



# 2009 Cost of Potato Production Comparisons for Idaho Commercial Potato Production

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2009 Cost of Potato Production  
Comparisons for Idaho  
Commercial Potato Production

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Copies of the report and earlier reports can be found at: <http://www.cals.uidaho.edu/aers>  
Click Resources then Project Reports

## Table of Contents

Table of Contents	Page ii
Idaho Potato Production Costs Project: Goal and Objectives	Page 1
Cost of Production Background	Page 1
2009Crop Input Costs	Page 2
Potato Cost of Production Overview	Page 3-6
Farm Size and Potato Acreage	
Input Costs	
Potato Yields	
Fumigation Yield and Cost Dilemma	Page 6-7
Unresolved Yield Issue	Page 8
2009 Cost of Potato Production Overview and Comparison	Page 8-10
Cost Summaries	
Cost Comparisons	
Adjustments	
Tables:	Page 11-41
Table 1.Listing of 2009 Idaho potato costs and returns estimates by region	Page 11
Table 2. Current & historical farm size and potato acreage assumptions by region	Page 11
Table 3.Current and historical interest rates, labor charges and power rates used in costs and returns estimates	Page 12
Table 4. Current and historical fuel, water assessments and fertilizer component prices	
4-a Southwestern Idaho	Page 12
4-b Southcentral Idaho	Page 13
4-c Eastern Idaho	Page 13
Table 5. Potato yields by region for published and unpublished University of Idaho costs and returns estimates, both with and without fumigation	Page 14
Table 6. Historical potato yields published by IASS for 2004 – 2008 and historical 3-year averages.	Page 14
Table 7. Historical potato yields reported by IASS for primary commercial potato counties of eastern Idaho and historical 3-year averages.	Page 15
Table 8. Fumigation yield adjustment and percentage fumigation factors by region	Page 15
Table 9. Cost changes per acre by region from 2008 to 2009.	Page 16

## Table of Contents (Cont.)

Table 10. Cost changes per hundredweight by region from 2008 to 2009.	Page 17
Table 11. Per acre and percentage change in costs from 2008 to 2009 for Irrigated Russet Burbank potatoes: no storage costs	Page 18
Table 12. Per acre and percentage change in costs from 2008 to 2009 for Irrigated Russet Burbank potatoes: with storage costs and no fumigation	Page 19
Table 13. Per acre and percentage change in costs from 2008 to 2009 for Irrigated Russet Burbank potatoes: with storage costs and no fumigation	Page 20
Appendix	Page 21
Table 14. 2009 Southwestern Idaho commercial Russet Burbank: fumigation and no storage potato costs and returns with comparison to 2008	Page 22-23
Table 15. 2009 Southwestern Idaho commercial Russet Burbank: fumigation and storage potato cost and returns with comparison to 2008	Page 24-25
Table 16. 2009 Southcentral Idaho commercial Russet Burbank: no storage potato cost and returns with comparison to 2008	Page 26-27
Table 17. 2009 Southcentral Idaho commercial Russet Burbank: storage potato cost and returns and comparison with 2008	Page 28-29
Table 18. 2009 Southcentral Idaho commercial Russet Burbank: fumigation and storage potato cost and returns with comparison to 2008	Page 30-31
Table 19. 2009 Eastern Idaho- South commercial Russet Burbank: no storage potato cost and returns with comparison to 2008	Page 32-33
Table 20. 2009 Eastern Idaho- South commercial Russet Burbank: storage potato cost and returns with comparison to 2008	Page 34-35
Table 21. 2009 Eastern Idaho- South commercial Russet Burbank: fumigation and storage potato cost and returns with comparison to 2008	Page 36-37
Table 22. 2009 Eastern Idaho- North commercial Russet Burbank: storage potato cost and returns with comparison to 2008	Page 38-39
Table 23. 2009 Eastern Idaho- North Russet Burbank G3 seed: storage potato cost and returns with comparison to 2008	Page 40-41

## Costs of Potato Production in Idaho

The overall goal of this project is to provide the Idaho potato industry with annual estimates of potato production costs in Idaho by region. Production costs are compared both within and between regions on a per acre and a per hundredweight basis. Percentage changes in costs from the previous year will also be calculated.

The following objectives are designed to meet the project goal:

1. To collect data from input suppliers, machinery and equipment dealers, and growers as appropriate.
2. To revise existing potato costs and returns estimates to reflect current input costs and growers' production practices.
3. To develop cost of production estimates for new varieties or production systems as appropriate, or as requested.
4. To provide individual CAR estimates to the Idaho potato industry and University of Idaho faculty with potato responsibility.
5. To calculate change in production costs by region and make this information available to the Idaho potato industry.
6. To re-establish the Cost of Production Advisory Committee and to meet with this group to review the potato CAR estimates and to obtain input on proposed revisions.

I would like to acknowledge the cooperation and support that I receive from all segments of the Idaho potato industry, including growers, processors, and input suppliers. I would also like to thank the Idaho Potato Commission for the funding I receive to support this project, BDK802.

### Cost of Production Background

The University of Idaho Department of Agricultural Economics and Rural Sociology (AERS) develops crop costs and returns (CAR) estimates – also referred to as enterprise budgets or cost of production estimates -- for many of the major crops grown in Idaho. CAR estimates are revised and published every other year in odd-numbered years, typically in the early winter. Crop CAR estimates are developed for four geographic regions of the state: southwestern Idaho, southcentral Idaho, eastern Idaho, and northern Idaho. Climate and soil conditions not only influence which crops are produced in each region of the state, but they also influence the crop specific production practices in each region. Production practices depicted in the University of Idaho CAR estimates are typical or representative for that crop and region.

They are not averages. The relatively small sample size of growers that provide data does not allow us to make statistical inferences for the state or even a region. It is also important to note that while the production practices and costs presented in the University of Idaho CAR estimates are typical of a region, there is a wide range in production practices and costs.

Information used in developing production practices modeled in the CAR estimates comes from a variety of sources, including: surveys of individual growers, information from grower panels, industry fieldmen, as well as University of Idaho county Extension educators and production specialists. Both crop and livestock CAR estimates are available from the Internet at the following URL:

<http://www.cals.uidaho.edu/aers> Click on Resources and then either Crops or Livestock. The crop CAR estimates are organized by year and by region. Copies of this report and earlier reports on changes in potato production costs in Idaho can be found at the same web address. Click on Resources and the Project Reports.

### **2009 Crop Input Costs**

The cost information used to produce the 2009 potato CAR estimates came from the summary of data collected from various input supplier surveys that will be published in the Agricultural Economics Extension Series, *Idaho Crop Input Price Summary for 2009*. The publication is available at <http://www.cals.uidaho.edu/aers/PDF/AEES/2009/AEES09-04.pdf>

Surveys were conducted between June and September and included irrigation districts and canal companies, agricultural lenders, crop insurance companies, trucking companies, aerial and other custom applicators, and chemical and fertilizer dealers. Information on seed potato prices and the cost to cut and treat potato seed was taken from a survey of Idaho seed potato growers. A charge for handling and transportation is added then added to the FOB seed farm-based seed potato prices to derive a seed potato cost for each region.

Machinery and equipment prices were obtained from a survey of dealers conducted between August 2004 and May of 2005. These prices are adjusted using the USDA Prices Paid Machinery Index. Irrigation equipment prices and costs were based on Extension Bulletin 788, *Economics of Sprinkler Irrigation Systems: handline, solid set & wheelline*, and Extension Bulletin 787, *Economics of Low-Pressure Sprinkler Irrigation Systems: center pivot and linear move*. Irrigation system costs were also adjusted using the USDA Prices Paid Machinery Index. Index-based price adjustments are based on annual changes. Machinery prices have increased approximately five percent over the past year.

## Potato Cost of Production Overview

Cost of production estimates are influenced by the assumptions made in depicting a representative or typical farm. The size of the farm and the acreage planted to different crops will influence the costs, particularly machinery ownership costs. It is important to recognize this when making comparisons between regions where assumptions differ or within a region over time as the underlying assumptions change. The University of Idaho currently has ten potato CAR estimates. Nine CAR estimates are for commercial potato production and one is for seed production. A list of CAR estimates by region and variety is found in Table 1. Table 1 also indicates whether the CAR estimates include storage or fumigation costs.

### Farm Size and Potato Acreage

Table 2 shows the farm size and potato acreage for each region's model farm for the five most recent years when cost of production estimates were made. For 2009 the model farm in southwestern Idaho is 1,200 acres with 300 acres in potatoes, while the model farms for southcentral and eastern Idaho are 1,800 acres with 450 acres and 600 acres in potatoes, respectively. In general, operating costs are not influenced by farm size. However, ownership costs do change with farm size, primarily because of economies of size and scale with equipment. Equipment ownership costs per acre are strongly influenced by the number of acres over which these costs are spread. The more acres, the lower the cost. In setting the farm size and selecting the machinery compliment, we attempt to achieve an economically efficient combination. Equipment that is under utilized has high ownership costs, while equipment with too many hours of use results in unrealistically low ownership costs.

### Input Costs

Some input prices are region specific, while other input prices are standardized for the entire state since they don't vary consistently by region. Table 3 contains information on three such items: interest rates, labor costs and Idaho Power's irrigation power charges. Table 3 has values for 2009, the previous 3 years and the percentage change from 2008 to 2009. Interest is charged from the time an expenditure is made until the harvest month using the operating interest rate shown in Table 3. Operating interest is identified as a separate line item in the CAR estimates. The intermediate interest rate is used in calculating non-cash machinery costs. The labor used in crop production falls in one of three classes shown in Table 3. The labor used to operate machinery; tractor operators and truck drivers for example, receive a higher wage than unskilled (other) labor used during harvest to pick clods and rocks on a harvester and to help with storage and trans-loading operations. The labor costs include the base wage rate plus payroll taxes and benefit costs. These are shown as a percentage. Additional labor information is included in the background and assumptions page that accompanies each CAR estimate. While Idaho Power's service

area does not extend to all irrigated areas of southern Idaho, it is by far the largest supplier of power to Idaho farms and ranches. The power rates shown in Table 3 are used with a center pivot irrigation system to derive the cost per acre-inch of water applied. The power demand used in the calculation is for pressurization only. The standard assumption for each region is that surface water is delivered to the farm from a canal.

Tables 4-a, 4-b and 4-c contain cost information on commonly used inputs where prices generally vary by region. These include fuel, water assessment, and fertilizer. Table 4-a shows these costs for southwestern Idaho, Table 4-b shows the costs for southcentral Idaho and Table 4-c shows the costs for eastern Idaho.

Prior to 2008, fuel prices were determined at a single point in time, typically August. Fuel prices used in the 2008 and 2009 CAR estimates are the average of prices collected at four times during the year: February, April, June and August. This change was made at the request of the cost of production advisory committee.

### Potato Yields

The yield in a CAR estimate is used to calculate gross revenue and break-even prices needed to cover costs in different categories. Yield is also the basis for certain costs, such as promotion or inspection fees paid by growers. Yield also drives storage and transloading costs which are calculated on a hundredweight basis. Table 5 shows the potato yields used in the University of Idaho's 2009 commercial potato CAR estimates, as well as the previous four updates. Some values are shown only as a reference and indicate the value we would use if we published a CAR estimate for that area and with those production practices. Only those shown in bold type are used in CAR estimates.

Prior to 1991 there was not a consistent method used to determine potato yields in CAR estimates for all three regions. Starting in 1991, yields in all three regions were based Idaho Agricultural Statistics Service county or regional-level yield data. From 1991 to 1995, the yield was calculated using a 5-year rolling average. From 1995 through 2003 the yields used were based on a projected yield using exponential smoothing with an alpha value of .20. This procedure eliminated the negative bias that resulted from using historical data to calculate averages when yields were increasing rapidly. Unfortunately, exponential smoothing also produced projected yields that varied widely from actual yield when potato yield variation from one year to the next was substantial. To avoid this problem, yield estimates for CAR estimates was switched to a projected 3-year average starting in 2005. For 2006, the 3-year average consisted of two years of historical data and the third year was projected, based on the November USDA crop production report. Starting in



2007, the 3-year average was switched to the three most recent years of historical data. For the 2009 CAR estimates, yield data for 2006, 2007 and 2008 was used. The 2009 county-level data for Idaho will not be published until September 2010, so the yields used in calculating the average will always be lagged by one year. Yields used in the CAR estimates are rounded to the nearest 5 hundredweight. These base area yields are then adjusted to account for fumigation, a procedure described later.

For crop reporting purposes, the IASS breaks Idaho into regions. The IASS calculates potato yields both for individual counties within a region and for the region itself. The yield estimates used in southwestern and southcentral Idaho CAR estimates are based on the IASS regions and includes all the counties in that region. Prior to 2001, yields in eastern Idaho CAR estimates were based on four major commercial potato counties: Bannock, Bingham, Bonneville and Power. Starting in 2001, separate CAR estimates were made for commercial potato production in the southern counties, Bannock, Bingham and Power, and the northern counties: Bonneville, Jefferson and Madison. (See Table 1.)

Because of changes in how yields were calculated and other procedural changes, it can be difficult to make historical comparisons going back more than one year. When procedural changes occur in cost calculations, the previous year's CAR estimate is re-calculated using the new procedure so that the year-to-year change is based on the price and quantity change of inputs, not based on procedural changes. Because of this, the resulting costs for the previous year will be different than those published the previous year.

The potato yields used in the 2009 CAR estimates are higher than those used in 2008. (See Table 5.) The yield was 20 hundredweight per acre higher in western Idaho, 10 hundredweight per acre higher in southcentral Idaho, and 5 hundredweight per acre higher in eastern Idaho.

The following section explains how the yield values used in the fumigation and non-fumigation CAR estimates are derived.

### **Fumigation Yield and Cost Allocation Dilemma**

Fumigation has a significant impact on the per acre production costs and can also have a large impact on potato yield and quality. For an individual grower, this does not pose a problem because the cost and yield increases correspond. In the budgeting procedures used to generate the potato CAR estimates, the cost increase is not a problem when fumigation is included. There are, however, two yield questions that must be considered. The first question: how much of a yield increase should be attributed to fumigation?

The second question: what should the base yield in the non-fumigation CAR estimate be? Since the county and regional yields published by IASS contain both fumigated and non-fumigated potato acreage, the IASS values are not appropriate for either a CAR estimate with fumigation or one without fumigation unless some attempt is made to identify and separate the fumigation yield impact in the IASS data.

Historic yields based on IASS data are too low if used in a CAR estimate with the full cost of fumigation included. Historic yields are too high if used in a CAR estimate when no fumigation cost is included. Including only a partial cost for fumigation would be appropriate in calculating average production costs, but not for calculating typical costs where fumigation is either used or it is not. In addition, the methods used by the University of Idaho to obtain farmer production practice data is not consistent with calculating average production costs for a region. Using the IASS yield data and including a partial fumigation cost in a typical budget is not appropriate as it gives the appearance that fumigation is less expensive than it actually is.

The IASS county-level or regional yield data are used to calculate an area 3-year average yield. These procedures were discussed in the previous section. This base area yield value is set equal to the weighted average of the fumigated yield and the non-fumigated yield as shown in the following formula. The weights are the estimated percentage of potato acres in that region that are fumigated and not fumigated, respectively. The yield adjustment attributable to fumigation as well as the percentage of acres fumigated in each region is shown in Table 8.

