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CUSTOM RATES 2013-2014 *for* Idaho Agricultural Operations

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The primary purpose of this publication is to report data obtained by a survey of custom operators in Idaho. It also provides information on how to calculate machinery costs for setting custom rates, as well as how to adjust historical custom rates using indices available from the United States Department of Agriculture (USDA).

The equipment needed for a modern farming operation is expensive and often quite specialized. On a smaller farm, it may be impractical to own all of the necessary equipment. Even a large farm with a complete machinery complement may find it necessary to use a custom operator or to hire a neighbor to avoid missing a planting or harvesting window when weather delays occur.

A custom operator typically specializes in certain farm operations, whereas a neighbor simply may have the equipment and time to trade work or to provide services for a fee. Some specialized farming operations use their equipment to do custom work during "slack times" on their farm or ranch. This can reduce ownership costs and provide needed cash flow.

The question that arises is how much should be charged or paid for these services. Full-time commercial custom operators should charge a fee that covers all machinery and labor costs plus a profit. Those performing custom services for a neighbor might charge only enough to cover labor and fuel costs.

In areas where a considerable portion of farm work is done by custom operators, established customary rates cover actual machine operating and ownership costs. Problems can arise, however, where no customary rates have been established or when a rapid increase in costs puts established rates significantly below total costs. This publication can help custom operators and growers calculate appropriate custom rates in such circumstances.

Idaho Geography

Idaho varies greatly in topography, climate, soils, and other variables affecting agricultural production. Consequently, a wide variety of crop/livestock enterprises and management systems exists. Because of this variability, production costs can differ from one area to another and even between adjacent farms or ranches.

Custom rates reported in this publication are tied to four

Photo: Kate Painter, University of Idaho

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geographic regions of Idaho. Counties are placed in the region with the most similar type of production agriculture. For example, Blaine and Camas counties are included with the eastern Idaho counties and not with the Magic Valley counties of southcentral Idaho. Boldface type indicates the counties where the majority of survey respondents were located.

- ***Northern Idaho*** covers Benewah, Bonner, Boundary, Idaho, Kootenai, Latah, Lewis, and Nez Perce counties.
- ***Southwestern Idaho*** covers Ada, Adams, Canyon, Elmore, Gem, Owyhee, Payette, and Washington counties.
- ***Southcentral Idaho*** covers **Cassia, Gooding, Jerome, Lincoln, Minidoka**, and **Twin Falls** counties.
- ***Eastern Idaho*** covers **Bannock**, Bear Lake, **Bingham**, Blaine, **Bonneville**, Butte, Camas, Caribou, Clark, Custer, Franklin, **Fremont**, **Jefferson**, Lemhi, **Madison**, **Oneida**, **Power**, and **Teton** counties.

Because of insufficient precipitation, irrigation is essential to crop production in most parts of the Snake River Plain that extends across southern Idaho. Farming practices, field size and shape, and types of equipment are influenced by irrigation in these areas. Although farming practices are comparable across much of the irrigated portions of southern Idaho, there are some regional differences, particularly in southwestern Idaho, where smaller fields translate into higher machinery operating expenses.

Rain-fed agriculture is dominant in the cooler northern Idaho region, where climate patterns affect crop choice, production practices, and equipment. However, northern Idaho does share some cultural practices and machinery types with the dryland grain-producing areas of eastern and southern Idaho.

Owning vs. Custom Hire

Custom services can sometimes be hired at a cost lower than that of owning and operating farm equipment, particularly on smaller farms. For example, a new grain combine that costs $350,000 will have an annual ownership cost of approximately $40,000 per year, depending on assumptions regarding years of life, salvage value, and interest rates. If operating costs for this combine are $15 per acre and a custom operator charges $40 per acre, then a minimum of 1,600 acres of grain must be harvested before ownership becomes as economical as hiring a custom operator. The breakeven acreage calculation uses the following formula:

$$\text{Breakeven acreage} = \frac{\text{Annual ownership cost}}{(\text{Custom rate per acre} - \text{Operating cost per acre})}$$

Annual ownership cost	=	Annual depreciation, interest, taxes, insurance, and housing (see table 1 [page 4], line 9)
Custom rate per acre	=	Going rate charged for that service (see Tables A–J)
Operating cost per acre	=	Fuel, maintenance and repairs, labor, and supplies (see Table 1 [page 4], line 17)

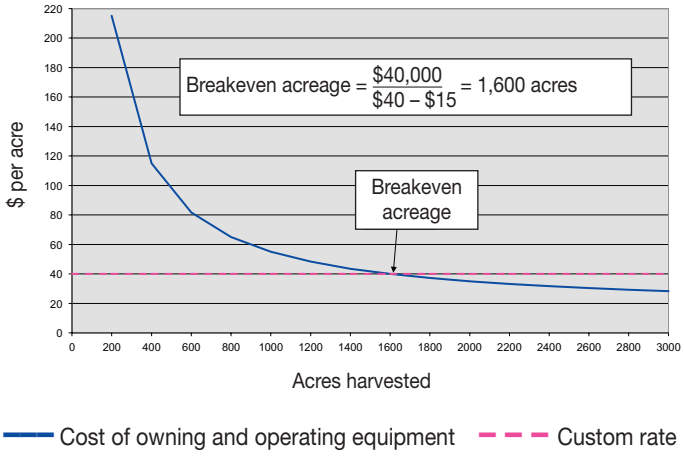
The same calculation can be done if costs are given per mile, bale, cwt, or some other unit, rather than per acre.

Figure 1 shows that the cost of owning and operating the grain combine is greater than the cost of custom hiring up to the breakeven acreage (1,600 acres). If the owner of the equipment uses it on more acres than the number needed to break even, the average cost per acre will be less than the amount required to hire a custom operator.

Breakeven cost calculations should be based on both cash and non-cash costs. Non-cash costs include owner-operator's labor, depreciation, and interest on the owner's equity. Cash costs are the more obvious ones, such as fuel, maintenance and repairs, hired labor, taxes, and interest paid on equipment loans. See "Calculating Machine Costs" (page 3) for more information about calculating annual ownership cost and operating cost per acre.

Other considerations include the availability of custom operators and their timeliness in completing the work. Crop yield and quality may suffer if the custom operator cannot complete tillage, spraying, planting, or harvesting operations in a timely manner. The quality of the custom work should also be considered. Each farmer needs to determine the risk associated with timeliness and quality of work. These risks vary by crop, location, financial condition of the farmer, and competition in the custom services market.

Figure 1. Breakeven acreage calculation for grain combine example.



Survey Data

From November 2013 to May 2014, custom operators, farmers, and other agribusiness firms in Idaho were contacted about custom rates charged or paid for various farm operations. Names were obtained from Extension agricultural educators, classified sections of newspapers, commodity directories, other farmers, and custom operators. Respondents were contacted by telephone or by mail. Some respondents provided the rates they charged in 2013, while others provided their 2014 rate schedule. It should be noted that fuel prices were stable from the time the survey started until it was completed.

Custom rates survey data are presented separately for southern and northern Idaho. Southern Idaho data are presented in Tables A through I. Data for northern Idaho are presented in Table J. Each table shows the average, high, and low custom rate charge reported, as well as the number of responses. Unless noted otherwise, costs of materials such as chemicals, seed, and fertilizer are not included in these custom rates.

The 10 tables located in the appendix are listed below. (Note: There were insufficient numbers of responses to provide information on custom harvesting of onions, potatoes, and sugarbeets or custom hauling, as was done in the past.)

