning and Operating Farm Machinery: Utah. Utah State University Extension Bulletin, EC416, Logan, Utah.
- Clement, L., I. Corbridge, and K. Hatch. 1978. Farm Machinery Management Decisions. Utah State University, Logan, Utah.

Appendix A

Adjusting Costs When Fuel Prices Change

If your average fuel price is different from what was used in these tables, you can make an easy adjustment to determine your fuel and oil costs by following the example below.

Example from Table 1: 40 HP Tractor

Hours used annually: 100
Fuel & oil costs: \$226
Price of fuel: \$0.99

Adjustments for Changes in Fuel Prices

	<u>Example</u>
1. Enter estimated average price of fuel per gallon	\$1.12
2. Per gallon fuel price used in the table being adjusted	\$.99
3. Divide line 1 by line 2	1.1313
4. Line 3 minus 1.00 ¹	.1313
5. Enter "Fuel and Oil Cost" from the appropriate table for 100 hours of annual use ²	226
6. Change in total cost of fuel and oil: Line 4 times line 5	29.67
7. Change in cost per hour: Line 6 divided by 100 hours (rounded)	.30
8. Adjusted cost per hour if used 100 hours per year ³	\$26.83
9. If you want total cost for your level of annual use, multiply line 7 times your hours of annual use and add to the value in the column under Total Cost.	

¹Value will be negative if fuel price drops. Adding the negative value on line 7 to line 8 lowers the cost.

²Any level of use can be chosen. The change in cost per hour will be the same, providing hours on line 7 is the same as hours on line 5.

³Value on line 7 plus value in cost/hr column of Table 1, line 4. This value on line 7 can be added to all values in cost/hr columns in tables.

Appendix B

Included in this appendix are three tables that provide supplemental information which may be useful under certain situations. The information was generated with a commercial computer program. Although the figures may not always be consistent with those in the previous tables, due to differing assumptions and/or constants, it is felt that the information is worth including in this publication.

Table B.1 gives the approximate gallons of fuel required for different field operations, over and above that consumed by the tractor with an empty load. For some operations, such as drying corn, a tractor may not be used.

It is often useful to know the number of acres that can be covered in one hour for specific field operations. Table B.2 shows average accomplishment rates for various sizes of machinery.

Often it is more meaningful to express accomplishment rates in another way, such as tons per hour. Table B.3 is useful for haying enterprises.

Table B.1. Approximate Fuel Required for Field Operations Over and Above Tractor

Field Operation	Fuel Type	
	Gasoline	Diesel
	------(gallons per acre)-----	
FERTILIZATION		
Spreading dry fertilizer, bulk cart	0.20	0.15
Anhydrous ammonia (30 inch spreading)	0.80	0.60
TILLAGE		
Moldboard plow	2.70	1.90
Chisel plow	1.70	1.20
Offset disk	1.35	0.95
Powered rotary tiller	2.30	1.60
Tandem disk, plowed field	1.00	0.70
Tandem disk, tilled field	0.85	0.60
Tandem disk, cornstalks	0.70	0.50
Field cultivate, plowed field	1.15	0.80
Field cultivate, tilled field	1.00	0.70
Spring-tooth harrow, plowed field	1.00	0.70
Spring-tooth harrow, tilled field	0.85	0.60
Spike-tooth harrow, tilled field	0.45	0.30
PLANTING (30 inch rows)		
Planter, seed only, tilled seedbed	0.65	0.45
Planter, fertilizer and pesticide attachments, tilled seedbed	0.85	0.60
Till-planter (sweep)	0.85	0.60
No-till planter (fluted coulter)	0.70	0.50
Harrow-plant combination	1.30	0.90
Grain drill	0.50	0.35
Broadcast seeder	0.20	0.15
WEED CONTROL (30 inch rows)		
Sprayer, trailer type	0.15	0.10
Rotary hoe	0.30	0.20
Sweep cultivator	0.65	0.45
Rolling cultivator	0.60	0.40
Cultivator with disk hillers	0.65	0.45
Powered rotary cultivator	1.00	0.70
HARVESTING		
Cutterbar mower	0.55	0.35
Mower-conditioner, PTO	0.85	0.60
Self-propelled windrower	0.70	0.50
Rake	0.35	0.25
Baler	0.65	0.45
Stack-forming wagon	0.70	0.50
Forage harvester		
Green forage	1.35	0.95
Haylage	1.80	1.25
Corn silage	5.20	3.60
High-moisture ground ear corn	2.75	1.90
Forage blower		
Green forage	0.50	0.35
Haylage	0.35	0.25
Corn silage	2.00	1.40
High-moisture ground ear corn	0.65	0.45
Combine, corn	2.35	1.60
Corn picker	1.75	1.15
Grain drying, corn	10.90	7.50
Hauling, field plus 1/2 mile on graveled road		
Green forage	0.55	0.35
Haylage	0.30	0.20
Corn silage	2.00	1.40
Corn grain	0.30	0.20
Hauling, add following values to those above for each additional mile on gravel		
Green forage	0.20	0.14
Haylage	0.30	0.20
Corn silage	1.30	0.90
Corn grain	0.20	0.15