#### Fumigation Yield Adjustment Factor

$(\% \text{ of acres not fumigated} \times Y) + (\% \text{ acres fumigated} \times FY) = \text{Area Average Yield},$

Where  $Y$  = non-fumigation yield,

$FY$  = fumigation yield, and

$FY = Y + \text{fumigation yield adjustment}$

The following example illustrates how the fumigation adjustment factor was used, given an area yield of 400 cwt, with 60 percent of the potato acreage fumigated and a fumigation yield adjustment of 50 hundredweight per acre. Set up the equation as shown below and solve for  $Y$ .

$$.4Y \quad + \quad .6(Y+50) \quad = \quad 400$$

$$.4Y \quad + \quad .6Y + 30 \quad = \quad 400$$

$$1.0 Y \quad + \quad 30 \quad = \quad 400$$

$$\begin{array}{rclcl}
 & Y & = & 370 & \\
 \text{And} & FY & = & 420 & \\
 \text{Check:} & .4 \times 370 & + & .6 \times 420 & = & 400
 \end{array}$$

Fumigation yield in this example is 420 and non-fumigation yield is 370, while the area average is 400. The fumigation CAR estimate would include the full cost of fumigation and the non-fumigation would have no fumigation costs. Thus, the costs and yields would correspond.

Note: There are limitations to this type of adjustment and there is a lack of publicly available data on which to base fumigation estimates. While not perfect, using this methodology does reduce the previous negative bias that occurred when calculating costs per hundredweight when the benefit of fumigation on yield was included in the region or county yields, but the cost of fumigation was not. Comments from the potato industry on how to improve this procedure are encouraged, particularly on how to improve the values shown in Table 8. Using the percentages of acres fumigated from Table 8 and the number of potato acres grown in each region produces a statewide weighted-average of approximately 45 to 50 percent of the potato acreage being fumigated. This falls within the ranges of values of 45-60 percent given by knowledgeable people in the industry.

### **Unresolved Yield Issue**

Regardless of how the area potato yields are calculated, how does this yield compare to the grower's paid yield? The answer will vary depending on whether the potatoes are sold in the fresh or in the process market. The yield data from IASS includes all tubers greater than 1-1/2 inches. Since the University of Idaho CAR estimates do not segment the yield into size and grade components that would sell for different prices, the breakeven prices shown in the CAR estimates are what the grower would have to average in order to cover costs. The implicit assumption is that the yields shown in the CAR estimates are a paid yield. But with unusable averaging around 8 percent for processing potatoes, the yield shown in the UI CAR estimates is greater than what growers would be paid on. This issue may not be resolved in the CAR estimates, but it certainly needs to be addressed if the potato industry uses the values from these CAR estimates to justify contract base prices and incentives. The underlying issue is whether per the per acre cost and the changes in per acres costs from year-to-year is a better measure to use than cost per hundredweight and the change in per hundredweight costs from year-to-year.

### **2009 Cost of Potato Production Overview and Comparison**

Direct comparisons with previously published estimates should not be made without accounting for differences in procedures and assumptions. Procedural adjustments were made in several calculations between 2008 and 2009. These are discussed later.

Note that beginning with the 2003 CAR estimates, the non-storage CAR estimates model a situation where potatoes are trans-loaded to a semi-trailer, rather than being hauled directly to the plant or processor storage in field trucks, which was the assumption prior to 2003. The semi-trailer is hired, not owned, so it shows up as a custom hauling expense. The expense shows up on the CAR estimates as a custom hauling charge. The labor costs for the crew at the transloading point must also be accounted for. The assumption is that the transloading crew is the same as the “cellar” crew used when potatoes are placed in storage. The transloading labor is included in the trans-loading operating expense, not as a labor charge per se. There is also an ownership cost in the non-storage CAR estimates to account for depreciation, interest and insurance on the trans-loading equipment. The trans-loading equipment includes most but not all the equipment that is used in the storage CAR estimates and includes: conveyers, even-flow bin, eliminator/sizer, and piler. Information regarding the specific farm situation for each CAR estimate, i.e. farm size, tillage, cultivation, fertilization practices, irrigation method, etc., is discussed on the background and assumptions page that is included with each CAR estimate.

### Cost Summaries

Table 9 summarizes the dollar values per acre for operating, ownership and total costs for 2008 and 2009, as well as the change per acre from 2008 to 2009 measured both in dollars and as a percentage. Table 9 includes eight of the nine commercial potato budgets published by the University of Idaho. The CAR estimates in Table 9 are grouped by region. The change in operating costs per acre ranged from a minus \$34 to a plus \$50. The non-storage budgets all showed a decrease, while the storage budgets all showed increases. The change in ownership costs per acre ranged from \$80 to \$124. The change in total costs per acre ranged from \$58 to \$174. Cost increases were highest for the storage budgets. On a percentage basis, the operating costs changes ranged from minus 2.1% to plus 2.0%. Ownership costs per acre increases ranged from 8.0 to 11.0%, while total costs increases ranged from 1.9% to 4.5%.

Table 10 is organized the same as Table 9, but shows the dollar and percentage cost change **per hundredweight**. When yield from one year to the next remains the same, the percentage change per acre and per hundredweight are the same. But with yields up in all regions of Idaho, the percentage increases per hundredweight were small (or negative) in comparison to the costs per acre. The change in operating

costs per hundredweight ranged from minus \$0.23 to minus \$0.03. The change in ownership costs per hundredweight ranged from plus \$0.06 to plus \$0.24. The change in total costs per hundredweight ranged from minus \$0.16 to plus \$0.15. On a percentage basis, the operating costs per hundredweight decreases ranged from minus 4.8% to minus 0.6%. Ownership costs per hundredweight increases ranged from 2.9% to 9.4%, while total costs changes ranged from minus 2.3% to plus 2.4%.

Tables 11, 12 and 13 show the dollar and percentage changes per acre by major cost category for the non-storage, storage and storage with fumigation CAR estimates, respectively. This allows for a side-by-side comparison across regions of potato CAR estimates with the same production practices. Making cost comparisons between regions may not always be appropriate, however, because of difference in the assumed management practices and farm sizes. Management practices for southcentral and southeastern Idaho are fairly similar, making direct comparisons more meaningful. The range in percentage changes across similar production systems in different geographic regions is smaller than the overall percentage changes across different production systems within a region. The change in cost per hundredweight of the same production system is also more similar across regions than across production systems in the same geographic region. The detailed CAR estimates for each production system and region are shown in the appendix, starting on page 21.

### Cost Comparisons

In general, cost increases were higher in storage CAR estimates than non-storage. On a per acres basis, costs increased in all regions for ownership and total costs. Operating costs per acre increased on storage budgets, but decreased on non-storage budgets. On a per hundredweight basis, operating costs decreased in all regions, ownership costs increased in all regions, and total costs increased in all eastern Idaho budgets, all but the non-storage budget in southcentral Idaho, and decreased in both the storage and non-storage budgets in western Idaho. In general, all ownership cost categories increased, with land showing the largest increase. Among operating costs categories, seed and irrigation were up in all regions, while machinery costs were down consistently in all regions because of lower fuel costs.

### Adjustments for 2009

Data from grower surveys conducted in February and March of 2009 were used to revise the potato CAR estimates in all regions. Farm sizes were increased, as were the number of acres devoted to potatoes. (See Table 2.) Significant changes were made in the pesticides, both in terms of the number of applications and the products being applied. This is why a direct comparison on price increases for individual pesticides

from 2008 to 2009 was not made. The individual CAR estimates in the appendix compares only the total dollar amount spend on pesticides in 2008 with the total for 2009. Price comparisons of individual products are not made. The number of gallons of fumigant applied in the southwestern Idaho CAR estimates was reduced from 50 to 35 gallons per acre. Fewer field operations and field operations with larger equipment changed the amount of machine labor and the amount of fuel in most CAR estimates.

Table 1. Idaho potato costs and returns estimates by region for 2009.

Region/Publication No.	Variety	Storage	Fumigation
<b>Commercial Potatoes</b>			
<u>Southwestern:</u>			
EBB2-Po1-09	Russet Burbank	No	Yes
EBB2-Po3-09	Russet Burbank	Yes	Yes
<u>Southcentral:</u>			
EBB3-Po1-09	Russet Burbank	No	No
EBB3-Po2-09	Russet Burbank	Yes	No
EBB3-Po3-09	Russet Burbank	Yes	Yes
<u>Eastern – South Counties:</u>			
EBB4-Po1-09	Russet Burbank	No	No
EBB4-Po5-09	Russet Burbank	Yes	No
EBB4-Po6-09	Russet Burbank	Yes	Yes
<u>Eastern – North Counties:</u>			
EBB4-Po2-09	Russet Burbank	Yes	No
<b>Seed</b>			
Eastern – Seed Counties			
EBB4-Po4-09	G3 Russet Burbank	Yes	No

Table 2. Model farm size and potato acreage assumptions by region: 2005- 2009.

	<u>2005</u>		<u>2006</u>		<u>2007</u>		<u>2008</u>		<u>2009</u>	
	Farm	Potato	Farm	Farm	Farm	Potato	Farm	Potato	Farm	Potato
Southwestern	1000	250	1000	1000	1000	250	1000	250	1200	300
Southcentral	1500	375	1500	1500	1500	375	1500	375	1800	450
Eastern	1500	500	1500	1500	1500	500	1500	500	1800	600

**Table 3. Interest rates, labor charges and power rates used in CAR estimates: 2006 – 2009 and percentage change from 2008 to 2009.**

	2006	2007	2008	2009	Change
Operating Interest Rate	9.50%	9.50%	7.0%	6.75%	-3.6%
Intermediate Interest Rate	8.75%	8.75%	7.5%	7.0%	-6.7%
<u>Labor Class (overhead)</u>					
Machinery Labor (30%)	\$13.45	\$14.10	\$14.95	\$15.60	+4.3%
Irrigation Labor (25%)	\$9.00	\$9.45	\$10.20	\$11.05	+8.3%
Other Labor (15%)	\$7.95	\$8.35	\$8.70	\$9.20	+5.7%
<u>Power Rate: Idaho Power Irrigation Service Schedule 24</u>					
Monthly Service Charge	\$14.25	\$14.25	\$15.00	\$15.75	+5.0%
Demand Charge: irrigation season	\$4.36	\$4.36	\$4.67	\$4.90	+4.9%
Base Rate: per kWh	3.3964¢	3.3964¢	3.6402¢	3.9397¢	+8.2%
Power Cost Adjustment per kWh	-0.36989¢	0.2419¢	0.7864¢	1.4022¢	+78.3%
Effective Rate: per kWh	3.0275¢	3.6383¢	4.4266¢	5.3419¢	+20.7
Pumping Cost per Acre Inch	\$1.12	\$1.26	\$1.48	\$1.72	+16.2%

Pumping cost is calculated using Idaho Power Company rates for a 160-acre center pivot with a corner system: 69% pumping plant efficiency and with zero lift. Pumping costs per acre-inch at different lifts (0-, 100-, 200- and 300-feet) and different irrigation systems (center pivots without corner systems and wheelines) can be found in the *Idaho Crop Input Cost Summary for 2009*.

**Table 4-a. Current and historical fuel, water assessment and fertilizer component prices for southwestern Idaho: 2006 – 2009 and percentage change from 2008 to 2009.**

	2006	2007	2008	2009	Change
Gasoline	\$2.98	\$3.00	\$3.65	\$2.30	-37.0%
Off-Road Diesel	\$2.75	\$2.65	\$3.80	\$2.00	-47.4%
Road Diesel	\$3.26	\$3.10	\$4.30	\$2.50	-41.9%
Water Assessment	\$35.90	\$37.40	\$40.60	\$43.25	+6.5%
Dry Nitrogen (46-0-0)	\$0.45	\$0.50	\$0.82	\$0.50	-39.0%
Liquid Nitrogen (32-0-0)	\$0.48	\$0.60	\$0.84	\$0.56	-33.3%
P <sub>2</sub> O <sub>5</sub> Dry (11-52-0)*	\$0.27	\$0.38	\$0.83	\$0.46	-44.6%
P <sub>2</sub> O <sub>5</sub> Liquid (10-34-0)*	\$0.36	\$0.37	\$1.04	\$0.63	-39.4%
K <sub>2</sub> O (0-0-60)	\$0.24	\$0.25	\$0.57	\$0.69	+21.1%
Sulfur	\$0.18	\$0.18	\$0.43	\$0.19	-55.8%

\*Nitrogen in 11-52-0 and 10-34—0 was valued at the price of N in urea and Solution 32, respectively.



**Table 4-b. Current and historical fuel, water assessment and component fertilizer prices for southcentral Idaho: 2006 – 2009 and percentage change from 2008 to 2009.**

	2006	2007	2008		Change
Gasoline	\$2.97	\$2.95	\$3.60	\$2.25	-37.5%
Off-Road Diesel	\$2.82	\$2.55	\$3.75	\$1.95	-48.0%
Road Diesel	\$3.31	\$3.05	\$4.25	\$2.45	-42.4
Water Assessment	\$33.95	\$38.20	\$38.20	\$38.20	0%
Pre-Plant N (46-0-0)	\$0.38	\$0.49	\$0.82	\$0.50	-39.0%
Post Plant N (32-0-0)	\$0.44	\$0.58	\$0.85	\$0.56	-34.1
P <sub>2</sub> O <sub>5</sub> Dry (11-52-0)*	\$0.28	\$0.37	\$0.75	\$0.46	-38.7
P <sub>2</sub> O <sub>5</sub> Liquid (10-34-0)*	\$0.37	\$0.38	\$0.94	\$0.63	-33.0%
K <sub>2</sub> O (0-0-60)	\$0.25	\$0.25	\$0.46	\$0.69	+50.0
Sulfur	\$0.17	\$0.15	\$0.40	\$0.19	-52.5%

\*Nitrogen in 11-52-0 and 10-34—0 was valued at the price of N in urea and Solution 32, respectively.

**Table 4-c. Current and historical fuel, water assessment and fertilizer component prices for eastern Idaho: 2006 – 2009 and percentage change from 2008 to 2009.**

	2006	2007	2008		Change
Gasoline	\$2.89	\$2.90	\$3.50	\$2.20	-37.1%
Off-Road Diesel	\$2.79	\$2.55	\$3.70	\$1.95	-47.3%
Road Diesel	\$3.28	\$3.00	\$4.20	\$2.45	-41.7%
Water Assessment	\$12.95	\$13.45	\$13.55	\$14.55	+7.4%
E. Idaho South District	\$23.00	\$23.00	\$23.00	\$25.00	+8.7%
E. Idaho North District	\$9.55	\$10.25	\$10.40	\$11.05	+6.25%
Pre-Plant N (46-0-0)	\$0.40	\$0.49	\$0.82	\$0.50	-39.0%
Post Plant N (32-0-0)	\$0.43	\$0.58	\$0.85	\$0.56	-34.1%
P <sub>2</sub> O <sub>5</sub> Dry (11-52-0)*	\$0.25	\$0.37	\$0.70	\$0.46	-34.3%
P <sub>2</sub> O <sub>5</sub> Liquid (10-34-0)*	\$0.30	\$0.38	\$0.95	\$0.63	-33.7%
K <sub>2</sub> O (0-0-60)	\$0.23	\$0.25	\$0.50	\$0.69	+38.0%
Sulfur	\$0.15	\$0.15	\$0.34	\$0.19	-44.1%

\*Nitrogen in 11-52-0 and 10-34—0 was valued at the price of N in urea and Solution 32, respectively.