Table A. Custom aerial application costs: Dry and liquid materials, 2013–14 (southern Idaho)
Table B. Custom ground application costs: Dry and liquid materials, 2013–14 (southern Idaho)
Table C. Custom row markout (bedding) and fumigation costs, 2013–14 (southern Idaho)
Table D. Custom tillage costs, 2013–14 (southern Idaho)
Table E. Custom cultivation costs, 2013–14 (southern Idaho)
Table F. Custom planting and seeding costs, 2013–14 (southern Idaho)
Table G. Custom harvesting costs for hay, peas, and straw, 2013–14 (southern Idaho)
Table H. Custom harvesting costs for silage and other forage crops, 2013–14 (southern Idaho)
Table I. Custom harvesting costs for dry beans, dry peas, seed crops, corn, and small grains, 2013–14 (southern Idaho)
Table J. Northern Idaho rates for custom work and equipment rental, 2013–14

Calculating Machine Costs

When information about custom operations and rates is not available, one may need to calculate the cost of performing a particular task. Machine costs can be separated into time-related and use-related categories. Time-related expenses may be classified as ownership costs, while use-related costs may be referred to as operating costs. As might be expected, machine costs do not always fall neatly into a particular category. For example, depreciation is a function of both time and use. For clarity, this publication follows the traditional conventions of classifying costs as shown below.

Ownership costs
Annual depreciation
Interest on the value of the machinery and equipment
Property taxes on the machine (if applicable)
Insurance
Shelter or housing

Operating costs
Fuel and lubrication
Maintenance and repairs
Supplies used in the operation (e.g., baler twine)
Labor

Equipment costs vary by farm and by custom operator. Factors that influence equipment costs include operating conditions, amount and type of equipment use, original cost of the machinery, replacement costs, interest rates, and quality of maintenance, among others.

The method for estimating machinery costs is the same for both new and used machinery. The parameters are different, however, and the resulting cost per hour of operation may differ significantly.

Producers' machinery records are the best source for cost information. However, if records are lacking, one can make a cost estimate as shown in Table 1 (page 4). The moldboard plow example in Table 1 shows that costs must be calculated separately for the tractor and plow; the tractor is used for a different number of hours, and the tractor and plow have different cost factors and different rates of depreciation. Note that labor is charged only once because only one operator is needed for both pieces of equipment. Be sure to add the cost of materials, such as chemicals, seed, twine, fertilizer, etc., when these are provided by the custom operator.

In this example, the tractor's hourly cost is $92.95, and the plow's hourly cost is $17.90, for a total of $110.85 per hour for the plowing operation. If 2.8 acres are covered per hour, the cost per acre is about $39.60 ($110.85 ÷ 2.8).

Acres covered per hour can be estimated based on personal experience or by using the following formula:

$$\text{Acres per hour} = \frac{[\text{Speed (mph)} \times \text{machine width (ft)} \times \text{machine's field efficiency (\%)}]}{8.25}$$

For example, if a 16-foot-wide machine travels at 4 miles per hour and has a field efficiency of 70 percent, the calculation would be as follows:

$$\frac{[4 \text{ mph} \times 16 \text{ feet} \times 0.70]}{8.25} = 5.4 \text{ acres per hour}$$

Typical speeds and field efficiencies for various types of machinery are shown in Table 2 (page 5). Field efficiency is less than 100 percent because of equipment overlap, turning time, and time required to adjust and service machinery and to fill hoppers and tanks when inputs are being applied.

One reference for estimating machinery costs is PNW Extension publication 346, *Costs of Owning and Operating Farm Machinery in the Pacific Northwest* (University of Idaho, 2011). Estimates in this publication are based on new machinery costs and a range of expected total hours of use during the life of the machine.

Another useful tool is Machinery Cost Analysis, a University of Idaho Windows-based computer program available from the UI Department of Agricultural Economics and Rural Sociology website (see "References and Other Useful Links," page 19).

Adjusting Custom Rates Using USDA Indices

Custom rates change when costs associated with ownership and operation of farm machinery and equipment change. In the absence of actual market data, a price index can be used to adjust historical custom rates to appropriate current rates based

continues on page 6

Table 1. Estimating costs of owning and operating farm machinery, using an example of plowing.

Equipment parameters	165-hp tractor	4-bottom (plow)
1. Purchase price[1]	$157,500	$14,400
2. Expected ownership period (years)[2]	15	10
3. Salvage value[3]	$30,000	$2,400
4. Adjusted average value[4]	$98,000	$9,000
5. Estimated annual hours of use	500	150
Annual ownership cost		
6. Depreciation[5]	$8,500	$1,200
7. Interest[6]	$5,880	$540
8. Taxes, housing, and insurance[7] (see Table 3, page 7)	$1,078	$45
9. Annual ownership cost (line 6 + line 7 + line 8)	$15,458	$1,785
10. Ownership cost per hour (line 9 ÷ line 5)	$30.92	$11.90
Annual operating cost		
11. Repairs and maintenance per hour[8]	$13.07	$7.20
12. Fuel consumption: gallons per hour[9]	7.25	–
13. Fuel and lubrication cost per hour[10]	$29.20	–
14. Labor ($18.00/hr x 1.1)[11]	$19.80	–
15. Materials needed (twine, etc.)[12]	–	–
16. Total operating cost per hour (lines 11 + 13 + 14 + 15)	$62.03	$7.20
17. Total operating cost per acre (line 16 ÷ 2.8 acres per hour)[13]	$22.15	$2.57
Total cost		
18. Total cost per hour (line 10 + line 16)	$92.95	$17.90
19. Total cost for plowing operation per hour	$110.85	
20. Total cost for plowing operation per acre[13] ($110.85 ÷ 2.8 acres per hour)	$39.59	

[1]Purchase price is the price paid for the machinery, whether new or used.

[2]The expected ownership period is the years of useful life or the number of years until the machine will be traded. Table 2 lists estimated total hours of useful life for various types of equipment and can be used to estimate the years of useful life if hours of annual use are known. In this example, the tractor is used 500 hours per year and the plow 150 hours.

[3]Salvage value is the expected selling price or trade-in value of the machine at the end of its ownership period.

[4]Average value: (Purchase price + Salvage value) ÷ 2. This value is often used in machinery cost calculations. However, using this unadjusted average will underestimate the interest charge on capital because it is an end-of-period value. To get a beginning-of-investment-period value, simply add a year of depreciation. The adjusted average formula used in this example is: (Purchase price + Salvage value + Annual depreciation) ÷ 2.

[5]An estimate of annual depreciation should be used. Depreciation is the loss in annual value over the machine's ownership period. Management depreciation (based on years of useful life) rather than tax depreciation (based on the IRS's tax life) should be used. Straight-line depreciation [(Purchase price – Salvage value) ÷ Years of useful life)] was used. More complicated depreciation methods can be used, but still will produce only an estimate. Depreciation is known only when the machine is sold or traded.

[6]Interest is an opportunity cost of capital and is charged against the adjusted average value using a real rate of interest. A real (inflation-adjusted) interest rate of 6% was used in the example calculation. Interest should be charged for all capital, not just the borrowed amount.

[7]The charge for taxes, housing, and insurance is based on the values shown in Table 3 (1.1% for tractor and 0.5% for plow) multiplied by the adjusted average value.

[8]Repairs and maintenance costs are based on the repair factor coefficients per $1,000 of purchase price, which are found in Table 2 (page 5), or (Purchase price ÷ 1,000) x 0.083 (for tractor) and x 0.5 (for plow).

[9]Fuel consumption per hour is based on an engineering equation that relates PTO horsepower to fuel consumption per hour. The factor for diesel is 0.044, and for gasoline it is 0.060. For example, diesel consumption for a 165-hp tractor would be: 165 x 0.044 = 7.25 gallons per hour.