Table B.2. Average Accomplishment Rates for Fieldwork Machines

Machine	Accomplishment Rate (in acres per hour)	Machine	Accomplishment Rate (in acres per hour)
Shredder		Spring Tooth	
6" rotary	2.6	14'	6.3
10" flail	4.6	21'	10.2
12" flail	5.6		
15" flail	6.7	Peg Tooth	
Fertilizer Spreader (4-ton)	10.2	21'	12.2
		31'	18.0
Anhydrous Ammonia		Rotary Tiller	
7 knife	5.7	80"	3.0
9 knife	7.4	100"	3.7
		120"	4.4
Plow		140"	5.1
3-16" bottoms	1.8	160"	5.6
4-16" bottoms	2.5		
5-16" bottoms	3.0	Sprayer	
6-16" bottoms	3.5	8-row	7.9
7-16" bottoms	4.0	12-row	11.8
8-16" bottoms	4.5	18-row	17.7
Chisel Plow		Planter, seed only*	
9'6"	4.9	4-38"	5.8
11'3"	5.8	4-30"	4.6
13'6"	6.8	6-30"	6.7
15'	7.4	8-30"	8.7
		12-30"	12.7
Offset disk		16-30"	16.5
10'	4.6	Rotary Hoe	
13'6"	6.1	4-38"	10.1
15'	6.6	4-30"	8.0
18'	7.8	6-30"	11.7
Tandem disk		8-30"	15.3
14'	7.8	12-30"	22.4
17'	9.2	16-30"	29.1
21'	11.2	Grain Drill	
24'	12.8	10'	4.4
Field Cultivator		12'6"	5.4
15'	7.6	14'	5.9
17'	7.2	Broadcast Seeder	
27'	13.1	20'	9.1
34'	16.1	21'	10.2
Sweep Cultivator		Rake	
4-38"	5.7	7'	3.7
4-30"	4.5	9'	4.7
6-30"	6.6	14'	7.2
8-30"	8.5	18'	9.0
12-30"	12.4	Combine (small grain)	
Rolling Cultivator		10'	2.6
4-38"	7.6	13'	3.3
6-30"	8.7	15'	3.7
8-30"	11.4	20'	4.8
12-30"	16.6	Combine (for corn)	
Mower, 7'	3.4	2-38"	1.5
Mower conditioner		3-38"	2.2
7'	3.6	4-38"	2.9
9'	4.5	6-38"	3.9
12'	5.9	3-30"	1.8
Windrower (self-propelled)		4-30"	2.3
10'	6.2	6-30"	3.2
12'	7.3	8-30"	3.9
14'	8.4		
16'	9.5		

*If chemical application attachments are used, reduce the field capacities of the planter by 5% to 10% from that shown in the table.

Table B.3. Average Accomplishment Rates for Non-field Machines

Machine	Accomplishment Rate (in tons per hour)
Baler only and baler with accumulator	6.4
Baler with bale thrower, trailing wagon	4.8
Load-haul-stack bales, tractor with bale fork	4.0*
Load-haul-stack bales, automatic balewagon	3.5*
Larger round baler	7.5
Bale mover, field to roadside	4.8
Bale mover, haul and store or feed	3.2*
Stacker, 1-ton	5.0
Stackmover, field to roadside	6.0
Stackmover, haul and store or feed	4.0*
Stacker, 3-ton	6.5
Stackmover, field to roadside	12.0
Stackmover, haul and store or feed	8.0*
Stacker, 6-ton	7.5
Stackmover, field to roadside	24.0
Stackmover, haul and store or feed	16.0*
Forage harvester, haylage, or cornstalks	
100 PTO hp tractor	11.0
125 PTO hp tractor	14.0
150 PTO hp tractor	16.0
Forage harvester, corn silage	
1 row	11.0
2 row	24.0
3 row	32.0

*All hauling assumes bales are removed one mile from field.