**Table 5. Calculated potato yields used in published University of Idaho costs and returns estimates by region, both with and without fumigation: 2005 - 2009. \***

Area	2005	2006	2007	2008	2009
	cwt	cwt	cwt	cwt	cwt
<u>Southwest Region: Base Yield</u>	475	475	480	480	500
Russet Burbank: No Fumigation	440	440	445	440	460
<b>Russet Burbank: Fumigation</b>	<b>500</b>	<b>500</b>	<b>505</b>	<b>505</b>	<b>525</b>
<u>Southcentral Region: Base Yield</u>	400	415	425	425	435
<b>Russet Burbank: No Fumigation</b>	<b>380</b>	<b>390</b>	<b>400</b>	<b>400</b>	<b>410</b>
<b>Russet Burbank: Fumigation</b>	<b>430</b>	<b>440</b>	<b>450</b>	<b>455</b>	<b>465</b>
<u>Eastern Region: Russet Burbank: Base</u>	320	345	345		
South Counties* : Base Yield	355	370	365	365	370
<b>South: No Fumigation</b>	<b>340</b>	<b>350</b>	<b>345</b>	<b>345</b>	<b>350</b>
<b>South: Fumigation</b>	<b>380</b>	<b>390</b>	<b>385</b>	<b>390</b>	<b>395</b>
North Counties*: Base Yield	325	340	345	345	350
<b>North: No Fumigation</b>	<b>320</b>	<b>330</b>	<b>335</b>	<b>335</b>	<b>340</b>
North: Fumigation	350	360	370	375	380

Note: Values in bold indicate published CAR estimates. There are no published CAR estimates for those not in bold. These are shown only for comparison.

\*Eastern Idaho North Counties: Bonneville, Jefferson and Madison.

\*Eastern Idaho South Counties: Bannock, Bingham and Power.

**Table 6. Historical potato yields published by IASS for 2004 - 2008 and historical 3-year averages.**

Area	2004	2005	2006	2007	2008	3-Year Average
Southwest Region	490	470	475	490	540	<b>502</b>
Southcentral Region	413	410	447	420	445	<b>437</b>
Eastern Region	345	340	357	347	350	351
South District	371	364	367	368	376	<b>370</b>
North District	334	338	355	342	347	<b>348</b>
Statewide	374	366	386	373	383	381

IASS: Idaho Agricultural Statistics Service, USDA. Note that the southcentral region 2007 and 2008 values are the author's estimate. USDA changed their procedures so that the value they published was not consistent with earlier historical published data.

**Table 7. Historical potato yields reported by IASS for the primary commercial potato counties in eastern Idaho for 2004 - 2008 and historical 3-year averages.**

Area	2004	2005	2006	2007	2008	3-Year Average
<u>North District Counties:</u>						
Bonneville	303	310	340	278	330	316
Jefferson	380	385	389	426	391	402
Madison	320	319	337	321	319	326
3-county Average	334	338	355	342	347	348
<u>South District Counties:</u>						
Bannock	360	377	355	372	386	371
Bingham	370	346	362	346	367	358
Power	382	369	384	386	376	382
3-county Average	371	364	367	368	376	370

IASS: Idaho Agricultural Statistics Service, USDA.  
Blue is forecast or average based on forecast.

**Table 8. Fumigation percentage by region and yield adjustment factors by region.**

Region	Acres Fumigated	Fumigation Adjustment
Southwest	60%	+ 65 cwt
Southcentral	50%	+ 55 cwt
Southeastern		
South District	45%	+ 45 cwt
North District	30%	+ 40 cwt

Table 9. Cost changes per acre by region from 2008 to 2009, University of Idaho.

	Southwestern Idaho		Southcentral Idaho			Eastern Idaho-South		
	R. Burbank: Fumigation & No Storage	R. Burbank: Fumigation & Storage	R. Burbank: No Storage	R. Burbank: Storage	R. Burbank: Fumigation & Storage	R. Burbank: No Storage	R. Burbank: Storage	R. Burbank: Fumigation & Storage
	Po1	Po3	Po1	Po2	Po3	Po1	Po5	Po6
2008 Op. Cost	\$2,390	\$2,558	\$1,878	\$2,009	\$2,320	\$1,638	\$1,742	\$2,014
2009 Op. Cost	\$2,389	\$2,608	\$1,847	\$2,018	\$2,341	\$1,604	\$1,749	\$2,028
\$ Change	-\$1	\$50	-\$31	\$9	\$20	-\$34	\$7	\$14
% Change	-0.1%	2.0%	-1.7%	0.5%	0.9%	-2.1%	0.4%	0.7%
2008 Own. Cost	\$1,119	\$1,280	\$916	\$1,056	\$1,078	\$750	\$865	\$898
2009 Own. Cost	\$1,208	\$1,404	\$1,005	\$1,145	\$1,181	\$830	\$960	\$979
\$ Change	\$89	\$124	\$89	\$89	\$103	\$80	\$95	\$81
% Change	8.0%	9.7%	9.7%	8.4%	9.6%	10.7%	11.0%	9.0%
2008 Total Cost	\$3,509	\$3,838	\$2,794	\$3,064	\$3,398	\$2,388	\$2,607	\$2,912
2009 Total Cost	\$3,597	\$4,012	\$2,852	\$3,163	\$3,522	\$2,434	\$2,709	\$3,007
\$ Change	\$88	\$174	\$58	\$98	\$123	\$46	\$102	\$96
% Change	2.5%	4.5%	2.1%	3.2%	3.6%	1.9%	3.9%	3.3%

Note: rounded values may not add up.

Op. = Operating and Own. = Ownership

Table 10. Cost changes per hundredweight by region from 2008 to 2009, University of Idaho.

	Southwestern Idaho		Southcentral Idaho			Eastern Idaho-South		
	R. Burbank: Fumigation & No Storage	R. Burbank: Fumigation & Storage	R. Burbank: No Storage	R. Burbank: Storage	R. Burbank: Fumigation & Storage	R. Burbank: No Storage	R. Burbank: Storage	R. Burbank: Fumigation & Storage
	Po1	Po3	Po1	Po2	Po3	Po1	Po5	Po6
2008 Op. Cost	\$4.73	\$5.07	\$4.70	\$5.02	\$5.10	\$4.75	\$5.05	\$5.16
2009 Op. Cost	\$4.51	\$4.92	\$4.50	\$4.92	\$5.03	\$4.58	\$5.00	\$5.13
\$ Change	-\$0.23	-\$0.14	-\$0.19	-\$0.10	-\$0.07	-\$0.16	-\$0.05	-\$0.03
% Change	-4.8%	-2.8%	-4.1%	-2.0%	-1.3%	-3.5%	-1.0%	-0.6%
2008 Own. Cost	\$2.22	\$2.53	\$2.29	\$2.64	\$2.37	\$2.17	\$2.51	\$2.30
2009 Own. Cost	\$2.28	\$2.65	\$2.45	\$2.79	\$2.54	\$2.37	\$2.74	\$2.48
\$ Change	\$0.06	\$0.11	\$0.16	\$0.15	\$0.17	\$0.20	\$0.24	\$0.18
% Change	2.9%	4.5%	7.0%	5.8%	7.2%	9.1%	9.4%	7.7%
2008 Total Cost	\$6.95	\$7.60	\$6.99	\$7.66	\$7.47	\$6.92	\$7.56	\$7.47
2009 Total Cost	\$6.79	\$7.57	\$6.96	\$7.71	\$7.57	\$6.95	\$7.74	\$7.61
\$ Change	-\$0.16	-\$0.03	-\$0.03	\$0.05	\$0.10	\$0.03	\$0.18	\$0.15
% Change	-2.3%	-0.4%	-0.4%	0.7%	1.4%	0.5%	2.4%	2.0%

Note: rounded values may not add up.

Op. = Operating and Own. = Ownership

Table 11. Per acre and percentage change in costs from 2008 to 2009 for irrigated Russet Burbank potatoes: no storage costs.

Item	Southwestern Idaho Change from 2008		Southcentral Idaho Change from 2008		Eastern Idaho Change from 2008	
Yield	25	5.0%	10	2.5%	5	1.4%
<b>Operating Inputs</b>	<b>\$</b>	<b>%</b>	<b>\$</b>	<b>%</b>	<b>\$</b>	<b>%</b>
Seed:	\$91.10	27.7%	\$79.35	25.9%	\$76.65	29.1%
Fertilizer:	-\$90.15	-14.1%	-\$111.30	-19.2%	-\$118.90	-22.0%
Pesticides & Chemicals:	-\$14.20	-3.0%	\$32.75	17.5%	\$51.92	46.8%
Custom & Consultants:	\$59.10	29.2%	-\$10.35	-5.3%	\$4.30	2.9%
Irrigation:	\$21.35	20.8%	\$9.81	10.6%	\$7.52	10.7%
Machinery: Fuel & Repairs	-\$91.46	-39.6%	-\$43.42	-25.9%	-\$75.62	-38.2%
Labor	\$0.42	0.2%	-\$6.15	-4.2%	\$5.57	4.2%
Transload	\$10.62	20.5%	\$7.05	17.2%	\$5.58	15.7%
Other: Fees & Crop Insurance	\$19.05	16.2%	\$15.60	14.7%	\$14.25	15.5%
Operating Interest	-\$7.04	-8.5%	-\$4.67	-8.2%	-\$5.23	-10.7%
Total Operating Costs	-\$1.21	-0.1%	-\$31.33	-1.7%	-\$33.96	-2.1%
Operating Costs per Unit	-\$0.23	-4.8%	-\$0.19	-4.1%	-\$0.16	-3.5%
<b>Ownership Costs:</b>						
Transloading Equipment	\$4.45	9.4%	\$2.70	7.2%	\$0.90	2.7%
Tractors & Equipment	\$14.00	5.4%	\$10.00	5.3%	\$10.00	5.1%
Land *	\$50.00	8.3%	\$50.00	9.5%	\$50.00	13.3%
Overhead	\$0.00	0.0%	\$1.00	2.1%	-\$1.00	-2.4%
Management Fee	\$20.00	13.8%	\$25.00	21.7%	\$20.00	20.0%
Total Ownership Costs	\$89.05	8.0%	\$88.90	9.7%	\$80.15	10.7%
Ownership Costs per Unit	\$0.06	2.9%	\$0.16	7.0%	\$0.20	9.1%
<b>Total Costs:</b>						
Total Costs per Acre	\$87.84	2.5%	\$57.57	2.1%	\$46.19	1.9%
Total Cost per Unit	-\$0.16	-2.3%	-\$0.03	-0.4%	\$0.03	0.5%

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Table 12. Per acre and percentage change in costs from 2008 to 2009 for irrigated Russet Burbank potatoes: with storage costs & no fumigation.

Item	Southcentral Idaho Change from 2008		Eastern Idaho Change from 2008	
Yield	10	2.5%	5	1.4%
<b><u>Operating Inputs</u></b>	<b>\$</b>	<b>%</b>	<b>\$</b>	<b>%</b>
Seed:	\$79.35	25.9%	\$76.65	29.1%
Fertilizer:	-\$111.30	-19.2%	-\$118.90	-22.0%
Pesticides & Cehmicals:	\$32.75	17.5%	\$51.92	46.8%
Custom & Consultants:	-\$21.15	-23.4%	\$2.50	5.0%
Irrigation:	\$9.81	10.6%	\$7.52	10.7%
Machinery:	-\$43.42	-25.9%	-\$71.92	-37.0%
Labor:	-\$6.15	-4.2%	\$5.57	4.2%
Storage:	\$54.31	19.3%	\$44.40	18.3%
Other: Fees & Crop Insurance	\$15.40	15.0%	\$13.92	15.6%
Operating Interest	-\$0.56	-1.0%	-\$4.41	-9.4%
Total Operating Costs	\$9.04	0.5%	\$7.25	0.4%
Operating Costs per Unit	-\$0.10	-2.0%	-\$0.05	-1.0%
<b><u>Ownership Costs:</u></b>				
Potato Storage System	\$10.00	6.0%	\$9.00	6.2%
Tractors & Equipment	\$10.00	5.3%	\$10.00	5.1%
Land *	\$50.00	9.5%	\$50.00	13.3%
Overhead	\$4.00	8.3%	\$1.00	2.3%
Management Fee	\$15.00	12.0%	\$25.00	25.0%
Total Ownership Costs	\$89.20	8.4%	\$95.25	11.0%
Ownership Costs per Unit	\$0.15	5.8%	\$0.24	9.4%
<b><u>Total Costs:</u></b>				
Total Costs per Acre	\$98.24	3.2%	\$102.50	3.9%
Total Cost per Unit	\$0.05	0.7%	\$0.18	2.4%

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Table 13. Per acre and percentage change in costs from 2008 to 2009 for irrigated Russet Burbank potatoes: with storage costs & fumigation.

Item	Southwestern Idaho Change from 2008		Southcentral Idaho Change from 2008		Eastern Idaho Change from 2008	
Yield	25	5.0%	10	2.2%	5	1.3%
<b>Operating Inputs</b>	<b>\$</b>	<b>%</b>	<b>\$</b>	<b>%</b>	<b>\$</b>	<b>%</b>
Seed:	\$91.10	27.7%	\$79.35	25.9%	\$76.65	29.1%
Fertilizer:	-\$90.15	-14.1%	-\$122.65	-20.0%	-\$125.50	-22.1%
Pesticides & Chemicals:	-\$14.20	-3.0%	\$52.75	15.2%	\$23.27	8.2%
Custom & Consultants:	\$42.00	59.2%	-\$19.15	-15.4%	\$34.00	60.2%
Irrigation:	\$21.35	20.8%	\$6.72	7.0%	\$8.00	10.7%
Machinery:	-\$91.45	-39.6%	-\$43.65	-25.6%	-\$70.44	-36.0%
Labor:	\$0.42	0.2%	-\$10.94	-6.9%	\$9.08	6.6%
Storage:	\$80.02	22.5%	\$60.68	18.9%	\$49.68	18.1%
Other: Fees & Crop Insurance	\$18.64	16.4%	\$15.92	13.9%	\$14.35	14.4%
Operating Interest	-\$7.31	-9.0%	\$1.17	1.7%	-\$4.71	-7.7%
Total Operating Costs	\$50.42	2.0%	\$20.20	0.9%	\$14.38	0.7%
Operating Costs per Unit	-\$0.14	-2.8%	-\$0.07	-1.3%	-\$0.03	-0.6%
<b>Ownership Costs:</b>						
Potato Storage System	\$26.00	12.6%	\$14.00	7.5%	\$10.00	6.2%
Tractors & Equipment	\$24.00	9.6%	\$10.00	5.3%	\$11.00	5.6%
Land *	\$50.00	8.3%	\$50.00	9.5%	\$50.00	13.3%
Overhead	\$3.00	4.8%	\$4.00	8.3%	-\$5.00	-10.0%
Management Fee	\$20.00	12.9%	\$25.00	20.0%	\$15.00	13.6%
Total Ownership Costs	\$123.60	9.7%	\$103.20	9.6%	\$81.25	9.0%
Ownership Costs per Unit	\$0.11	4.5%	\$0.17	7.2%	\$0.18	7.7%
<b>Total Costs:</b>						
Total Costs per Acre	\$174.02	4.5%	\$123.40	3.6%	\$95.63	3.3%
Total Cost per Unit	-\$0.03	-0.4%	\$0.10	1.4%	\$0.15	2.0%

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# Appendix

Table 14. 2009 Southwestern Idaho Irrigated Russet Burbank Commercial Potatoes: With Fumigation and No Storage. Comparison with 2008.