[10]Fuel costs per hour are based on the estimated fuel consumption per hour (7.25 gallons) multiplied by the price of off-road diesel ($3.50 per gallon), or 7.25 gallons per hour x $3.50 per gallon = $25.38 per hour. Lubricant costs per hour are estimated using a standard engineering coefficient of 15% of fuel costs, or 0.15 x $25.38 per hour = $3.81 per hour. Fuel and lubricant costs: $25.38 + $3.81 = $29.19, rounded to $29.20.

[11]Labor is based on a wage rate of $18.00 per hour, which includes benefits. This is increased by 10% to account for time spent servicing equipment and travel. This converts the cost per hour of labor to a cost per hour of machine operating time. The appropriate labor adjustment factor will vary by type of operation and travel distances.

[12]When materials (baling twine, seed, chemicals, etc.) are furnished by the custom operator, these costs should be included in the estimate.

[13]A plowing speed that covers 2.8 acres per hour is based on a plow width of 6 feet (18" bottoms), a tractor speed of 4.5 miles per hour, and field efficiency of 85%. These last two factors are the midpoints for the range of values shown in Table 2.

Table 2. Farm machinery field efficiencies, field speeds, hours of useful life, and repair and maintenance factors.

Machine	Field efficiency Range (%)	Field efficiency Typical (%)	Field speed Range (mph)	Field speed Typical (mph)	Estimated life (hr)	Total life R&M cost[1] (% of list price)	Repair factor/hr[2] (per $1,000 of list price)
Tractors							
2-wheel-drive and stationary	–	–	–	–	12,000	100	0.083
4-wheel-drive and crawler	–	–	–	–	16,000	80	0.050
Tillage and planting implements							
Moldboard plow	70-90	85	3.0-6.0	4.5	2,000	100	0.500
Heavy-duty disk	70-90	85	3.5-6.0	4.5	2,000	60	0.300
Tandem disk harrow	70-90	80	4.0-7.0	6.0	2,000	60	0.300
(Coulter) chisel plow	70-90	85	4.0-6.5	5.0	2,000	75	0.375
Field cultivator	70-90	85	5.0-8.0	7.0	2,000	70	0.350
Spring-tooth harrow	70-90	85	5.0-8.0	7.0	2,000	70	0.350
Roller-packer	70-90	85	4.5-7.5	6.0	2,000	40	0.200
Mulcher-packer	70-90	80	4.0-7.0	5.0	2,000	40	0.200
Rotary hoe	70-85	80	8.0-14.0	12.0	2,000	60	0.300
Row crop cultivator	70-90	80	3.0-7.0	5.0	2,000	80	0.400
Rotary tiller	70-90	85	1.0-4.5	3.0	1,500	80	0.533
Row crop planter	50-75	65	4.0-7.0	5.5	1,500	75	0.500
Grain drill	55-80	70	4.0-7.0	5.0	1,500	75	0.500
Harvesting equipment							
Corn picker-sheller	60-75	65	2.0-4.0	2.5	2,000	70	0.350
Combine	60-75	65	2.0-5.0	3.0	2,000	60	0.300
Combine (SP)[3]	65-80	70	2.0-5.0	3.0	3,000	40	0.133
Mower	75-85	80	3.0-6.0	5.0	2,000	150	0.750
Mower (rotary)	75-90	80	5.0-12.0	7.0	2,000	175	0.875
Mower-conditioner	75-85	80	3.0-6.0	5.0	2,500	80	0.320
Mower-conditioner (rotary)	75-90	80	5.0-12.0	7.0	2,500	100	0.400
Windrower (SP)[3]	70-85	80	3.0-8.0	5.0	3,000	55	0.183
Side delivery rake	70-90	80	4.0-8.0	6.0	2,500	60	0.240
Rectangular baler	60-85	75	2.5-6.0	4.0	2,000	80	0.400
Large rectangular baler	70-90	80	4.0-8.0	5.0	3,000	75	0.250
Large round baler	55-75	65	3.0-8.0	5.0	1,500	90	0.600
Forage harvester	60-85	70	1.5-5.0	3.0	2,500	65	0.260
Forage harvester (SP)[3]	60-85	70	1.5-6.0	3.5	4,000	50	0.125
Sugarbeet harvester	50-70	60	4.0-6.0	5.0	1,500	100	0.667
Potato harvester	55-70	60	1.5-4.0	2.5	2,500	70	0.280
Cotton picker (SP)[3]	60-75	70	2.0-4.0	3.0	3,000	80	0.267
Miscellaneous equipment							
Fertilizer spreader	60-80	70	5.0-10.0	7.0	1,200	80	0.667
Boom-type sprayer	50-80	65	3.0-7.0	6.5	1,500	70	0.467
Air-carrier sprayer	55-70	60	2.0-5.0	3.0	2,000	60	0.300
Bean puller-windrower	70-90	80	4.0-7.0	5.0	2,000	60	0.300
Beet topper/stalk chopper	70-90	80	4.0-7.0	5.0	1,200	35	0.292
Forage blower	–	–	–	–	1,500	45	0.300
Forage wagon	–	–	–	–	2,000	50	0.250
Wagon	–	–	–	–	3,000	80	0.267

Source: *American Society of Agricultural Engineers Standards*: *Agricultural Machinery Data Management*. ASAE D497.4 FEB03.

[1]Total R&M cost is the accumulated repair and maintenance cost over the entire useful life as a percentage of the machine's list price.

[2]The repair factor per hour of use is derived by using the percent of list price for the total life R&M cost from ASAE Standards to calculate the lifetime accumulated repairs per $1,000 of list price and dividing this value by the total hours of useful life. This method will overestimate repairs and maintenance for machinery owned less than the estimated life. These repair factors were used to estimate repair costs on the tractor and plow in Table 1.

[3]SP = self-propelled.

on changes in cost over time. Five individual USDA farm price indices were used to develop a new weighted composite index that can be used for this purpose.

Table 4 shows the individual indices as well as the composite index from 2004 through 2014. As an example, suppose the per-acre cost for moldboard plowing was $30.00 in 2009. In Table 4, the composite cost index for 2009 is 88, and the composite cost index for 2014 is 106. The adjusted per-acre cost in 2014 would be calculated as follows:

106 ÷ 88 x $30.00 = $36.13

The USDA Custom Rates Index is also shown in Table 4. This index tracks the rates farmers paid for custom services reported in the USDA survey. Figure 2 shows annual percentage changes for the composite index and the USDA Custom Rates Index from 2005 to 2014. The composite index rose by 58 percent, from an index value of 67 in 2004 to 106 in 2014, while the Custom Rates Index increased by only 35 percent, from 81 to 109.

This comparison illustrates the problem faced by custom operators. The composite index tracks how custom operators' costs have changed, while the Custom Rates Index shows how much of the cost increase has been passed on to customers—considerably less than the total cost increase. Cost efficiencies gained from using larger equipment and covering more acres have helped some custom operators deal with this cost-price squeeze, but many have simply been squeezed out of business.

The composite index reflects costs for operators using new equipment. Actual custom rate charges lag behind the composite index at least in part because many custom operators use machinery and equipment purchased in earlier years. Those who use an index as a guide should also be aware that the relative shares of labor, fuel, repair, and machinery costs vary considerably by type of operation. Fuel may account for one-fourth or more of plowing costs, but only 10 percent of a combine's cost. Thus, different weights for machinery, repairs, fuel, and wages may be appropriate.

All indices in Table 4 are based on national cost and price data. Values for Idaho may be slightly different. Data needed to keep these index values current can be obtained from USDA (see "References and Other Useful Links").

Figure 2. Annual percentage changes in the composite and USDA indices, 2005–14.