11/10/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison		
					2008	Yield Change	
					505	25	5.0%
						\$ Change	% Change
<b>Gross Returns</b>							
Potatoes	530	cwt	\$7.50	\$3,975.00			
<b>Operating Inputs</b>							
<b>Seed:</b>					\$420.00		
G-3 Burbank Potato Seed	24	cwt	\$15.50	\$372.00	\$328.90	\$91.10	27.7%
Seed Cut and Treat	24	cwt	\$2.00	\$48.00	\$281.75	\$90.25	32.0%
					\$47.15	\$0.85	1.8%
<b>Fertilizer:</b>					\$548.95		
Dry Nitrogen - Preplant	165	lb	\$0.50	\$82.50	\$639.10	-\$90.15	-14.1%
Dry P2O5	200	lb	\$0.46	\$92.00	\$131.20	-\$48.70	-37.1%
K2O	240	lb	\$0.69	\$165.60	\$157.70	-\$65.70	-41.7%
Sulfur	115	lb	\$0.19	\$21.85	\$102.60	\$63.00	61.4%
Micronutrients & Foliars	1	ac	\$40.00	\$40.00	\$34.40	-\$12.55	-36.5%
Liquid Nitrogen	195	lb	\$0.56	\$109.20	\$30.00	\$10.00	33.3%
Liquid P2O5	60	lb	\$0.63	\$37.80	\$126.00	-\$16.80	-13.3%
					\$57.20	-\$19.40	-33.9%
<b>Pesticides:</b>					\$451.69		
K-Pam	35	gal	\$5.50	\$192.50	\$465.89	-\$14.20	-3.0%
Admire Pro	8.0	oz	\$4.05	\$32.40			
Quadris (2x)	14.0	oz	\$2.80	\$39.20			
Eptam 7E	2.0	qt	\$9.90	\$19.80	\$17.80	\$2.00	11.2%
Sencor 4L	1.0	pt	\$11.85	\$11.85	\$13.28	-\$1.43	-10.8%
Prowl 3.3EC	2.0	pt	\$3.45	\$6.90			
Ridomil Gold MZ	2.5	lb	\$13.00	\$32.50			
Endura (2x)	7.0	oz	\$5.55	\$38.85			
Dithane F45 Rainshield	1.6	qt	\$6.90	\$11.04			
Asana XL	9.6	oz	\$0.75	\$7.20			
Agri-Mek	8.0	oz	\$4.35	\$34.80			
Reglone	1.0	qt	\$24.65	\$24.65	\$26.50	-\$1.85	-7.0%
<b>Custom &amp; Consultants:</b>					\$261.40		
Custom Fumigate: Deep Inject	1	ac	\$40.00	\$40.00	\$202.30	\$59.10	29.2%
Custom Fertilize	2	ac	\$8.50	\$17.00	\$0.00	\$40.00	
Consultant	1	ac	\$20.00	\$20.00	\$17.00	\$0.00	0.0%
Custom Air Spray-10G	3	ac	\$12.00	\$36.00	\$18.00	\$2.00	11.1%
Custom Hauling	530	cwt	\$0.28	\$148.40	\$36.00	\$0.00	0.0%
					\$131.30	\$17.10	13.0%
<b>Irrigation:</b>					\$123.75		
Water Assessment	1	ac	\$43.25	\$43.25	\$102.40	\$21.35	20.8%
Irrigation Power-CP *	35	acin	\$1.72	\$60.20	\$40.60	\$2.65	6.5%
Irrigation Repairs-CP *	35	acin	\$0.58	\$20.30	\$44.40	\$15.80	35.6%
					\$17.40	\$2.90	16.7%
<b>Machinery:</b>					\$139.40		
Fuel - Gas	2.5	gal	\$2.30	\$5.75	\$230.86	-\$91.46	-39.6%
Fuel - Diesel	32.3	gal	\$2.00	\$64.60	\$9.82	-\$4.07	-41.4%
Lube	1	ac	\$10.55	\$10.55	\$142.23	-\$77.63	-54.6%
Machinery Repairs	1	ac	\$58.50	\$58.50	\$22.81	-\$12.26	-53.7%
					\$56.00	\$2.50	4.5%
<b>Labor:</b>					\$169.16		
Labor (machine)	7.11	hr	\$15.60	\$110.92	\$168.74	\$0.42	0.2%
Labor (irrigation - cp) *	2.44	hr	\$11.05	\$26.96	\$118.70	-\$7.78	-6.6%
Labor (other)	3.4	hr	\$9.20	\$31.28	\$21.42	\$5.54	25.9%
					\$28.62	\$2.66	9.3%
<b>Transload:</b>					\$62.55		
Transloading Costs	530	cwt	\$0.100	\$53.00	\$51.93	\$10.62	20.5%
Transloading Equipment Repair	1	ac	\$9.55	\$9.55	\$43.43	\$9.57	22.0%
					\$8.50	\$1.05	12.4%
<b>Other:</b>					\$136.80		
Crop Insurance	1	ac	\$52.00	\$52.00	\$117.75	\$19.05	16.2%
Fees & Assessments	530	cwt	\$0.16	\$84.80	\$42.00	\$10.00	23.8%
					\$75.75	\$9.05	11.9%
Operating Interest @ 6.75%				\$75.50	\$82.54	-\$7.04	-8.5%
Total Operating Costs				\$2,389	\$2,390	-\$1.21	-0.1%
Operating Costs per Unit				\$4.51	\$4.73	-\$0.23	-4.8%
Net Returns Above Operating Expenses				\$1,586	\$505	\$1,081	

Table 14. 2009 Southwestern Idaho Irrigated Russet Burbank Commercial Potatoes: With Fumigation and No Storage. Comparison with 2008.

11/10/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison		
<b>Ownership Costs:</b>							
Transloading Equipment				\$51.95	\$47.50	\$4.45	9.4%
Tractors & Equipment Insurance				\$6.70	\$6.10	\$0.60	9.8%
Tractors & Equipment Depreciation & Interest				\$274.00	\$260.00	\$14.00	5.4%
Irrigation Equipment Depreciation & Interest							
Land **				\$650.00	\$600.00	\$50.00	8.3%
Overhead				\$60.00	\$60.00	\$0.00	0.0%
Management Fee				\$165.00	\$145.00	\$20.00	13.8%
<b>Total Ownership Costs</b>				\$1,208	\$1,119	\$89.05	8.0%
<b>Ownership Costs per Unit</b>				\$2.28	\$2.22	\$0.06	2.9%
<b>Total Costs per Acre</b>				\$3,597	\$3,509	\$87.84	2.5%
<b>Total Cost per Unit</b>				\$6.79	\$6.95	-\$0.16	-2.3%
Returns to Risk				\$378	-\$655	\$1,033	
Notes:							
* Center pivot. ** Includes irrigation system ownership costs.							
Blue font indicates an increase.							
A red font indicates a decrease.							
A green font indicates a change in product or procedure to derive the cost.							
Procedural changes can result in different costs than were published the previous year.							
<b>Breakeven Analysis:</b>							
	-	Base	+				
	10%		10%				
		Yield					
<u>Price</u>	477	530	583				
Operating Cost Breakeven	\$5.01	\$4.51	\$4.10				
Ownership Cost Breakeven	\$2.53	\$2.28	\$2.07				
Total Cost Breakeven	\$7.54	\$6.79	\$6.17				
		Price					
<u>Yield</u>	\$6.75	\$7.50	\$8.25				
Operating Cost Breakeven	354.0	318.6	289.6				
Ownership Cost Breakeven	178.9	161.0	146.4				
Total Cost Breakeven	532.9	479.6	436.0				

Table 15. 2009 Southwestern Idaho Irrigated Russet Burbank Commercial Potatoes: With Fumigation and On-Farm Storage. Comparison with 2008.

Final 11/19/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison		
					2008	Yield Change	
					505	25	5.0%
						<b>\$ Change</b>	<b>% Change</b>
<b>Gross Returns</b>							
Potatoes	530	cwt	\$6.75	\$3,577.50			
<b>Operating Inputs</b>							
<b>Seed:</b>					\$420.00		
G-3 Burbank Potato Seed	24	cwt	\$15.50	\$372.00	\$328.90	\$91.10	27.7%
Seed Cut and Treat	24	cwt	\$2.00	\$48.00	\$281.75	\$90.25	32.0%
					\$47.15	\$0.85	1.8%
<b>Fertilizer:</b>					\$548.95		
Dry Nitrogen - Preplant	165	lb	\$0.50	\$82.50	\$639.10	-\$90.15	-14.1%
Dry P2O5	200	lb	\$0.46	\$92.00	\$131.20	-\$48.70	-37.1%
K2O	240	lb	\$0.69	\$165.60	\$157.70	-\$65.70	-41.7%
Sulfur	115	lb	\$0.19	\$21.85	\$102.60	\$63.00	61.4%
Micronutrients & Foliars	1	ac	\$40.00	\$40.00	\$34.40	-\$12.55	-36.5%
Liquid Nitrogen	195	lb	\$0.56	\$109.20	\$30.00	\$10.00	33.3%
Liquid P2O5	60	lb	\$0.63	\$37.80	\$126.00	-\$16.80	-13.3%
					\$57.20	-\$19.40	-33.9%
<b>Pesticides:</b>					\$451.69		
K-Pam	35	gal	\$5.50	\$192.50	\$465.89	-\$14.20	-3.0%
Admire Pro	8.0	oz	\$4.05	\$32.40			
Quadris (2x)	14.0	oz	\$2.80	\$39.20			
Eptam 7E	2.0	qt	\$9.90	\$19.80	\$17.80	\$2.00	11.2%
Sencor 4L	1.0	pt	\$11.85	\$11.85	\$13.28	-\$1.43	-10.8%
Prowl 3.3EC	2.0	pt	\$3.45	\$6.90			
Ridomil Gold MZ	2.5	lb	\$13.00	\$32.50			
Endura (2x)	7.0	oz	\$5.55	\$38.85			
Dithane F45 Rainshield	1.6	qt	\$6.90	\$11.04			
Asana XL	9.6	oz	\$0.75	\$7.20			
Agri-Mek	8.0	oz	\$4.35	\$34.80			
Reglone	1.0	qt	\$24.65	\$24.65	\$26.50	-\$1.85	-7.0%
<b>Custom &amp; Consultants:</b>					\$113.00		
Custom Fumigate: Deep Inject	1	ac	\$40.00	\$40.00	\$71.00	\$42.00	59.2%
Custom Fertilize	2	ac	\$8.50	\$17.00	\$0.00	\$40.00	
Consultant	1	ac	\$20.00	\$20.00	\$17.00	\$0.00	0.0%
Custom Air Spray-10G	3	ac	\$12.00	\$36.00	\$18.00	\$2.00	11.1%
				\$0.00	\$36.00	\$0.00	0.0%
<b>Irrigation:</b>					\$123.75		
Water Assessment	1	ac	\$43.25	\$43.25	\$102.40	\$21.35	20.8%
Irrigation Power-CP	35	acin	\$1.72	\$60.20	\$40.60	\$2.65	6.5%
Irrigation Repairs-CP	35	acin	\$0.58	\$20.30	\$44.40	\$15.80	35.6%
					\$17.40	\$2.90	16.7%
<b>Machinery:</b>					\$139.40		
Fuel - Gas	2.5	gal	\$2.30	\$5.75	\$230.85	-\$91.45	-39.6%
Fuel - Diesel	32.3	gal	\$2.00	\$64.60	\$9.82	-\$4.07	-41.4%
Lube	1	ac	\$10.55	\$10.55	\$142.23	-\$77.63	-54.6%
Machinery Repairs	1	ac	\$58.50	\$58.50	\$22.80	-\$12.25	-53.7%
					\$56.00	\$2.50	4.5%
<b>Labor:</b>					\$169.16		
Labor (machine)	7.11	hr	\$15.60	\$110.92	\$168.74	\$0.42	0.2%
Labor (irrigation - cp)	2.44	hr	\$11.05	\$26.96	\$118.70	-\$7.78	-6.6%
Labor (other)	3.4	hr	\$9.20	\$31.28	\$21.42	\$5.54	25.9%
					\$28.62	\$2.66	9.3%
<b>Storage:</b>					\$435.58		
Storage Operating Costs	530	cwt	\$0.776	\$411.28	\$355.56	\$80.02	22.5%
Storage Repairs	1	ac	\$24.30	\$24.30	\$333.81	\$77.47	23.2%
					\$21.75	\$2.55	11.7%
<b>Other:</b>					\$132.64		
Crop Insurance	1	ac	\$52.00	\$52.00	\$114.00	\$18.64	16.4%
Fees & Assessments	504	cwt	\$0.16	\$80.64	\$42.00	\$10.00	23.8%
					\$72.00	\$8.64	12.0%
Operating Interest @ 6.75%				\$74.25	\$81.56	-\$7.31	-9.0%
Total Operating Costs				\$2,608	\$2,558	\$50.42	2.0%
Operating Costs per Unit				\$4.92	\$5.07	-\$0.14	-2.8%
Net Returns Above Operating Expenses				\$969	\$590	\$379	

Table 15. 2009 Southwestern Idaho Irrigated Russet Burbank Commercial Potatoes: With Fumigation and On-Farm Storage. Comparison with 2008.

Final 11/19/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison			
<b>Ownership Costs:</b>								
Potato Storage System				\$233.00	\$207.00	\$26.00	12.6%	
Tractors & Equipment Insurance				\$6.70	\$6.10	\$0.60	9.8%	
Tractors & Equipment Depreciation & Interest				\$274.00	\$250.00	\$24.00	9.6%	
Irrigation Equipment Depreciation & Interest								
Land *				\$650.00	\$600.00	\$50.00	8.3%	
Overhead				\$65.00	\$62.00	\$3.00	4.8%	
Management Fee				\$175.00	\$155.00	\$20.00	12.9%	
<b>Total Ownership Costs</b>				<b>\$1,404</b>	<b>\$1,280</b>	<b>\$123.60</b>	<b>9.7%</b>	
<b>Ownership Costs per Unit</b>				<b>\$2.65</b>	<b>\$2.53</b>	<b>\$0.11</b>	<b>4.5%</b>	
<b>Total Costs per Acre</b>				<b>\$4,012</b>	<b>\$3,838</b>	<b>\$174.02</b>	<b>4.5%</b>	
<b>Total Cost per Unit</b>				<b>\$7.57</b>	<b>\$7.60</b>	<b>-\$0.03</b>	<b>-0.4%</b>	
Returns to Risk				-\$435	-\$682	\$247		
Notes:								
* Center pivot. ** Includes irrigation system ownership costs.								
Blue font indicates an increase.								
A red font indicates a decrease.								
A green font indicates a change in product or procedure to derive the cost.								
Procedural changes can result in different costs than were published the previous year.								
<b>Breakeven Analysis:</b>								
	-	Base	+					
	10%		10%					
		Yield						
<u>Price</u>	477	530	583					
Operating Cost Breakeven	\$5.47	\$4.92	\$4.47					
Ownership Cost Breakeven	\$2.94	\$2.65	\$2.41					
Total Cost Breakeven	\$8.41	\$7.57	\$6.88					
		Price						
<u>Yield</u>	\$6.08	\$6.75	\$7.43					
Operating Cost Breakeven	429.4	386.4	351.3					
Ownership Cost Breakeven	231.1	208.0	189.1					
Total Cost Breakeven	660.4	594.4	540.4					

Table 16. 2009 Southcentral Idaho Irrigated Russet Burbank Commercial Potatoes: No Storage. Comparison With 2008.

Final 11/21/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison		
					2008	Yield Change	
					400	10	2.5%
						<b>\$ Change</b>	<b>% Change</b>
<b>Gross Returns</b>							
Potatoes	410	cwt	\$7.50	\$3,075.00			
<b>Operating Inputs</b>							
<b>Seed:</b>					\$385.25		
G-3 Burbank Potato Seed	23	cwt	\$14.75	\$339.25	\$305.90	\$79.35	25.9%
Seed Cut and Treat	23	cwt	\$2.00	\$46.00	\$258.75	\$80.50	31.1%
					\$47.15	-\$1.15	-2.4%
<b>Fertilizer:</b>					\$466.90		
Dry Nitrogen - Preplant	165	lb	\$0.50	\$82.50	\$578.20	-\$111.30	-19.2%
Dry P2O5	200	lb	\$0.46	\$92.00	\$135.30	-\$52.80	-39.0%
K2O	200	lb	\$0.69	\$138.00	\$150.00	-\$58.00	-38.7%
Sulfur	80	lb	\$0.19	\$15.20	\$82.80	\$55.20	66.7%
Micronutrients & Foliars	2	ac	\$15.00	\$30.00	\$32.00	-\$16.80	-52.5%
Liquid Nitrogen	150	lb	\$0.56	\$84.00	\$30.00	\$30.00	0.0%
Liquid P2O5	40	lb	\$0.63	\$25.20	\$110.50	-\$26.50	-24.0%
					\$37.60	-\$12.40	-33.0%
<b>Pesticides:</b>					\$220.03		
Admire Pro	8.0	oz	\$4.05	\$32.40	\$187.28	\$32.75	17.5%
Quadris	8.0	oz	\$2.80	\$22.40			
Outlook 6EC	20.0	oz	\$1.20	\$24.00			
Sencor DF	0.75	lb	\$16.05	\$12.04			
Prowl 3.3 EC	1.0	qt	\$6.95	\$6.95			
Endura (2x)	11.0	oz	\$5.55	\$61.05			
Dithane F45 Rainshield	1.6	qt	\$6.90	\$11.04			
Headline	6.0	qt	\$2.75	\$16.50			
Leverage 2.7	3.75	oz	\$2.40	\$9.00			
Reglone	1.0	qt	\$24.65	\$24.65			
<b>Custom &amp; Consultants:</b>					\$184.00		
Custom Fertilize	2	ac	\$7.50	\$15.00	\$194.35	-\$10.35	-5.3%
Consultant	1	ac	\$20.00	\$20.00	\$16.50	-\$1.50	-9.1%
Custom Air Spray-10G	3	ac	\$11.40	\$34.20	\$18.00	\$2.00	11.1%
Custom Hauling	410	cwt	\$0.28	\$114.80	\$45.60	-\$11.40	-25.0%
Sulfuric Acid Application	0	ac	\$10.25	\$0.00	\$104.00	\$10.80	10.4%
					\$10.25	-\$10.25	-100.0%
<b>Irrigation:</b>					\$102.60		
Water Assessment	1	ac	\$38.20	\$38.20	\$92.79	\$9.81	10.6%
Irrigation Power-CP	28	acin	\$1.72	\$48.16	\$38.20	\$0.00	0.0%
Irrigation Repairs	28	acin	\$0.58	\$16.24	\$39.22	\$8.94	22.8%
					\$15.37	\$0.87	5.7%
<b>Machinery:</b>					\$124.02		
Fuel - Gas	2.8	gal	\$2.25	\$6.30	\$167.44	-\$43.42	-25.9%
Fuel - Diesel	28.6	gal	\$1.95	\$55.77	\$11.20	-\$4.90	-43.8%
Lube	1	ac	\$9.30	\$9.30	\$90.71	-\$34.94	-38.5%
Machinery Repairs	1	ac	\$52.65	\$52.65	\$15.28	-\$5.98	-39.1%
					\$50.25	\$2.40	4.8%
<b>Labor:</b>					\$141.85		
Labor (machine)	6.0	hrs	\$15.60	\$93.60	\$148.00	-\$6.15	-4.2%
Labor (irrigation - cp)	2.16	hr	\$11.05	\$23.87	\$105.10	-\$11.50	-10.9%
Labor (other)	2.65	hrs	\$9.20	\$24.380	\$18.97	\$4.90	25.8%
					\$23.93	\$0.45	1.9%
<b>Transload:</b>					\$48.10		
Transloading Costs	410	cwt	\$0.100	\$41.00	\$41.05	\$7.05	17.2%
Repairs	1	ac	\$7.10	\$7.10	\$34.40	\$6.60	19.2%
					\$6.65	\$0.45	6.8%
<b>Other:</b>					\$121.60		
Fees & Assessments	410	cwt	\$0.16	\$65.60	\$106.00	\$15.60	14.7%
Crop Insurance	1	ac	\$56.00	\$56.00	\$60.00	\$5.60	9.3%
					\$46.00	\$10.00	21.7%
Operating Interest @ 7.0%				\$52.35	\$57.02	-\$4.67	-8.2%
Total Operating Costs @ 7.0%				\$1,847	\$1,878	-\$31.33	-1.7%
Operating Costs per Unit				\$4.50	\$4.70	-\$0.19	-4.1%
Net Returns Above Operating Expenses				\$1,228.30			

Table 16. 2009 Southcentral Idaho Irrigated Russet Burbank Commercial Potatoes:  
No Storage. Comparison With 2008.

Final 11/21/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison		
<b>Ownership Costs:</b>							
Transloading Equipment				\$40.20	\$37.50	\$2.70	7.2%
Tractors & Equipment Insurance				\$5.00	\$4.80	\$0.20	4.2%
Tractors & Equipment Depreciation & Interest				\$197.00	\$187.00	\$10.00	5.3%
Irrigation Equipment Depreciation & Interest							
Land *				\$575.00	\$525.00	\$50.00	9.5%
Overhead				\$48.00	\$47.00	\$1.00	2.1%
Management Fee				\$140.00	\$115.00	\$25.00	21.7%
<b>Total Ownership Costs</b>				<b>\$1,005</b>	<b>\$916</b>	<b>\$88.90</b>	<b>9.7%</b>
<b>Ownership Costs per Unit</b>				<b>\$2.45</b>	<b>\$2.29</b>	<b>\$0.16</b>	<b>7.0%</b>
<b>Total Costs per Acre</b>				<b>\$2,852</b>	<b>\$2,794</b>	<b>\$57.57</b>	<b>2.1%</b>
<b>Total Cost per Unit</b>				<b>\$6.96</b>	<b>\$6.99</b>	<b>-\$0.03</b>	<b>-0.4%</b>
Returns to Risk				\$223	-\$494	\$717	
Notes:							
* Center pivot. ** Includes irrigation system ownership costs.							
Blue font indicates an increase.							
A red font indicates a decrease.							
A green font indicates a change in product or procedure to derive the cost.							
Procedural changes can result in different costs than were published the previous year.							
<b>Breakeven Analysis:</b>							
		-	Base	+			
		10%		10%			
			Yield				
<u>Price</u>		369	410	451			
Operating Cost Breakeven		\$5.00	\$4.50	\$4.09			
Ownership Cost Breakeven		\$2.72	\$2.45	\$2.23			
Total Cost Breakeven		\$7.73	\$6.96	\$6.32			
			Price				
<u>Yield</u>		\$6.75	\$7.50	\$8.25			
Operating Cost Breakeven		273.6	246.2	223.8			
Ownership Cost Breakeven		148.9	134.0	121.8			
Total Cost Breakeven		422.5	380.3	345.7			

Table 17. 2009 Southcentral Idaho Irrigated Russet Burbank Commercial Potatoes: With On-Farm Storage. Comparison With 2008.

Final 11/21/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison			
					2008	Yield Change		
<b>Gross Returns</b>								
Potatoes	410	cwt	\$6.75	\$2,767.50	400	10	2.5%	
<b>Operating Inputs</b>								
<b>Seed:</b>				\$385.25	\$305.90	\$79.35	25.9%	
G-3 Burbank Potato Seed	23	cwt	\$14.75	\$339.25	\$258.75	\$80.50	31.1%	
Seed Cut and Treat	23	cwt	\$2.00	\$46.00	\$47.15	-\$1.15	-2.4%	
<b>Fertilizer:</b>				\$466.90	\$578.20	-\$111.30	-19.2%	
Dry Nitrogen - Preplant	165	lb	\$0.50	\$82.50	\$135.30	-\$52.80	-39.0%	
Dry P2O5	200	lb	\$0.46	\$92.00	\$150.00	-\$58.00	-38.7%	
K2O	200	lb	\$0.69	\$138.00	\$82.80	\$55.20	66.7%	
Sulfur	80	lb	\$0.19	\$15.20	\$32.00	-\$16.80	-52.5%	
Micronutrients & Foliars	2	ac	\$15.00	\$30.00	\$30.00	\$0.00	0.0%	
Liquid Nitrogen	150	lb	\$0.56	\$84.00	\$110.50	-\$26.50	-24.0%	
Liquid P2O5	40	lb	\$0.63	\$25.20	\$37.60	-\$12.40	-33.0%	
<b>Pesticides:</b>				\$220.03	\$187.28	\$32.75	17.5%	
Admire Pro	8.0	oz	\$4.05	\$32.40				
Quadris	8.0	oz	\$2.80	\$22.40				
Outlook 6EC	20.0	oz	\$1.20	\$24.00				
Sencor DF	0.75	lb	\$16.05	\$12.04				
Prowl 3.3 EC	1.0	qt	\$6.95	\$6.95				
Endura (2x)	11.0	oz	\$5.55	\$61.05				
Dithane F45 Rainshield	1.6	qt	\$6.90	\$11.04				
Headline	6.0	qt	\$2.75	\$16.50				
Leverage 2.7	3.75	oz	\$2.40	\$9.00				
Reglone	1.0	qt	\$24.65	\$24.65				
<b>Custom &amp; Consultants:</b>				\$69.20	\$90.35	-\$21.15	-23.4%	
Custom Fertilize	2	ac	\$7.50	\$15.00	\$16.50	-\$1.50	-9.1%	
Consultant	1	ac	\$20.00	\$20.00	\$18.00	\$2.00	11.1%	
Custom Air Spray-10G	3	ac	\$11.40	\$34.20	\$45.60	-\$11.40	-25.0%	
Sulfuric Acid Application	0	ac	\$10.25	\$0.00	\$10.25	-\$10.25	-100.0%	
<b>Irrigation:</b>				\$102.60	\$92.79	\$9.81	10.6%	
Water Assessment	1	ac	\$38.20	\$38.20	\$38.20	\$0.00	0.0%	
Irrigation Power-CP	28	acin	\$1.72	\$48.16	\$39.22	\$8.94	22.8%	
Irrigation Repairs	28	acin	\$0.58	\$16.24	\$15.37	\$0.87	5.7%	
<b>Machinery:</b>				\$124.02	\$167.44	-\$43.42	-25.9%	
Fuel - Gas	2.8	gal	\$2.25	\$6.30	\$11.20	-\$4.90	-43.8%	
Fuel - Diesel	28.6	gal	\$1.95	\$55.77	\$90.71	-\$34.94	-38.5%	
Lube	1	ac	\$9.30	\$9.30	\$15.28	-\$5.98	-39.1%	
Machinery Repairs	1	ac	\$52.65	\$52.65	\$50.25	\$2.40	4.8%	
<b>Labor:</b>				\$141.85	\$148.00	-\$6.15	-4.2%	
Labor (machine)	6.0	hrs	\$15.60	\$93.60	\$105.10	-\$11.50	-10.9%	
Labor (irrigation - cp)	2.16	hr	\$11.05	\$23.87	\$18.97	\$4.90	25.8%	
Labor (other)	2.65	hrs	\$9.20	\$24.380	\$23.93	\$0.45	1.9%	
<b>Storage:</b>				\$336.06	\$281.75	\$54.31	19.3%	
Storage Operating Costs	410	cwt	\$0.776	\$318.16	\$264.80	\$53.36	20.2%	
Storage Repairs	1	ac	\$17.90	\$17.90	\$16.95	\$0.95	5.6%	
<b>Other:</b>				\$118.40	\$103.00	\$15.40	15.0%	
Fees & Assessments	390	cwt	\$0.16	\$62.40	\$57.00	\$5.40	9.5%	
Crop Insurance	1	ac	\$56.00	\$56.00	\$46.00	\$10.00	21.7%	
Operating Interest @ 7.0%				\$53.35	\$53.91	-\$0.56	-1.0%	
Total Operating Costs @ 7.0%				\$2,018	\$2,009	\$9.04	0.5%	
Operating Costs per Unit				\$4.92	\$5.02	-\$0.10	-2.0%	
<b>Net Returns Above Operating Expenses</b>				\$749.84				



Table 17. 2009 Southcentral Idaho Irrigated Russet Burbank Commercial Potatoes:  
With On-Farm Storage. Comparison With 2008.

Final 11/21/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison		
<b>Ownership Costs:</b>							
Potato Storage System				\$176.00	\$166.00	\$10.00	6.0%
Tractors & Equipment Insurance				\$5.00	\$4.80	\$0.20	4.2%
Tractors & Equipment Depreciation & Interest				\$197.00	\$187.00	\$10.00	5.3%
Irrigation Equipment Depreciation & Interest							
Land *				\$575.00	\$525.00	\$50.00	9.5%
Overhead				\$52.00	\$48.00	\$4.00	8.3%
Management Fee				\$140.00	\$125.00	\$15.00	12.0%
<b>Total Ownership Costs</b>				\$1,145	\$1,056	\$89.20	8.4%
<b>Ownership Costs per Unit</b>				\$2.79	\$2.64	\$0.15	5.8%
<b>Total Costs per Acre</b>				\$3,163	\$3,064	\$98.24	3.2%
<b>Total Cost per Unit</b>				\$7.71	\$7.66	\$0.05	0.7%
Returns to Risk				-\$395	-\$564	\$169	
Notes:							
* Center pivot. ** Includes irrigation system ownership costs.							
Blue font indicates an increase.							
A red font indicates a decrease.							
A green font indicates a change in product or procedure to derive the cost.							
Procedural changes can result in different costs than were published the previous year.							
<b>Breakeven Analysis:</b>							
		-	Base	+			
		10%		10%			
			Yield				
<u>Price</u>		369	410	451			
Operating Cost Breakeven		\$5.47	\$4.92	\$4.47			
Ownership Cost Breakeven		\$3.10	\$2.79	\$2.54			
Total Cost Breakeven		\$8.57	\$7.71	\$7.01			
			Price				
<u>Yield</u>		\$6.08	\$6.75	\$7.43			
Operating Cost Breakeven		332.1	298.9	271.7			
Ownership Cost Breakeven		188.5	169.6	154.2			
Total Cost Breakeven		520.6	468.5	425.9			

Table 18. 2009 Southcentral Idaho Irrigated Russet Burbank Commercial Potatoes: With Fumigation and On-Farm Storage. Comparison With 2008.