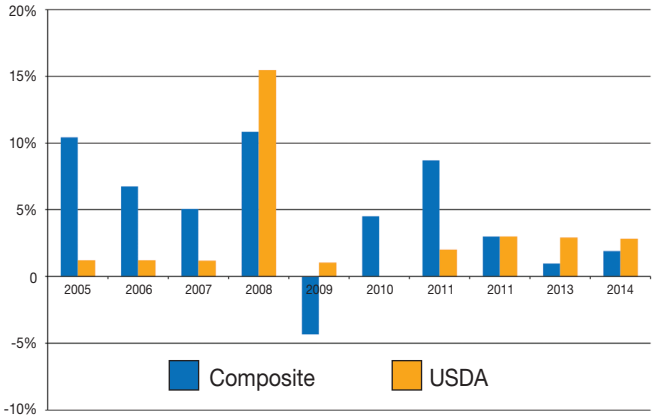


Table 3. Percentage of average machine value used to estimate property taxes, housing, and insurance (THI) for selected machinery.

Machinery	Taxes[1]	Housing[2]	Insurance[3]	Total
Wheel tractor	0	0.3	0.8	1.1
Crawler tractor	0	0.2	0.8	1.0
Combine	0	0.5	1.5	2.0
Potato harvester	0	1.4	0.5	1.9
Bean cutter	0	1.1	0.5	1.6
Self-propelled forage harvester	0	1.3	1.5	2.8
Pull-type forage harvester	0	1.3	1.5	2.8
Self-propelled windrower	0	1.1	1.5	2.6
Bean windrower	0	1.1	0.5	1.6
Hay rake	0	–	0.5	0.5
Hay baler	0	1.9	0.5	2.4
Self-propelled automatic bale wagon	0	1.0	1.5	2.5
Pull-type automatic bale wagon	0	1.0	0.5	1.5
Self-unloading forage wagon	0	–	0.5	0.5
Drill-planter	0	2.4	0.5	2.9
Tillage equipment	0	–	0.5	0.5
Sprayer	0	–	0.5	0.5

[1]Idaho no longer charges property tax on farm machinery. A rate of 1% is often used to estimate property tax in states where it still exists.

[2]Housing costs can be expressed as a percentage of purchase price, list price, or adjusted average value. Another approach is to estimate the value of the storage area required to place the equipment under cover. First, estimate the number of square feet required to store equipment, multiply this by the cost per square foot to build the storage, and amortize this cost over the machine shed's useful life. The rate depends on the type of shelter. A rate between $0.75 and $0.90 per square foot would provide a reasonable estimate based on current construction costs.

[3]When insurance costs on machinery are unknown, insurance can be estimated using a percentage of purchase price, list price, or adjusted average value. Insurance rates per $100 of value typically range between 0.4 and 0.6% for most tillage and pull-type harvesting equipment ($0.40 to $0.60 per $100). Rates for tractors and self-propelled machinery are typically higher, ranging between 0.65 and 2.0% ($0.65 to $2 per $100 of value).

Table 4. USDA indices of prices paid and custom rates, 2004–14.

	Prices paid indices[1]								
Year	Machinery[2]	Repairs	Diesel	Wages	Interest	Composite[3]	Composite annual percent change	USDA Custom Rates Index[4]	Custom rates annual percent change
Weight	0.45	0.10	0.15	0.15	0.15	1.00			
2004	66	83	42	83	67	67	-	81	-
2005	71	87	59	86	76	74	10%	82	1%
2006	75	88	66	89	91	79	7%	83	1%
2007	78	91	72	92	98	83	5%	84	1%
2008	86	93	95	97	102	92	11%	97	15%
2009	91	94	59	98	94	88	-4%	98	1%
2010	94	96	76	99	92	92	5%	98	0%
2011	100	100	100	100	100	100	9%	100	2%
2012	105	103	103	103	94	103	3%	103	3%
2013	108	104	97	106	95	104	1%	106	3%
2014	111	105	95	108	101	106	2%	109	3%

Source: NASS, USDA Agricultural Prices Annual Summary (various years). Washington D.C., July. http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1002

[1]Index values are calculated using 2011 as base year, where index values equal 100.

[2]Machinery index is a composite of tractors, self-propelled, and other machinery.

[3]The composite custom rate index is calculated by weighting individual component indices as follows: machinery 45%, repairs 10%, diesel 15%, wages 15%, and interest 15%. The calculated value is rounded to the nearest full percentage point. The composite index was developed by the authors and is presented as an alternative to using the USDA Custom Rates Index.

[4]The Custom Rates Index is a USDA-calculated index.

Conclusion

Hiring a custom operator provides a reasonable way to accomplish work when time or machinery is lacking. Performing custom work for others can help machine owners make more efficient use of their resources by spreading ownership costs over more acres, reducing the overall operating cost without incurring the expense of acquiring more land.

The survey data provided in this publication should serve only as a guide in setting rates. Prevailing conditions such as weather, field shape and size, the presence of rocks, and other factors affecting ease or difficulty of operation should be considered. For example, some custom operators in irrigated regions charge more for fields with furrow irrigation than for fields with sprinkler irrigation. Rocky or rough field conditions also result in higher charges, especially for tillage and cultivation. The size of the job is another important factor, with higher rates charged for smaller jobs.

Response rates for different types of operations varied widely. In some cases, only a single response was received, so please take this into consideration when using these data. Users should also be aware that quoted rates might not be representative of an entire area or region. For example, fuel costs can be much higher in more remote regions, thus justifying a higher rate.

While custom rates have increased since the last edition of this publication in 2010–11, most rates have not increased as fast as would be indicated by the composite cost index values found in Table 4. These index values suggest custom rates have not kept pace with increases in ownership and operating costs for new equipment.

One cost that does not show up in the appendix tables is the set-up fee charged by a number of custom operators, in addition to the per-unit charges. Fuel prices are another variable that often results in additional charges. Volatile and uncertain fuel prices in recent years left some custom operators losing money if they bid jobs when fuel prices were low and did not include a provision for a fuel surcharge in the contract. Some custom operators have instituted a fuel surcharge, while others require the individual who hires them to provide fuel. Operators in some regions may now offer custom rate quotes minus fuel.

In summary, custom rates need to be configured with as much information as possible, including current market rates in your area. This publication should serve as a data source to help determine equitable yet profitable custom rates for both users and providers of custom services across the major agricultural regions in Idaho.

Appendix

Table A. Custom aerial application costs: Dry and liquid materials, 2013–14 (southern Idaho).

Operation	Unit	SW	SC	E	Southern ID avg
MINIMUM JOB CHARGE	job				
Average		$400	$317	—	$359
High		$400	$400	—	$400
Low		$400	$250	—	$250
Responses		1	3	—	4
DRY PRODUCT					
Minimum charge (< 100 lb)	acre				
Average		$12.00	$9.67	$12.75	$11.47
High		$14.00	$10.00	$13.00	$14.00
Low		$10.00	$9.00	$12.50	$9.00
Responses		2	3	2	7
Plus cents per pound (> 100 lb)	lb				
Average		$8.75	$8.80	$12.80	$10.10
High		$9.50	$9.50	$13.00	$13.00
Low		$8.00	$8.00	$12.50	$8.00
Responses		2	3	2	7
SEEDING	acre				
Average		–	$10.67	–	$10.67
High		–	$15.00	–	$15.00
Low		–	$7.00	–	$7.00
Responses		–	3	–	3
LIQUID PRODUCT					
3 gallons	acre				
Average		$8.75	$9.05	$7.88	$8.56
High		$10.00	$10.15	$8.00	$10.15
Low		$7.50	$8.00	$7.75	$7.50
Responses		2	3	2	7
5 gallons	acre				
Average		$11.25	$9.91	$8.75	$9.97
High		$12.00	$10.40	$9.00	$12.00
Low		$10.50	$9.00	$8.50	$8.50
Responses		2	4	2	8
7.5 gallons	acre				
Average		–	$11.02	$10.13	$10.58
High		–	$12.00	$10.25	$12.00
Low		–	$10.00	$10.00	$10.00
Responses		–	3	2	5
10 gallons	acre				
Average		$14.00	$12.15	$11.13	$12.43
High		$16.00	$12.25	$11.50	$16.00
Low		$12.00	$12.05	$10.75	$10.75
Responses		2	2	2	6

SW = Southwestern Idaho, SC = Southcentral Idaho, E = Eastern Idaho

Photo: Potato Grower Magazine

Table B. Custom ground application costs: Dry and liquid materials, 2013–14 (southern Idaho).