Final 11/21/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison		
					2008	Yield Change	
					455	10	2.2%
						<b>\$ Change</b>	<b>% Change</b>
<b>Gross Returns</b>							
Potatoes	465	cwt	\$6.75	\$3,138.75			
<b>Operating Inputs</b>							
<b>Seed:</b>					\$385.25		
G-3 Burbank Potato Seed	23	cwt	\$14.75	\$339.25	\$305.90	\$79.35	25.9%
Seed Cut and Treat	23	cwt	\$2.00	\$46.00	\$258.75	\$80.50	31.1%
					\$47.15	-\$1.15	-2.4%
<b>Fertilizer:</b>					\$492.05		
Dry Nitrogen - Preplant	180	lb	\$0.50	\$90.00	\$614.70	-\$122.65	-20.0%
Dry P2O5	220	lb	\$0.46	\$101.20	\$147.60	-\$57.60	-39.0%
K2O	205	lb	\$0.69	\$141.45	\$165.00	-\$63.80	-38.7%
Sulfur	80	lb	\$0.19	\$15.20	\$92.00	\$49.45	53.8%
Micronutrients & Foliars	2	ac	\$17.50	\$35.00	\$32.00	-\$16.80	-52.5%
Liquid Nitrogen	150	lb	\$0.56	\$84.00	\$30.00	\$5.00	16.7%
Liquid P2O5	40	lb	\$0.63	\$25.20	\$110.50	-\$26.50	-24.0%
					\$37.60	-\$12.40	-33.0%
<b>Pesticides:</b>					\$400.03		
Metam Sodium	40	gal	\$4.50	\$180.00	\$347.28	\$52.75	15.2%
Admire Pro	8.0	oz	\$4.05	\$32.40			
Quadris	8.0	oz	\$2.80	\$22.40			
Outlook 6EC	20.0	oz	\$1.20	\$24.00			
Sencor DF	0.75	lb	\$16.05	\$12.04			
Prowl 3.3 EC	1.0	qt	\$6.95	\$6.95			
Endura (2x)	11.0	oz	\$5.55	\$61.05			
Dithane F45 Rainshield	1.6	qt	\$6.90	\$11.04			
Headline	6.0	qt	\$2.75	\$16.50			
Leverage 2.7	3.75	oz	\$2.40	\$9.00			
Reglone	1.0	qt	\$24.65	\$24.65			
<b>Custom &amp; Consultants:</b>					\$105.20		
Custom Fertilize	2	ac	\$7.50	\$15.00	\$124.35	-\$19.15	-15.4%
Consultant	1	ac	\$20.00	\$20.00	\$16.50	-\$1.50	-9.1%
Custom Air Spray-10G	3	ac	\$11.40	\$34.20	\$18.00	\$2.00	11.1%
Fumigation: Deep Injection	1	ac	\$36.00	\$36.00	\$45.60	-\$11.40	-25.0%
Sulfuric Acid Application	0	ac	\$10.25	\$0.00	\$34.00	\$2.00	5.9%
					\$10.25	-\$10.25	-100.0%
<b>Irrigation:</b>					\$102.60		
Water Assessment	1	ac	\$38.20	\$38.20	\$95.88	\$6.72	7.0%
Irrigation Power-CP	28	acin	\$1.72	\$48.16	\$38.20	\$0.00	0.0%
Irrigation Repairs	28	acin	\$0.58	\$16.24	\$41.44	\$6.72	16.2%
					\$16.24	\$0.00	0.0%
<b>Machinery:</b>					\$126.91		
Fuel - Gas	2.8	gal	\$2.25	\$6.30	\$170.56	-\$43.65	-25.6%
Fuel - Diesel	28.8	gal	\$1.95	\$56.16	\$11.20	-\$4.90	-43.8%
Lube	1	ac	\$9.35	\$9.35	\$91.46	-\$35.30	-38.6%
Machinery Repairs	1	ac	\$55.10	\$55.10	\$15.40	-\$6.05	-39.3%
					\$52.50	\$2.60	5.0%
<b>Labor:</b>					\$146.99		
Labor (machine)	6.3	hrs	\$15.60	\$98.28	\$157.93	-\$10.94	-6.9%
Labor (irrigation - cp)	2.16	hr	\$11.05	\$23.87	\$109.58	-\$11.30	-10.3%
Labor (other)	2.7	hrs	\$9.20	\$24.84	\$19.99	\$3.88	19.4%
					\$28.36	-\$3.52	-12.4%
<b>Storage:</b>					\$381.04		
Storage Operating Costs	465	cwt	\$0.776	\$360.84	\$320.36	\$60.68	18.9%
Storage Repairs	1	ac	\$20.20	\$20.20	\$301.21	\$59.63	19.8%
					\$19.15	\$1.05	5.5%
<b>Other:</b>					\$130.72		
Fees & Assessments	442	cwt	\$0.16	\$70.72	\$114.80	\$15.92	13.9%
Crop Insurance	1	ac	\$60.00	\$60.00	\$64.80	\$5.92	9.1%
					\$50.00	\$10.00	20.0%
Operating Interest @ 7.0%				\$69.80	\$68.63	\$1.17	1.7%
Total Operating Costs				\$2,341	\$2,320	\$20.20	0.9%
Operating Costs per Unit				\$5.03	\$5.10	-\$0.07	-1.3%
Net Returns Above Operating Expenses				\$798.16			

Table 18. 2009 Southcentral Idaho Irrigated Russet Burbank Commercial Potatoes:  
With Fumigation and On-Farm Storage. Comparison With 2008.

Final 11/21/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison		
<b>Ownership Costs:</b>							
Potato Storage System				\$200.00	\$186.00	\$14.00	7.5%
Tractors & Equipment Insurance				\$5.05	\$4.85	\$0.20	4.1%
Tractors & Equipment Depreciation & Interest				\$199.00	\$189.00	\$10.00	5.3%
Irrigation Equipment Depreciation & Interest							
Land *				\$575.00	\$525.00	\$50.00	9.5%
Overhead				\$52.00	\$48.00	\$4.00	8.3%
Management Fee				\$150.00	\$125.00	\$25.00	20.0%
<b>Total Ownership Costs</b>				<b>\$1,181</b>	<b>\$1,078</b>	<b>\$103.20</b>	<b>9.6%</b>
<b>Ownership Costs per Unit</b>				<b>\$2.54</b>	<b>\$2.37</b>	<b>\$0.17</b>	<b>7.2%</b>
<b>Total Costs per Acre</b>				<b>\$3,522</b>	<b>\$3,398</b>	<b>\$123.40</b>	<b>3.6%</b>
<b>Total Cost per Unit</b>				<b>\$7.57</b>	<b>\$7.47</b>	<b>\$0.10</b>	<b>1.4%</b>
Returns to Risk				-\$383	-\$554	\$171	
<b>Notes:</b>							
* Center pivot. ** Includes irrigation system ownership costs.							
Blue font indicates an increase.							
A red font indicates a decrease.							
A green font indicates a change in product or procedure to derive the cost.							
Procedural changes can result in different costs than were published the previous year.							
<b>Breakeven Analysis:</b>							
		-	Base	+			
		10%		10%			
			Yield				
<u>Price</u>		418.5	465	511.5			
Operating Cost Breakeven		\$5.59	\$5.03	\$4.58			
Ownership Cost Breakeven		\$2.82	\$2.54	\$2.31			
Total Cost Breakeven		\$8.41	\$7.57	\$6.88			
			Price				
<u>Yield</u>		\$6.08	\$6.75	\$7.43			
Operating Cost Breakeven		385.3	346.8	315.2			
Ownership Cost Breakeven		194.4	175.0	159.1			
Total Cost Breakeven		579.7	521.7	474.3			

Table 19. 2009 Irrigated Russet Burbank Commercial Potatoes With No Storage for Eastern Idaho - South: Bannock, Bingham and Power Counties with comparison to 2008.

Final 11/11/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison		
					2008	Yield Change	
<b>Gross Returns</b>					345	5	1.4%
Potatoes	350	cwt	\$7.50	\$2,625.00			
<b>Operating Inputs</b>							
<b>Seed:</b>				\$340.20	\$263.55	\$76.65	29.1%
G-3 Burbank Potato Seed	21	cwt	\$14.20	\$298.20	\$220.50	\$77.70	35.2%
Seed Cut and Treat	21	cwt	\$2.00	\$42.00	\$43.05	-\$1.05	-2.4%
<b>Fertilizer:</b>				\$420.90	\$539.80	-\$118.90	-22.0%
Dry Nitrogen - Preplant	145	lb	\$0.50	\$72.50	\$118.90	-\$46.40	-39.0%
P2O5	155	lb	\$0.46	\$71.30	\$108.50	-\$37.20	-34.3%
K2O	175	lb	\$0.69	\$120.75	\$87.50	\$33.25	38.0%
Sulfur	85	lb	\$0.19	\$16.15	\$28.90	-\$12.75	-44.1%
Liquid Nitrogen	140	lb	\$0.56	\$78.40	\$119.00	-\$40.60	-34.1%
Liquid P2O5	60	lb	\$0.63	\$37.80	\$57.00	-\$19.20	-33.7%
Micronutrients & Foliars	1	ac	\$24.00	\$24.00	\$20.00	\$4.00	20.0%
<b>Chemicals &amp; Pesticides:</b>				\$162.98	\$111.06	\$51.92	46.8%
Admire Pro	8	oz	\$4.05	\$32.40			
Sencor 75DF	0.66	lb	\$16.05	\$10.59			
Eptam 7EC	4.0	pt	\$4.95	\$19.80			
Prowl 3.3EC	2.0	pt	\$3.45	\$6.90			
Omega 500DF	8.0	oz	\$3.30	\$26.40			
Quadris	8.0	oz	\$2.80	\$22.40			
Headline	6	oz	\$2.75	\$16.50			
Dithane F45 Rainshield	1.6	qt	\$6.90	\$11.04			
Rely	3	pt	\$5.65	\$16.95			
<b>Custom &amp; Consultants:</b>				\$150.50	\$146.20	\$4.30	2.9%
Custom Fertilize	2	ac	\$6.75	\$13.50	\$13.00	\$0.50	3.8%
Consultant/Soil Test	1	ac	\$20.00	\$20.00	\$18.00	\$2.00	11.1%
Custom Air Spray-10G	2	ac	\$9.50	\$19.00	\$19.00	\$0.00	0.0%
Custom Hauling	350	cwt	\$0.28	\$98.00	\$89.70	\$8.30	9.3%
Custom Ground Spray	0	ac		\$0.00	\$6.50	-\$6.50	
<b>Irrigation:</b>				\$77.90	\$70.38	\$7.52	10.7%
Water Assessment	1	ac	\$25.00	\$25.00	\$23.00	\$2.00	8.7%
Irrigation Power - CP*	23	acin	\$1.72	\$39.56	\$34.04	\$5.52	16.2%
Irrigation Repairs - CP*	23	acin	\$0.58	\$13.34	\$13.34	\$0.00	0.0%
<b>Machinery:</b>				\$122.28	\$197.90	-\$75.62	-38.2%
Fuel - Gas	2.85	gal	\$2.20	\$6.27	\$12.95	-\$6.68	-51.6%
Fuel - Diesel	28.8	gal	\$1.95	\$56.16	\$117.40	-\$61.24	-52.2%
Lube	1	ac	\$9.35	\$9.35	\$19.55	-\$10.20	-52.2%
Machinery Repairs	1	ac	\$50.50	\$50.50	\$48.00	\$2.50	5.2%
<b>Labor:</b>				\$138.73	\$133.16	\$5.57	4.2%
Labor (machine)	6.2	hrs	\$15.60	\$96.72	\$95.08	\$1.64	1.7%
Labor (irrigation - cp)	1.72	hrs	\$11.05	\$19.01	\$16.42	\$2.59	15.7%
Labor (other)	2.5	hrs	\$9.20	\$23.00	\$21.66	\$1.34	6.2%
<b>Transload:</b>				\$41.20	\$35.62	\$5.58	15.7%
Transloading Operating Costs	350	cwt	\$0.100	\$35.00	\$29.67	\$5.33	18.0%
Transloading Equip. Repairs	1	ac	\$6.20	\$6.20	\$5.95	\$0.25	4.2%
<b>Other:</b>				\$106.00	\$91.75	\$14.25	15.5%
Fees & Assessments	350	cwt	\$0.16	\$56.00	\$51.75	\$4.25	8.2%
Crop Insurance	1	ac	\$50.00	\$50.00	\$40.00	\$10.00	25.0%
Operating Interest @ 6.75%				\$43.55	\$48.78	-\$5.23	-10.7%
Total Operating Costs				\$1,604	\$1,638	-\$33.96	-2.1%
Operating Costs per Unit				\$4.58	\$4.75	-\$0.16	-3.5%
Net Returns Above Operating Expenses				\$1,021	\$346	\$675	

Table 19. 2009 Irrigated Russet Burbank Commercial Potatoes With No Storage for Eastern Idaho - South: Bannock, Bingham and Power Counties with comparison to 2008.

Final 11/11/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison		
<b>Ownership Costs:</b>							
Transloading Equipment				\$33.80	\$32.90	\$0.90	2.7%
Tractors & Equipment Insurance				5.15	\$4.90	\$0.25	5.1%
Tractors & Equipment Depreciation & Interest				\$206.00	\$196.00	\$10.00	5.1%
Irrigation Equipment Depreciation & Interest							
Land *				\$425.00	\$375.00	\$50.00	13.3%
Overhead				\$40.00	\$41.00	-\$1.00	-2.4%
Management Fee				\$120.00	\$100.00	\$20.00	20.0%
<b>Total Ownership Costs</b>				<b>\$830</b>	<b>\$750</b>	<b>\$80.15</b>	<b>10.7%</b>
<b>Ownership Costs per Unit</b>				<b>\$2.37</b>	<b>\$2.17</b>	<b>\$0.20</b>	<b>9.1%</b>
<b>Total Costs per Acre</b>				<b>\$2,434</b>	<b>\$2,388</b>	<b>\$46.19</b>	<b>1.9%</b>
<b>Total Cost per Unit</b>				<b>\$6.95</b>	<b>\$6.92</b>	<b>\$0.03</b>	<b>0.5%</b>
Returns to Risk				\$191	-\$404	\$595	

Notes:

\* Center pivot. \*\* Includes irrigation system ownership costs.

Blue font indicates an increase.

A red font indicates a decrease.

A green font indicates a change in product or procedure to derive the cost.

Procedural changes can result in different costs than were published the previous year.

**Breakeven Analysis:**

	- 10%	Base Yield	+ 10%
<u>Price</u>	315	350	385
Operating Cost Breakeven	\$5.09	\$4.58	\$4.17
Ownership Cost Breakeven	\$2.63	\$2.37	\$2.16
Total Cost Breakeven	\$7.73	\$6.95	\$6.32
		<u>Price</u>	
<u>Yield</u>	\$6.75	\$7.50	\$8.25
Operating Cost Breakeven	237.7	213.9	194.5
Ownership Cost Breakeven	123.0	110.7	100.6
Total Cost Breakeven	360.6	324.6	295.1

Table 20. 2009 Irrigated Russet Burbank Commercial Potatoes With On-Farm Storage for Eastern Idaho - South: Bannock, Bingham and Power Counties with comparison to 2008.

Final 11/11/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison		
					2008	Yield Change	
<b>Gross Returns</b>					345	5	1.4%
Potatoes	350	cwt	\$6.75	\$2,362.50			
<b>Operating Inputs</b>							
<b>Seed:</b>				\$340.20	\$263.55	\$76.65	29.1%
G-3 Burbank Potato Seed	21	cwt	\$14.20	\$298.20	\$220.50	\$77.70	35.2%
Seed Cut and Treat	21	cwt	\$2.00	\$42.00	\$43.05	-\$1.05	-2.4%
<b>Fertilizer:</b>				\$420.90	\$539.80	-\$118.90	-22.0%
Dry Nitrogen - Preplant	145	lb	\$0.50	\$72.50	\$118.90	-\$46.40	-39.0%
P2O5	155	lb	\$0.46	\$71.30	\$108.50	-\$37.20	-34.3%
K2O	175	lb	\$0.69	\$120.75	\$87.50	\$33.25	38.0%
Sulfur	85	lb	\$0.19	\$16.15	\$28.90	-\$12.75	-44.1%
Liquid Nitrogen	140	lb	\$0.56	\$78.40	\$119.00	-\$40.60	-34.1%
Liquid P2O5	60	lb	\$0.63	\$37.80	\$57.00	-\$19.20	-33.7%
Micronutrients & Foliars	1	ac	\$24.00	\$24.00	\$20.00	\$4.00	20.0%
<b>Pesticides:</b>				\$162.98	\$111.06	\$51.92	46.8%
Admire Pro	8	oz	\$4.05	\$32.40			
Sencor 75DF	0.66	lb	\$16.05	\$10.59			
Eptam 7EC	4.0	pt	\$4.95	\$19.80			
Prowl 3.3EC	2.0	pt	\$3.45	\$6.90			
Omega 500DF	8.0	oz	\$3.30	\$26.40			
Quadris	8.0	oz	\$2.80	\$22.40			
Headline	6	oz	\$2.75	\$16.50			
Dithane F45 Rainshield	1.6	qt	\$6.90	\$11.04			
Rely	3	pt	\$5.65	\$16.95			
<b>Custom &amp; Consultants:</b>				\$52.50	\$50.00	\$2.50	5.0%
Custom Fertilize	2	ac	\$6.75	\$13.50	\$13.00	\$0.50	3.8%
Consultant/Soil Test	1	ac	\$20.00	\$20.00	\$18.00	\$2.00	11.1%
Custom Air Spray-10G	2	ac	\$9.50	\$19.00	\$19.00	\$0.00	0.0%
Custom Ground Spray	0	ac		\$0.00	\$0.00	\$0.00	
<b>Irrigation:</b>				\$77.90	\$70.38	\$7.52	10.7%
Water Assessment	1	ac	\$25.00	\$25.00	\$23.00	\$2.00	8.7%
Irrigation Power - CP*	23	acin	\$1.72	\$39.56	\$34.04	\$5.52	16.2%
Irrigation Repairs - CP*	23	acin	\$0.58	\$13.34	\$13.34	\$0.00	0.0%
<b>Machinery:</b>				\$122.28	\$194.20	-\$71.92	-37.0%
Fuel - Gas	2.85	gal	\$2.20	\$6.27	\$12.95	-\$6.68	-51.6%
Fuel - Diesel	28.8	gal	\$1.95	\$56.16	\$114.18	-\$58.02	-50.8%
Lube	1	ac	\$9.35	\$9.35	\$19.07	-\$9.72	-51.0%
Machinery Repairs	1	ac	\$50.50	\$50.50	\$48.00	\$2.50	5.2%
<b>Labor:</b>				\$138.73	\$133.16	\$5.57	4.2%
Labor (machine)	6.2	hrs	\$15.60	\$96.72	\$95.08	\$1.64	1.7%
Labor (irrigation - cp)	1.72	hrs	\$11.05	\$19.01	\$16.42	\$2.59	15.7%
Labor (other)	2.5	hrs	\$9.20	\$23.00	\$21.66	\$1.34	6.2%
<b>Storage:</b>				\$287.65	\$243.25	\$44.40	18.3%
Storage Operating Costs	350	cwt	\$0.776	\$271.60	\$228.05	\$43.55	19.1%
Storage System Repairs	1	ac	\$16.05	\$16.05	\$15.20	\$0.85	5.6%
<b>Other:</b>				\$103.12	\$89.20	\$13.92	15.6%
Fees & Assessments	332	cwt	\$0.16	\$53.12	\$49.20	\$3.92	8.0%
Crop Insurance	1	ac	\$50.00	\$50.00	\$40.00	\$10.00	25.0%
Operating Interest @ 6.75%				\$42.75	\$47.16	-\$4.41	-9.4%
Total Operating Costs				\$1,749	\$1,741.76	\$7.25	0.4%
Operating Costs per Unit				\$5.00	\$5.05	-\$0.05	-1.0%
<b>Net Returns Above Operating Expenses</b>				\$613			

Table 20. 2009 Irrigated Russet Burbank Commercial Potatoes With On-Farm Storage for Eastern Idaho - South: Bannock, Bingham and Power Counties with comparison to 2008.

Final 11/11/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison		
<b>Ownership Costs:</b>							
Potato Storage System Depreciation & Interest				\$154.00	\$145.00	\$9.00	6.2%
Tractors & Equipment Insurance				5.15	\$4.90	\$0.25	5.1%
Tractors & Equipment Depreciation & Interest				\$206.00	\$196.00	\$10.00	5.1%
Irrigation Equipment Depreciation & Interest							
Land *				\$425.00	\$375.00	\$50.00	13.3%
Overhead				\$45.00	\$44.00	\$1.00	2.3%
Management Fee				\$125.00	\$100.00	\$25.00	25.0%
<b>Total Ownership Costs</b>				<b>\$960</b>	<b>\$865</b>	<b>\$95.25</b>	<b>11.0%</b>
<b>Ownership Costs per Unit</b>				<b>\$2.74</b>	<b>\$2.51</b>	<b>\$0.24</b>	<b>9.4%</b>
<b>Total Costs per Acre</b>				<b>\$2,709</b>	<b>\$2,607</b>	<b>\$102.50</b>	<b>3.9%</b>
<b>Total Cost per Unit</b>				<b>\$7.74</b>	<b>\$7.56</b>	<b>\$0.18</b>	<b>2.4%</b>
Returns to Risk				-\$347	-\$623	\$276	
Notes:							
* Center pivot. ** Includes irrigation system ownership costs.							
Blue font indicates an increase.							
A red font indicates a decrease.							
A green font indicates a change in product or procedure to derive the cost.							
Procedural changes can result in different costs than were published the previous year.							
<b>Breakeven Analysis:</b>							
	-	Base	+				
	10%		10%				
		Yield					
<u>Price</u>	315	350	385				
Operating Cost Breakeven	\$5.55	\$5.00	\$4.54				
Ownership Cost Breakeven	\$3.05	\$2.74	\$2.49				
Total Cost Breakeven	\$8.60	\$7.74	\$7.04				
		Price					
<u>Yield</u>	\$6.08	\$6.75	\$7.43				
Operating Cost Breakeven	287.9	259.1	235.6				
Ownership Cost Breakeven	158.0	142.2	129.3				
Total Cost Breakeven	446.0	401.4	364.9				

Table 21. 2009 Irrigated Russet Burbank Commercial Potatoes With Fumigation and On-Farm Storage for Eastern Idaho - South: Bannock, Bingham and Power Counties with comparison to 2008.

Final 11/11/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison			
					2008	Yield Change		
<b>Gross Returns</b>					390	5	1.3%	
Potatoes	395	cwt	\$6.75	\$2,666.25				
<b>Operating Inputs</b>						<b>\$ Change</b>	<b>% Change</b>	
<b>Seed:</b>					\$340.20	\$263.55	\$76.65	29.1%
G-3 Burbank Potato Seed	21	cwt	\$14.20	\$298.20	\$220.50	\$77.70	35.2%	
Seed Cut and Treat	21	cwt	\$2.00	\$42.00	\$43.05	-\$1.05	-2.4%	
<b>Fertilizer:</b>					\$443.00	\$568.50	-\$125.50	-22.1%
Nitrogen - Preplant	155	lb	\$0.50	\$77.50	\$127.10	-\$49.60	-39.0%	
P2O5	165	lb	\$0.46	\$75.90	\$115.50	-\$39.60	-34.3%	
K2O	185	lb	\$0.69	\$127.65	\$92.50	\$35.15	38.0%	
Sulfur	85	lb	\$0.19	\$16.15	\$28.90	-\$12.75	-44.1%	
Liquid Nitrogen	150	lb	\$0.56	\$84.00	\$127.50	-\$43.50	-34.1%	
Liquid P2O5	60	lb	\$0.63	\$37.80	\$57.00	-\$19.20	-33.7%	
Micronutrients & Foliars	1	ac	\$24.00	\$24.00	\$20.00	\$4.00	20.0%	
<b>Pesticides:</b>					\$306.33	\$283.06	\$23.27	8.2%
Vapam 42%	32	gal	\$4.65	\$148.80	\$172.00	-\$23.20	-13.5%	
Admire Pro	8.0	oz	\$4.05	\$32.40				
Sencor 75DF	0.75	lb	\$16.05	\$12.04	\$10.88	\$1.16	10.7%	
Eptam 7E	4.0	pt	\$4.95	\$19.80	\$19.00	\$0.80	4.2%	
Omega 500DF	8.0	oz	\$3.30	\$26.40				
Quadris	8.0	oz	\$2.80	\$22.40				
Headline	6.0	oz	\$2.75	\$16.50				
Dithane F45 Rainshield	1.6	qt	\$6.90	\$11.04				
Rely	3.0	pt	\$5.65	\$16.95				
<b>Custom &amp; Consultants:</b>					\$90.50	\$56.50	\$34.00	60.2%
Fumigation: Deep Injection	1	ac	\$38.00	\$38.00	\$0.00	\$38.00		
Custom Fertilize	2	ac	\$6.75	\$13.50	\$13.00	\$0.50	3.8%	
Consultant	1	ac	\$20.00	\$20.00	\$18.00	\$2.00	11.1%	
Custom Air Spray-10G	2	ac	\$9.50	\$19.00	\$19.00	\$0.00	0.0%	
Custom Ground Spray	0			\$0.00	\$6.50	-\$6.50	-100.0%	
<b>Irrigation:</b>					\$82.50	\$74.50	\$8.00	10.7%
Water Assessment	1	ac	\$25.00	\$25.00	\$23.00	\$2.00	8.7%	
Irrigation Power - CP*	25	acin	\$1.72	\$43.00	\$37.00	\$6.00	16.2%	
Irrigation Repairs - CP*	25	acin	\$0.58	\$14.50	\$14.50	\$0.00	0.0%	
<b>Machinery:</b>					\$124.97	\$195.41	-\$70.44	-36.0%
Fuel - Gas	2.85	gal	\$2.20	\$6.27	\$12.95	-\$6.68	-51.6%	
Fuel - Diesel	29.0	gal	\$1.95	\$56.55	\$114.18	-\$57.63	-50.5%	
Lube	1	ac	\$9.40	\$9.40	\$19.07	-\$9.67	-50.7%	
Machinery Repairs	1	ac	\$52.75	\$52.75	\$49.21	\$3.54	7.2%	
<b>Labor:</b>					\$145.82	\$136.74	\$9.08	6.6%
Labor (machine)	6.48	hrs	\$15.60	\$101.09	\$95.23	\$5.86	6.2%	
Labor (irrigation - cp)	1.8	hrs	\$11.05	\$19.89	\$17.85	\$2.04	11.4%	
Labor (other)	2.7	hrs	\$9.20	\$24.84	\$23.66	\$1.18	5.0%	
<b>Storage:</b>					\$324.42	\$274.74	\$49.68	18.1%
Storage Operating Costs	395	cwt	\$0.776	\$306.52	\$257.79	\$48.73	18.9%	
Storage System Repairs	1	ac	\$17.90	\$17.90	\$16.95	\$0.95	5.6%	
<b>Other:</b>					\$114.00	\$99.65	\$14.35	14.4%
Fees & Assessments	375	cwt	\$0.16	\$60.00	\$55.65	\$4.35	7.8%	
Crop Insurance	1	ac	\$54.00	\$54.00	\$44.00	\$10.00	22.7%	
Operating Interest @ 7.0%				\$56.20	\$60.91	-\$4.71	-7.7%	
Total Operating Costs				\$2,028	\$2,014	\$14.38	0.7%	
Operating Costs per Unit				\$5.13	\$5.16	-\$0.03	-0.6%	
Net Returns Above Operating Expenses				\$638	\$424	\$214		



Table 21. 2009 Irrigated Russet Burbank Commercial Potatoes With Fumigation and On-Farm Storage for Eastern Idaho - South: Bannock, Bingham and Power Counties with comparison to 2008.

Final 11/11/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison		
<b>Ownership Costs:</b>							
Potato Storage System Depreciation & Interest				\$171.00	\$161.00	\$10.00	6.2%
Tractors & Equipment Insurance				\$5.20	\$4.95	\$0.25	5.1%
Tractors & Equipment Depreciation & Interest				\$208.00	\$197.00	\$11.00	5.6%
Irrigation Equipment Depreciation & Interest							
Land **				\$425.00	\$375.00	\$50.00	13.3%
Overhead				\$45.00	\$50.00	-\$5.00	-10.0%
Management Fee				\$125.00	\$110.00	\$15.00	13.6%
<b>Total Ownership Costs</b>				\$979	\$898	\$81.25	9.0%
<b>Ownership Costs per Unit</b>				\$2.48	\$2.30	\$0.18	7.7%
<b>Total Costs per Acre</b>				\$3,007	\$2,912	\$95.63	3.3%
<b>Total Cost per Unit</b>				\$7.61	\$7.47	\$0.15	2.0%
Returns to Risk				-\$341	-\$474	\$133	
Notes:							
* Center pivot. ** Includes irrigation system ownership costs.							
Blue font indicates an increase.							
A red font indicates a decrease.							
A green font indicates a change in product or procedure to derive the cost.							
Procedural changes can result in different costs than were published the previous year.							
<b>Breakeven Analysis:</b>							
	-	Base	+				
	10%		10%				
		Yield					
<u>Price</u>	355.5	395	434.5				
Operating Cost Breakeven	\$5.70	\$5.13	\$4.67				
Ownership Cost Breakeven	\$2.75	\$2.48	\$2.25				
Total Cost Breakeven	\$8.46	\$7.61	\$6.92				
		Price					
<u>Yield</u>	\$6.08	\$6.75	\$7.43				
Operating Cost Breakeven	333.8	300.4	273.1				
Ownership Cost Breakeven	161.2	145.1	131.9				
Total Cost Breakeven	495.0	445.5	405.0				

Table 22. 2009 Irrigated Russet Burbank Commercial Potatoes With On-Farm Storage for Eastern Idaho - North: Bonneville, Jefferson and Madison Counties with comparison to 2008.