Operation	Unit	SW	SC	E	Southern ID avg
DRY FERTILIZER					
Notes: Plus $1 on plowed or rough ground. Plus $2–$3 on corrugated ground. Plus $1–$2 for herbicide-impregnated fertilizer.					
Broadcast: 0–750 lb	acre				
Average		$9.50	$7.99	$7.94	$8.48
High		$10.00	$10.00	$8.50	$10.00
Low		$9.00	$6.90	$7.00	$6.90
Responses		3	7	8	18
Broadcast: 500–1,500 lb	acre				
Average		$9.83	$10.22	$8.64	$9.56
High		$10.50	$12.00	$9.20	$12.00
Low		$9.50	$8.25	$8.00	$8.00
Responses		3	8	8	19
Broadcast: variable rate (1–2 products)	acre				
Average		$14.00	$10.33	$11.67	$12.00
High		$18.00	$12.00	$12.50	$18.00
Low		$10.00	$9.00	$9.00	$9.00
Responses		2	3	6	11
Broadcast: variable rate (3–4 products)	acre				
Average		$16.00	$12.50	$12.88	$13.79
High		$18.00	$13.75	$15.00	$18.00
Low		$14.00	$11.75	$12.00	$11.75
Responses		2	3	4	9
LIQUID FERTILIZER					
Broadcast spray	acre				
Average		–	–	$7.50	$7.50
High		–	–	$8.00	$8.00
Low		–	–	$7.00	$7.00
Responses		–	–	2	2
Shank-in or markout	acre				
Average		$25.33	$23.00	$24.50	$24.28
High		$26.00	$24.00	$25.00	$26.00
Low		$24.00	$22.00	$24.00	$22.00
Responses		3	3	2	8
Sidedress	acre				
Average		$13.75	$13.50	–	$13.63
High		$15.00	$14.00	–	$15.00
Low		$13.00	$13.00	–	$13.00
Responses		4	2	–	6

Photo: Paul E. Patterson, University of Idaho

Operation	Unit	SW	SC	E	Southern ID avg
SPRAY CHEMICALS					
By volume: ≤ 10 gallons	acre				
Average		$10.00	$6.75	$7.03	$7.93
High		$10.50	$7.50	$7.50	$10.50
Low		$9.50	$6.00	$6.00	$6.00
Responses		3	5	8	16
By volume: 11–20 gallons	acre				
Average		$10.75	$7.38	$7.50	$8.54
High		$13.00	$8.00	$8.50	$13.00
Low		$9.50	$6.75	$6.50	$6.50
Responses		4	4	6	14
By volume: 21–30 gallons	acre				
Average		$13.00	$7.65	$8.19	$9.61
High		$13.00	$8.50	$8.50	$13.00
Low		$13.00	$7.00	$8.00	$7.00
Responses		1	5	4	10
By crop: grain, pulse crops, & alfalfa	acre				
Average		–	$6.56	$7.20	$6.88
High		–	$7.00	$7.50	$7.50
Low		–	$6.00	$6.50	$6.00
Responses		–	4	4	8
By crop: row crops (potatoes, sugar-beets, onions)	acre				
Average		–	$8.00	$7.94	$7.97
High		–	$9.50	$8.50	$9.50
Low		–	$7.00	$7.00	$7.00
Responses		–	3	4	7
Spray & incorporate	acre				
Average		–	$22.67	–	$22.67
High		–	$24.00	–	$24.00
Low		–	$20.00	–	$20.00
Responses		–	3	–	3
Apply sulfuric acid: 10–20 gallons	acre				
Average		–	$12.00	$10.67	$11.34
High		–	$12.00	$12.00	$12.00
Low		–	$12.00	$8.00	$8.00
Responses		–	2	3	5
Apply sulfuric acid: 21–30 gallons	acre				
Average		$19.75	$13.00	$12.50	$15.08
High		$20.00	$13.00	$13.00	$20.00
Low		$19.50	$13.00	$12.00	$12.00
Responses		2	2	2	6
Apply sulfuric acid: > 30 gallons	acre				
Average		–	$13.00	$13.88	$13.44
High		–	$13.00	$15.00	$15.00
Low		–	$13.00	$12.75	$12.75
Responses		–	2	2	4

SW = Southwestern Idaho, SC = Southcentral Idaho, E = Eastern Idaho

Table C. Custom row markout (bedding) and fumigation costs, 2013–14 (southern Idaho).

Operation	Unit	SW	SC	E	Southern ID avg
STRIP TILLAGE					
Row markout & fertilize: 22" rows	acre				
Average		$55.00	$40.00	–	$47.50
High		$60.00	$40.00	–	$60.00
Low		$50.00	$40.00	–	$40.00
Responses		2	1	–	3
MARKOUT					
Note: Cost may increase $2–$4/acre with GPS.					
Dry row markout: no product applied	acre				
Average		$22.00	$21.33	$21.50	$21.61
High		$24.00	$22.00	$23.00	$24.00
Low		$19.00	$20.00	$20.00	$19.00
Responses		3	3	2	8
Row markout with one product: 0–30 gallons	acre				
Average		$25.33	$23.00	$24.50	$24.28
High		$26.00	$24.00	$25.00	$26.00
Low		$24.00	$22.00	$24.00	$22.00
Responses		3	3	2	8
Row markout with two products or 31–45 gallons	acre				
Average		–	$25.00	$28.00	$26.50
High		–	$25.00	$28.00	$28.00
Low		–	$25.00	$28.00	$25.00
Responses		–	1	1	2
Row markout, fertilize, & fumigate (Vapam/K-Pam)	acre				
Average		$29.50	–	–	$29.50
High		$30.00	–	–	$30.00
Low		$29.00	–	–	$29.00
Responses		2	–	–	2

Operation	Unit	SW	SC	E	Southern ID avg
FUMIGATION					
Shanked with chisel plow (Vapam or K-Pam): 30–40 gallons	acre				
Average		$37.75	$32.50	$33.50	$34.58
High		$39.00	$40.00	$39.00	$40.00
Low		$35.00	$25.00	$24.00	$24.00
Responses		4	2	4	10
Ripper or disk-ripper with steel roller (Telone)	acre				
Average		–	$45.00	$46.00	$45.50
High		–	$45.00	$50.00	$50.00
Low		–	$45.00	$42.00	$42.00
Responses		–	1	2	3
Ripper or disk-ripper with steel roller (Telone + Vapam)	acre				
Average		$56.75	$48.00	$57.50	$54.08
High		$65.00	$55.00	$60.00	$65.00
Low		$53.50	$44.00	$55.00	$44.00
Responses		4	3	2	9

SW = Southwestern Idaho, SC = Southcentral Idaho, E = Eastern Idaho

Table D. Custom tillage costs, 2013–14 (southern Idaho).

Operation	Unit	SW	SC	E	Southern ID avg
PRIMARY TILLAGE					
Deep rip/subsoil, V-ripper, disk-ripper: 18"+	acre				
Average		$27.50	$30.00	–	$28.75
High		$30.00	$35.00	–	$35.00
Low		$25.00	$25.00	–	$25.00
Responses		2	2	–	4
Disk-ripper: 10–16"	acre				
Note: Charge typically increases $3–$5 for sod or alfalfa and $2 when roller harrow is included.					
Average		$25.00	$35.00	$33.80	$31.27
High		$25.00	$35.00	$40.00	$40.00
Low		$25.00	$35.00	$26.00	$25.00
Responses		1	3	5	9
Moldboard plow: stubble or potato ground	acre				
Notes: Charge typically increases $3–$10 for rocky ground. Charge typically increases $6–$10 for hay or sod. Charge may increase $1 when packer is included.					
Average		$29.50	$39.00	$28.33	$32.28
High		$34.00	$45.00	$30.00	$45.00
Low		$24.00	$24.00	$25.00	$24.00
Responses		6	12	3	21
Chisel plow: 10–12"	acre				
Average		$17.50	$22.90	$29.00	$23.13
High		$20.00	$29.00	$30.00	$30.00
Low		$15.00	$20.00	$28.00	$15.00
Responses		2	5	2	9
Offset (heavy) disk	acre				
Average		$20.00	$19.83	$19.80	$19.88
High		$20.00	$27.00	$25.00	$27.00
Low		$20.00	$18.00	$16.00	$16.00
Responses		2	6	5	13
SECONDARY TILLAGE					
Tandem disk	acre				
Average		$17.50	$19.00	$14.33	$16.94
High		$17.00	$23.00	$16.00	$23.00
Low		$17.00	$16.00	$12.00	$12.00
Responses		2	5	3	10

Operation	Unit	SW	SC	E	Southern ID avg
SECONDARY TILLAGE (continued)					
Disk with harrow or tire roller	acre				
Average		–	–	$18.00	$18.00
High		–	–	$18.00	$18.00
Low		–	–	$18.00	$18.00
Responses		–	–	1	1
Field cultivator with roller/packer	acre				
Average		–	$20.00	$15.00	$17.50
High		–	$20.00	$15.00	$20.00
Low		–	$20.00	$15.00	$15.00
Responses		–	1	1	2
Triple K	acre				
Average		$17.50	–	–	$17.50
High		$17.50	–	–	$17.50
Low		$17.50	–	–	$17.50
Responses		1	–	–	1
Groundhog	acre				
Average		$18.00	–	–	$18.00
High		$18.00	–	–	$18.00
Low		$18.00	–	–	$18.00
Responses		1	–	–	1
Rotary hoe/tiller (rota-tiller)	acre				
Average		$50.00	–	–	$50.00
High		$50.00	–	–	$50.00
Low		$50.00	–	–	$50.00
Responses		1	–	–	1
Roller harrow	acre				
Note: Charge typically increases $2–$4 with spike harrow.					
Average		$18.00	$19.00	$16.25	$17.75
High		$18.00	$22.00	$18.00	$22.00
Low		$18.00	$16.00	$15.00	$15.00
Responses		1	5	4	10
Harrow: spike tooth or flexible	acre				
Average		–	$13.50	–	$13.50
High		–	$18.00	–	$18.00
Low		–	$8.00	–	$8.00
Responses		–	4	–	4
Land plane	acre				
Average		–	–	–	$0.00
High		–	–	–	$0.00
Low		–	–	–	$0.00
Responses		–	–	–	0

SW = Southwestern Idaho, SC = Southcentral Idaho, E = Eastern Idaho

Table E. Custom cultivation costs, 2013–14 (southern Idaho).

Operation	Unit	SW	SC	E	Southern ID avg
ROW CROP CULTIVATION					
Cultivate	acre				
Average		$20.00	$19.67	–	$19.84
High		$20.00	$22.00	–	$22.00
Low		$20.00	$18.00	–	$18.00
Responses		1	3	–	4
Corrugate	acre				
Average		$18.00	$16.75	–	$17.38
High		$19.00	$22.00	–	$22.00
Low		$17.00	$15.00	–	$15.00
Responses		2	4	–	6
Hill potatoes	acre				
Average		–	$19.00	–	$19.00
High		–	$19.00	–	$19.00
Low		–	$19.00	–	$19.00
Responses		–	1	–	1
Basin tillage/ dammer diker	acre				
Note: Plus $1–$2 when spraying is included.					
Average		–	$20.88	–	$20.88
High		–	$24.00	–	$24.00
Low		–	$17.00	–	$17.00
Responses		–	4	–	4

SW = Southwestern Idaho, SC = Southcentral Idaho, E = Eastern Idaho

Table F. Custom planting and seeding costs, 2013–14 (southern Idaho).

Operation	Unit	SW	SC	E	Southern ID avg
FIELD CROPS					
Conventional drills					
Small grains, alfalfa, grass, & legumes	acre				
Note: Higher rate typically includes use of GPS.					
Average		$22.00	$17.50	$15.33	$18.28
High		$22.00	$19.00	$25.00	$25.00
Low		$22.00	$16.00	$10.00	$10.00
Responses		1	4	6	11
Small grains, alfalfa, grass, & legumes: roller harrow & plant	acre				
Note: Higher rate typically includes use of GPS.					
Average		–	$25.00	$20.33	$22.67
High		–	$30.00	$26.00	$30.00
Low		–	$20.00	$12.00	$12.00
Responses		–	2	6	8
Air seeder					
Small grain & legumes: seed only	acre				
Notes: Plus $2–$4 when dry or liquid fertilizer is applied. Plus $4–$6 when both dry and liquid fertilizers are applied. Plus $1–$4 for GPS. Minus $2–$3 for seeding only on dryland.					
Average		$22.00	$19.00	$17.00	$19.33
High		$22.00	$20.00	$18.00	$22.00
Low		$22.00	$18.00	$16.00	$16.00
Responses		1	2	2	5
Dryland no-till/direct seeding					
Small grain: seed & fertilizer	acre				
Average		–	–	$19.00	$19.00
High		–	–	$22.00	$22.00
Low		–	–	$16.00	$16.00
Responses		–	–	4	4

SW = Southwestern Idaho, SC = Southcentral Idaho, E = Eastern Idaho

Operation	Unit	SW	SC	E	Southern ID avg
ROW CROPS					
Dry beans: 22"	acre				
Note: Higher rate includes GPS.					
Average		$22.50	$19.33	–	$20.92
High		$25.00	$20.00	–	$25.00
Low		$20.00	$18.00	–	$18.00
Responses		2	3	–	5
Corn: 22"	acre				
Notes: Higher rate includes GPS. Plus $1 for chemical or fertilizer. Rates are for 22" row spacing. Minus $1 for 30" row spacing.					
Average		$22.50	$18.50	$17.50	$19.50
High		$25.00	$20.00	$19.00	$25.00
Low		$20.00	$16.00	$16.00	$16.00
Responses		2	6	2	10
Sugarbeets: 22"	acre				
Notes: Higher rate includes GPS. Plus $1 for chemical or fertilizer.					
Average		–	$19.00	$19.50	$19.25
High		–	$20.00	$20.00	$20.00
Low		–	$18.00	$19.00	$18.00
Responses		–	3	2	5
Potatoes: includes trucks to haul seed	acre				
Notes: Higher rate includes GPS. Plus $2 with liquid fertilizer application.					
Average		–	$37.00	$42.50	$39.75
High		–	$37.00	$45.00	$45.00
Low		–	$37.00	$40.00	$37.00
Responses		–	1	2	3

Photo: R. Dennis Roe, Washington State University

Table G. Custom harvesting costs for hay, peas, and straw, 2013–14 (southern Idaho).

Operation	Unit	SW	SC	E	Southern ID avg
SWATH					
Non-corrugated or non-irrigated	acre				
Notes: Swathing hay is with conditioner, minus $2–$4 without conditioner. Swathing straw may be $1–$2 less. For SC and E Idaho, add $2–$4 for rough or corrugated fields. For SW Idaho, rates include corrugated fields. For oat and pea hay, add $1–$2. Typically plus $2–$5 for small acreage.					
Average		$20.34	$17.15	$17.18	$18.22
High		$25.00	$20.00	$20.00	$25.00
Low		$18.00	$15.00	$13.00	$13.00
Responses		8	13	15	36
Swathing peas on corrugated field	acre				
Average		–	$24.00	–	$24.00
High		–	$28.00	–	$28.00
Low		–	$20.00	–	$20.00
Responses		–	2	–	2
TWIN RAKE or TURNOVER	acre				
Notes: For SC and E Idaho, add $2–$3 for rough or corrugated fields. For SW Idaho, rates include corrugated fields. Typically plus $1–$2 for small acreage.					
Average		$10.06	$7.65	$6.13	$7.95
High		$15.00	$10.00	$8.00	$15.00
Low		$7.00	$5.00	$4.00	$4.00
Responses		7	10	8	25

Photo: Cindy Snyder

Operation	Unit	SW	SC	E	Southern ID avg
BALING					
Small bale: 2-string (14" x 16" or 16" x 18")	bale				
Note: Higher rates are for 16" x 18" bales.					
Average			$0.90	$0.80	$0.95	$0.88
High			$1.00	$0.85	$1.25	$1.25
Low			$0.80	$0.75	$0.75	$0.75
Responses			4	2	4	10
Small bale: 3-string	bale				
Average			–	$1.05	$1.25	$1.15
High			–	$1.05	$1.25	$1.25
Low			–	$1.05	$1.25	$1.05
Responses			–	1	1	2
Large rectangular bale: 3' x 4'	bale				
Notes: Rate increases for lower yields, typically < 1.5 ton/acre. Rate for straw may be $1-$2 less than for hay.					
Average			$14.00	$13.00	$13.13	$13.38
High			$16.00	$14.00	$16.00	$16.00
Low			$12.00	$12.00	$11.00	$11.00
Responses			3	2	8	13
Large rectangular bale: 4' x 4'	bale				
Notes: Rate increases for lower yields, typically < 1.5 ton/acre. Rate for straw may be $1–$3 less.					
Average			$18.00	$16.56	$15.47	$16.68
High			$18.00	$18.00	$16.00	$18.00
Low			$18.00	$15.00	$14.00	$14.00
Responses			2	9	8	19
RETRIEVE & STACK (short haul)					
Small bale: 2-string (16" x 18" x 48")	bale				
Average			$0.65	$0.43	$0.45	$0.51
High			$0.75	$0.48	$0.45	$0.75
Low			$0.55	$0.40	$0.45	$0.40
Responses			2	3	1	6
Large rectangular bale: 3' x 4'	bale				
Average			$5.00	–	$4.10	$4.55
High			$5.00	–	$5.00	$5.00
Low			$5.00	–	$3.00	$3.00
Responses			1	–	5	6
Large rectangular bale: 4' x 4'	bale				
Note: Rate for straw may be $0.50–$1 lower.					
Average			$9.50	$6.25	$5.15	$6.97
High			$9.50	$8.00	$6.00	$9.50
Low			$9.50	$4.50	$4.00	$4.00
Responses			1	2	5	8

SW = Southwestern Idaho, SC = Southcentral Idaho, E = Eastern Idaho

Table G continues on page 15

Table G *continued*. Custom harvesting costs for hay, peas, and straw, 2013–14 (southern Idaho).

Operation	Unit	SW	SC	E	Southern ID avg
COMBINATION PACKAGE					
Swath, rake, bale (16" x 18"), & stack	ton				
Average		–	–	$47.50	$47.50
High		–	–	$47.50	$47.50
Low		–	–	$47.50	$47.50
Responses		–	–	1	1
Swath, rake, bale (3' x 4'), & stack	ton				
Average		–	–	$36.33	$36.33
High		–	–	$45.00	$45.00
Low		–	–	$30.00	$30.00
Responses		–	–	3	3
Swath, rake, bale (4' x 4'), & stack	ton				
Note: Plus $3–$5 for rough or rocky fields.					
Average		–	$36.67	$35.00	$35.84
High		–	$40.00	$42.00	$42.00
Low		–	$32.00	$30.00	$30.00
Responses		–	3	5	8

Table H. Custom harvesting costs for silage and other forage crops, 2013–14 (southern Idaho).

Operation	Unit	SW	SC	E	Southern ID avg
CORN SILAGE					
Chop only	ton				
Notes: Rate may increase by $0.25–$1.00 for green chopping grain or hay. Rates are set to a standard dry matter basis, i.e., 30%.					
Average		$5.50	–	–	$5.50
High		$6.00	–	–	$6.00
Low		$5.00	–	–	$5.00
Responses		2	–	–	2
Haul only: < 1 mile	ton				
Average		$2.63	–	–	$2.63
High		$2.75	–	–	$2.75
Low		$2.50	–	–	$2.50
Responses		2	–	–	2
Haul: > 1 mile plus $/ton/mile	ton				
Average		$0.28	–	–	$0.28
High		$0.30	–	–	$0.30
Low		$0.25	–	–	$0.25
Responses		2	–	–	2
Pack	ton				
Average		$1.25	–	–	$1.25
High		$1.50	–	–	$1.50
Low		$1.00	–	–	$1.00
Responses		3	–	–	3
Chop, short haul, & pack	ton				
Average		–	$9.75	–	$9.75
High		–	$10.00	–	$10.00
Low		–	$9.50	–	$9.50
Responses		–	2	–	2

Operation	Unit	SW	SC	E	Southern ID avg
GREEN CHOP HAY & GRAIN					
Chop only	ton				
Average		$7.50	–	–	$7.50
High		$7.50	–	–	$7.50
Low		$7.50	–	–	$7.50
Responses		1	–	–	1
Rake, chop, haul (< 1 mile), & pack	ton				
Average		–	$10.00	–	$10.00
High		–	$10.00	–	$10.00
Low		–	$10.00	–	$10.00
Responses		–	1	–	1
Haul only: < 1 mile	ton				
Average		$4.50	–	–	$4.50
High		$4.50	–	–	$4.50
Low		$4.50	–	–	$4.50
Responses		1	–	–	1
Haul: > 1 mile plus $/ton/mile	ton				
Average		$0.30	$0.25	–	$0.28
High		$0.30	$0.25	–	$0.30
Low		$0.30	$0.25	–	$0.25
Responses		1	1	–	2

SW = Southwestern Idaho, SC = Southcentral Idaho, E = Eastern Idaho

Table I. Custom harvesting costs for dry beans, dry peas, seed crops, corn, and small grains, 2013–14 (southern Idaho).

Operation	Unit	SW	SC	E	Southern ID avg
CUT & WINDROW BEANS	acre				
Note: Plus $15 for rocky, weedy fields.					
Average		$50.00	$31.75	–	$40.88
High		$50.00	$40.00	–	$50.00
Low		$50.00	$20.00	–	$20.00
Responses		1	4	–	5
COMBINE/ THRASH IN WINDROW					
Dry beans (commercial) or dry peas	acre				
Note: Plus $10 for rocks in windrows.					
Average		$58.33	$46.67	–	$52.50
High		$65.00	$55.00	–	$65.00
Low		$50.00	$40.00	–	$40.00
Responses		3	3	–	6
Dry beans (commercial) or dry peas	cwt				
Average		–	$1.70	–	$1.70
High		–	$1.85	–	$1.85
Low		–	$1.55	–	$1.55
Responses		–	6	–	6
Dry beans: garden or seed	cwt				
Average		–	$1.88	–	$1.88
High		–	$2.00	–	$2.00
Low		–	$1.75	–	$1.75
Responses		–	2	–	2
COMBINE/ THRASH STANDING					
Dry beans (commercial) or dry peas	acre				
Average		$67.50	–	–	$67.50
High		$70.00	–	–	$70.00
Low		$65.00	–	–	$65.00
Responses		2	–	–	2
Seed crops: alfalfa, clover, grass and forbs	acre				
Average		$65.00	–	$50.00	$57.50
High		$65.00	–	$50.00	$65.00
Low		$65.00	–	$50.00	$50.00
Responses		1	–	1	2
Corn	acre				
Notes: Plus $10 for yields > 225 bushels. Plus $10 for chopping corn head. Plus $5 for moisture > 23%. Plus $2 for yield mapping. Thrashing down corn: $800/hour.					
Average		$51.00	$40.50	–	$45.75
High		$55.00	$46.00	–	$55.00
Low		$45.00	$35.00	–	$35.00
Responses		5	2	–	7
Small grains: irrigated	acre				
Notes: Plus $3–$15 for lodged grain. Plus $2–5 for short haul. Plus $2 for yield mapping.					
Average		$49.20	$39.70	$33.11	$40.67
High		$55.00	$46.00	$39.00	$55.00
Low		$40.00	$32.00	$30.00	$30.00
Responses		5	11	9	25
Small grains: dryland	acre				
Average		$35.00	–	$24.00	$29.50
High		$40.00	–	$28.00	$40.00
Low		$30.00	–	$20.00	$20.00
Responses		2	–	2	4

SW = Southwestern Idaho, SC = Southcentral Idaho, E = Eastern Idaho

Table J. Northern Idaho rates for custom work and equipment rental, 2013–14.

Operation	Unit	Avg	Responses	Range
FERTILIZER APPLICATION				
Dry				
Floater (terragator), minimum 25 acres	acre	$7.50	1	$7.50
Spinner (dry box), pulled by tractor with AutoSteer	acre	$6.00	1	$6.00
Anhydrous				
Shanked, with aqua	acre	$5.75	1	$5.75
NH_3 plus dry (Banducator)	acre	$9.75	2	$8.75 to $10.75
Cultivator, 60–150 contiguous acres	acre	$10.25	1	$10.25
Cultivator, 151–300 contiguous acres	acre	$9.75	1	$9.75
Cultivator, 301–750 contiguous acres	acre	$9.25	1	$9.25
Cultivator, 750–1500 contiguous acres	acre	$8.75	1	$8.75
Min-till, 60–150 contiguous acres	acre	$10.25	1	$9.25
Min-till, 151–300 contiguous acres	acre	$9.75	1	$8.75
Min-till, 301–750 contiguous acres	acre	$9.25	1	$8.25
Min-till, 750–1500 contiguous acres	acre	$8.75	1	$8.00
Aerial				
0–100 lb	lb	$8.00	1	$8.00
> 100 lb	lb	$9.00	1	$9.00
Plus pesticide	acre	$8.50	1	$8.50
Per hour	hour	$900.00	1	$900.00
CHEMICAL APPLICATION				
Self-propelled ground sprayer				
< 10 gallons per acre	acre	$7.25	5	$7.00 to $7.50
10 gallons per acre	acre	$8.25	2	$8.00 to $8.50
12 gallons per acre	acre	$8.35	2	$8.20 to $8.50
15 gallons per acre	acre	$8.50	2	$8.50 to $8.50
Aerial				
Minimum charge	hour	$900.00	1	$900.00
3 gallons	acre	$8.23	2	$7.50 to $8.95
5 gallons	acre	$8.90	2	$8.30 to $9.50
TILLAGE				
Stubble bust (Schulte 26')	acre	$16.50	2	$15.00 to $18.00
Harrow	acre	$5.00	1	$5.00
Cultivate	acre	$8.00	1	$8.00
Chisel	acre	$14.00	1	$14.00
Plow	acre	$25.00	1	$25.00
PLANTING				
No-till Seeding				
With fuel:				
All crops, air drill	acre	$40.00	1	$40.00
Fuel supplied by grower:	acre			
All crops, hoe drill	acre	$25.50	2	$23.00 to $28.00
All crops, cross-slot drill	acre	$27.50	4	$24.00 to $32.00
All crops, air drill	acre	$21.00	2	$20.00 to $22.00
HARVESTING				
Combining, grain, farmer provides trucks	hour	$50.00	1	$50.00
Combining, grain, including trucks	hour	$75.00	1	$75.00
Swathing hay (minimum 40 acres)	acre	$16.75	2	$16.00 to $17.50
Baling, 3' x 4' (minimum 40 acres)	ton	$20.00	1	$20.00
Swathe, bale, and stack hay, 3' x 4' bales (≥ 40 acres)	acre	$55.00	1	$55.00
Swathe, bale, and stack straw, 3' x 4' bales (≥ 40 acres)	acre	$45.00	1	$45.00
EQUIPMENT RENTAL				
Drill (Ag Pro Conservation)				
Minimum charge	job	$2,500.00	1	$2,500.00
150–249 acres	acre	$16.75	1	$16.75
250–499 acres	acre	$15.25	1	$15.25
500–999 acres	acre	$13.75	1	$13.75
1000 acres or more	acre	$12.00	1	$12.00

Table J continues on page 18

Table J *continued*. Northern Idaho rates for custom work and equipment rental, 2013–14.

Operation	Unit	Avg	Responses	Range
Fertilizer applicators				
Mini-till anhydrous applicator	acre	$2.25	1	$2.25
Chisel anhydrous applicator	acre	$5.10	2	$2.55
Valmar	acre	$5.10	2	$2.55
Valmar with harrow	acre	$3.50	1	$3.50
Valmar fertilizer machine	acre	$4.00	1	$4.00
Miscellaneous				
Weed wiper	acre	$3.50	1	$3.50
Spinner spreader	acre	$3.25	1	$3.25
Spinner spreader with motor	acre	$3.75	1	$3.75
Pull-behind chemical applicator*	acre	$3.50	1	$3.50
**Note: Rental may be free, depending on size of order.*				

References and Other Useful Links

Painter, K. 2011. *The Costs of Owning and Operating Farm Machinery in the Pacific Northwest*. PNW 346. Moscow, ID: University of Idaho Extension. http://www.cals.uidaho.edu/edComm/pdf/PNW/PNW0346/PNW0346.html

University of Idaho. 2010. *Machinery Cost Analysis*. http://web.cals.uidaho.edu/idahoagbiz/management-tools/

USDA Prices Paid Index values can be found at http://quickstats.nass.usda.gov/ Note: USDA no longer publishes the Annual Agricultural Prices Summary.

Idaho AgBiz website, University of Idaho Department of Agricultural Economics and Rural Sociology: http://web.cals.uidaho.edu/idahoagbiz/

Iowa State University's Farm Custom Rates Survey: http://www.extension.iastate.edu/agdm/crops/html/a3-10.html Note: This website also provides a link to custom rate guides for other states and Canadian provinces. This is a very convenient and useful site to reference.

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