Final 11/13/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison			
					2008	Yield Change		
<b>Gross Returns</b>								
Potatoes	335	cwt	\$6.75	\$2,261.25	335	0	0.0%	
<b>Operating Inputs</b>								
<b>Seed:</b>				\$328.65	\$236.00	\$92.65	39.3%	
G-3 Burbank Potato Seed	21	cwt	\$13.65	\$286.65	\$195.00	\$91.65	47.0%	
Seed Cut and Treat	21	cwt	\$2.00	\$42.00	\$41.00	\$1.00	2.4%	
<b>Fertilizer:</b>				\$397.65	\$449.10	-\$51.45	-11.5%	
Dry Nitrogen - Preplant	160	lb	\$0.50	\$80.00	\$123.00	-\$43.00	-35.0%	
P2O5	150	lb	\$0.46	\$69.00	\$70.00	-\$1.00	-1.4%	
K2O	165	lb	\$0.69	\$113.85	\$70.00	\$43.85	62.6%	
Sulfur	100	lb	\$0.19	\$19.00	\$22.10	-\$3.10	-14.0%	
Liquid Nitrogen	100	lb	\$0.56	\$56.00	\$68.00	-\$12.00	-17.6%	
Liquid P2O5	60	lb	\$0.63	\$37.80	\$76.00	-\$38.20	-50.3%	
Micronutrients & Foliars	1	ac	\$22.00	\$22.00	\$20.00	\$2.00	10.0%	
<b>Chemicals &amp; Pesticides:</b>				\$139.68	\$132.18	\$7.50	5.7%	
Admire Pro	8.0	oz	\$4.05	\$32.40				
Sencor DF	0.75	lb	\$16.05	\$12.04	\$10.88	\$1.16	10.7%	
Matrix	1.5	oz	\$16.95	\$25.43				
Quadris	8.0	oz	\$2.80	\$22.40				
Dithane F45 Rainshield	1.6	qt	\$6.90	\$11.04				
Endura	3.5	oz	\$5.55	\$19.43				
Rely	3.0	pt	\$5.65	\$16.95				
<b>Custom &amp; Consultants:</b>				\$60.00	\$69.25	-\$9.25	-13.4%	
Custom Fertilize	2	ac	\$6.75	\$13.50	\$13.00	\$0.50	3.8%	
Consultant	1	ac	\$18.00	\$18.00	\$18.00	\$0.00	0.0%	
Custom Air Spray-10G	3	ac	\$9.50	\$28.50	\$28.50	\$0.00	0.0%	
Sulfuric Acid Application	0	ac	\$9.75	\$0.00	\$9.75	-\$9.75	-100.0%	
<b>Irrigation:</b>				\$63.95	\$52.63	\$11.32	21.5%	
Water Assessment	1	ac	\$11.05	\$11.05	\$10.40	\$0.65	6.3%	
Irrigation Power - CP*	23	acin	\$1.72	\$39.56	\$30.34	\$9.22	30.4%	
Irrigation Repairs - CP*	23	acin	\$0.58	\$13.34	\$11.89	\$1.45	12.2%	
<b>Machinery:</b>				\$126.69	\$184.89	-\$58.20	-31.5%	
Fuel - Gas	2.80	gal	\$2.20	\$6.16	\$12.95	-\$6.79	-52.4%	
Fuel - Diesel	30.4	gal	\$1.95	\$59.28	\$104.90	-\$45.62	-43.5%	
Lube	1	ac	\$9.80	\$9.80	\$17.68	-\$7.88	-44.6%	
Machinery Repairs	1	ac	\$51.45	\$51.45	\$49.36	\$2.09	4.2%	
<b>Labor:</b>				\$139.39	\$130.98	\$8.41	6.4%	
Labor (machine)	6.33	hrs	\$15.60	\$98.75	\$97.32	\$1.43	1.5%	
Labor (irrigation - cp)	1.68	hrs	\$11.05	\$18.56	\$14.69	\$3.87	26.4%	
Labor (other)	2.4	hrs	\$9.20	\$22.08	\$18.97	\$3.11	16.4%	
<b>Storage:</b>				\$275.31	\$235.79	\$39.52	16.8%	
Storage Operating Costs	335	cwt	\$0.776	\$259.96	\$221.44	\$38.52	17.4%	
Potato Storage System Repairs	1	ac	\$15.35	\$15.35	\$14.35	\$1.00	7.0%	
<b>Other:</b>				\$96.88	\$85.70	\$11.18	13.0%	
Fees & Assessments	318	cwt	\$0.16	\$50.88	\$47.70	\$3.18	6.7%	
Crop Insurance	1	ac	\$46.00	\$46.00	\$38.00	\$8.00	21.1%	
Operating Interest @ 6.75.0%				\$41.35	\$31.80	\$9.55	30.0%	
Total Operating Costs				\$1,670	\$1,608	\$61.23	3.8%	
Operating Costs per Unit				\$4.98	\$4.80	\$0.18	3.8%	
Net Returns Above Operating Expenses				\$592	\$486	\$106		

Table 22. 2009 Irrigated Russet Burbank Commercial Potatoes With On-Farm Storage for Eastern Idaho - North: Bonneville, Jefferson and Madison Counties with comparison to 2008.

Final 11/13/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	Comparison		
<b>Ownership Costs:</b>							
Potato Storage System Depreciation & Interest				\$147.00	\$137.00	\$10.00	7.3%
Tractors & Equipment Insurance				\$5.25	\$4.83	\$0.42	8.7%
Tractors & Equipment Depreciation & Interest				\$208.00	\$187.93	\$20.07	10.7%
Irrigation Equipment Depreciation & Interest							
Land **				\$375.00	\$340.00	\$35.00	10.3%
Overhead				\$40.00	\$41.00	-\$1.00	-2.4%
Management Fee				\$115.00	\$100.00	\$15.00	15.0%
<b>Total Ownership Costs</b>				<b>\$890</b>	<b>\$811</b>	<b>\$79.49</b>	<b>9.8%</b>
<b>Ownership Costs per Unit</b>				<b>\$2.66</b>	<b>\$2.42</b>	<b>\$0.24</b>	<b>9.8%</b>
<b>Total Costs per Acre</b>				<b>\$2,560</b>	<b>\$2,419</b>	<b>\$140.72</b>	<b>5.8%</b>
<b>Total Cost per Unit</b>				<b>\$7.64</b>	<b>\$7.22</b>	<b>\$0.42</b>	<b>5.8%</b>
Returns to Risk				-\$299	-\$325	\$27	
Notes:							
* Center pivot. ** Includes irrigation system ownership costs.							
Blue font indicates an increase.							
A red font indicates a decrease.							
A green font indicates a change in product or procedure to derive the cost.							
Procedural changes can result in different costs than were published the previous year.							
<b>Breakeven Analysis:</b>							
	-	Base	+				
	10%	Yield	10%				
<u>Price</u>	301.5	335	368.5				
Operating Cost Breakeven	\$5.54	\$4.98	\$4.53				
Ownership Cost Breakeven	\$2.95	\$2.66	\$2.42				
Total Cost Breakeven	\$8.49	\$7.64	\$6.95				
		Price					
<u>Yield</u>	\$6.08	\$6.75	\$7.43				
Operating Cost Breakeven	274.8	247.3	224.9				
Ownership Cost Breakeven	146.5	131.9	119.9				
Total Cost Breakeven	421.4	379.2	344.8				

Table 23. 2009 Irrigated Russet Burbank G3 Seed Potatoes With On-Farm Storage for Eastern Idaho: Caribou, Fremont and Teton Counties with Comparison to 2008.

Final 11/12/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	2008	Yield Change	
<b>Gross Returns</b>							
Seed	255	cwt	\$11.00	\$2,805.00	255	0	0.0%
Tops	20	cwt	\$4.00	\$80.00	20	0	0.0%
<b>Total</b>	<b>275</b>	<b>cwt</b>		<b>\$2,885.00</b>	<b>275</b>		
<b>Operating Inputs</b>					<b>2008</b>	<b>\$ Change</b>	<b>% Change</b>
<b>Seed:</b>					\$382.95		
G-2 Potato Seed	23	cwt	\$14.65	\$336.95	\$300.15	\$82.80	27.6%
Seed Cut and Treat	23	cwt	\$2.00	\$46.00	\$253.00	\$83.95	33.2%
					\$47.15	-\$1.15	-2.4%
<b>Fertilizer:</b>					\$228.05		
Nitrogen - Preplant	110	lb	\$0.50	\$55.00	\$258.70	-\$30.65	-11.8%
P2O5	100	lb	\$0.46	\$46.00	\$82.00	-\$27.00	-32.9%
K2O	85	lb	\$0.69	\$58.65	\$56.00	-\$10.00	-17.9%
Sulfur	60	lb	\$0.19	\$11.40	\$37.50	\$21.15	56.4%
Liquid Nitrogen	40	lb	\$0.56	\$22.40	\$10.20	\$1.20	11.8%
Liquid P2O5	20	lb	\$0.63	\$12.60	\$34.00	-\$11.60	-34.1%
Micronutrients & Foliars	1	ac	\$22.00	\$22.00	\$19.00	-\$6.40	-33.7%
					\$20.00	\$2.00	10.0%
<b>Pesticides:</b>					\$155.53		
Admire Pro	8.0	oz	\$4.05	\$32.40	\$152.94	\$2.59	1.7%
Sencor DF	0.75	qt	\$16.05	\$12.04			
Eptam 7E	4.0	pt	\$4.95	\$19.80	\$10.88	\$1.16	10.7%
Quadris	8.0	oz	\$2.80	\$22.40	\$19.00	\$0.80	4.2%
Dithane F45 Rainshield	1.6	qt	\$6.90	\$11.04			
Omega 500DF	8.0	oz	\$3.30	\$26.40			
Assail 70WP	1.0	oz	\$14.50	\$14.50			
Rely	3.0	pt	\$5.65	\$16.95			
<b>Custom &amp; Consultants:</b>					\$88.75		
Custom Fertilize	1	ac	\$6.75	\$6.75	\$96.25	-\$7.50	-7.8%
Custom Ground Spray	1	ac	\$6.50	\$6.50	\$6.50	\$0.25	3.8%
Custom Air Spray-10G	3	ac	\$9.50	\$28.50	\$6.50	\$0.00	0.0%
Consultant	1	ac	\$20.00	\$20.00	\$28.50	\$0.00	0.0%
Rogueing	2	ac	\$13.50	\$27.00	\$18.00	\$2.00	11.1%
Sulfuric Acid Application	0			\$0.00	\$27.00	\$0.00	0.0%
					\$9.75	-\$9.75	-100.0%
<b>Irrigation:</b>					\$43.25		
Water Assessment	1	ac	\$11.05	\$11.05	\$35.12	\$8.13	23.1%
Irrigation Power-CP	14	acin	\$1.72	\$24.08	\$10.40	\$0.65	6.3%
Irrigation Repairs	14	acin	\$0.58	\$8.12	\$17.76	\$6.32	35.6%
					\$6.96	\$1.16	16.7%
<b>Machinery</b>					\$109.47		
Fuel - Gas	2.8	gal	\$2.20	\$6.16	\$171.67	-\$62.20	-36.2%
Fuel - Diesel	28.75	gal	\$1.95	\$56.06	\$11.62	-\$5.46	-47.0%
Lube	1	ac	\$9.35	\$9.35	\$100.38	-\$44.32	-44.1%
Machinery Repairs	1	ac	\$37.90	\$37.90	\$16.80	-\$7.45	-44.3%
					\$42.87	-\$4.97	-11.6%
<b>Labor:</b>					\$125.72		
Labor (machine)	5.08	hrs	\$15.60	\$79.25	\$135.29	-\$9.57	-7.1%
Labor (irrigation - cp)	1.0	hrs	\$11.05	\$11.05	\$87.31	-\$8.06	-9.2%
Labor (other)	3.85	hrs	\$9.20	\$35.42	\$8.57	\$2.48	28.9%
					\$39.41	-\$3.99	-10.1%
<b>Storage:</b>					\$236.87		
Storage Operating Costs	255	cwt	\$0.873	\$222.62	\$202.97	\$33.90	16.7%
Potato Storage System Repairs	1	ac	\$14.25	\$14.25	\$189.22	\$33.40	17.6%
					\$13.75	\$0.50	3.6%
<b>Other:</b>					\$147.92		
Crop Insurance	1	ac	\$50.00	\$50.00	\$143.30	\$4.62	3.2%
Certification	1	ac	\$26.00	\$26.00	\$50.00	\$0.00	0.0%
Tagging	1	ac	\$30.00	\$30.00	\$24.00	\$2.00	8.3%
Fees	262	cwt	\$0.16	\$41.92	\$30.00	\$0.00	0.0%
					\$39.30	\$2.62	6.7%
				\$0.00			
Operating Interest @ 6.75%				\$29.10	\$30.12	-\$1.02	-3.4%

Table 23. 2009 Irrigated Russet Burbank G3 Seed Potatoes With On-Farm Storage for Eastern Idaho: Caribou, Fremont and Teton Counties with Comparison to 2008.

Final 11/12/2009

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre	2008		
Total Operating Costs				\$1,548	\$1,527	\$21.09	1.4%
Operating Costs per Cwt Based on Total Yield				\$5.63	\$5.55	\$0.08	1.4%
Operating Costs per Cwt Based on Seed Only & Adjusted Operating Costs*				\$5.83	\$5.75	\$0.08	1.4%
Net Returns Above Operating Expenses				\$1,337	\$721	\$616	
<b>Ownership Costs:</b>							
Potato Storage System Depreciation & Interest				\$130.00	\$125.00	\$5.00	4.0%
Tractors & Equipment Insurance				\$5.65	\$5.09	\$0.56	11.0%
Tractors & Equipment Depreciation & Interest				\$227.00	\$200.85	\$26.15	13.0%
Irrigation Equipment Depreciation & Interest							
Land **				\$325.00	\$275.00	\$50.00	18.2%
Overhead				\$42.00	\$40.00	\$2.00	5.0%
Management Fee				\$140.00	\$110.00	\$30.00	27.3%
Total Ownership Costs				\$870	\$756	\$113.71	15.0%
Ownership Costs per Cwt Based on Total Yield				\$3.16	\$2.75	\$0.41	15.0%
Ownership Costs per Cwt Based on Seed Only & Adjusted Ownership Costs*				\$3.33	\$2.89	\$0.45	15.5%
Total Costs per Acre				\$2,417	\$2,282	\$134.80	5.9%
Total Cost per Cwt Based on Total Yield				\$8.79	\$8.30	\$0.49	5.9%
Total Cost per Cwt Based on Seed Only and Adjusted Total Costs*				\$9.17	\$8.64	\$0.53	6.1%
Returns to Risk				\$468	-\$35	\$503	

Notes

\* Costs are adjusted by subtracting revenue received from tops before dividing by seed yield

\* Revenue from tops is apportioned as follows: 75% operating and 25% ownership

\*\* Includes irrigation system ownership costs.

Blue font indicates an increase.

A red font indicates a decrease.

A green font indicates a change in product or procedure to derive the cost

Procedural changes can result in different costs than were published the previous year

**Seed Only**

**Breakeven Analysis:**

	Yield		
	- 5%	Base	+ 5%
	Price		
	242.25	255	267.75
Operating Cost Breakeven	\$6.14	\$5.83	\$5.56
Ownership Cost Breakeven	\$3.51	\$3.33	\$3.17
Total Cost Breakeven	\$9.65	\$9.17	\$8.73
	Price		
	\$10.45	\$11.00	\$11.55
Operating Cost Breakeven	142.4	135.2	128.8
Ownership Cost Breakeven	81.3	77.2	73.6
Total Cost Breakeven	223.7	212.5	202.4

Date:

User's Name:

Address: