Southcentral Idaho: Magic Valley
Russet Burbank Potatoes: Production and Storage Costs

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Background and Assumptions

The University of Idaho's costs and returns estimates are based on economic costs, not accounting costs. All resources are valued at a market rate or "opportunity cost". Input prices are

furrow at planting. Seven foliar insecticides are applied by air throughout the growing season. Eight fungicide applications are made to control a number of different diseases. One fungicide is soil applied at planting, and seven foliar fungicides applications are made by air from late June through August. Fungicides are often tank-mixed with an insecticide. The seed treatment also contains a fungicide.

Potatoes receive 25 inches of water during the growing season, 1.0 inch in May, 6 inches in June, 9.0 inches in July, and 9 inches in August. One inch of water is applied pre-harvest in September, and 2.0 inches applied to the grain stubble the previous fall is also credited to potatoes, for a total of 28 inches.

Machinery

Machinery and equipment used to produce potatoes is shown in Tables 4 and 5. Equipment used in sorting and handling potatoes is not included. The repair and ownership costs for this equipment is, however, shown in Tables 1 and 2. Table 4 lists the field equipment and their hourly operating and ownership costs, while Table 5 lists the equipment and their annual ownership costs. Machinery ownership capital recovery cost is based on 75% of the replacement cost of a new piece of equipment, except for trucks. Truck prices are for a used vehicle with a new self-unloading bed. Capital recovery combines depreciation and interest into a single value. To keep machinery prices current between years in which a comprehensive survey is conducted, machinery prices are adjusted using USDA's Farm Machinery Prices Paid Index. Equipment prices are collected approximately every five years.

Labor and Management

The cost of labor used in this study includes a base wage rate, plus a percentage to account for various payroll taxes (FICA, SUTA & FUTA), and workman's compensation, as well as benefits such as paid vacation/personal leave days, health insurance and bonuses. Labor is classified by the type of work performed. Labor classifications, labor rates and payroll overhead are shown below.

Labor Values

Labor Class	Base Rate	Payroll Overhead	Effective Rate
General Farm Labor	$9.85	15%	$11.35
Truck Drivers	$13.35	15%	$15.35

to the Idaho Potato Commission and the National Potato Board, inspection fees paid to the Idaho Department of Agriculture, and membership fees paid to grower organizations. The consultant fee, listed under custom operating costs, includes soil and petiole sampling and irrigation scheduling.

Land rent is based on a one-year cash lease for potatoes and covers the ownership costs (depreciation, interest, and insurance) of the irrigation system. Since the charge for water, irrigation system repairs, and irrigation power costs are listed separately, the land rent may appear low because the land owner in many circumstances pays some or even all these expenses.

Budget Format

Table 1 shows both expected revenue, based a

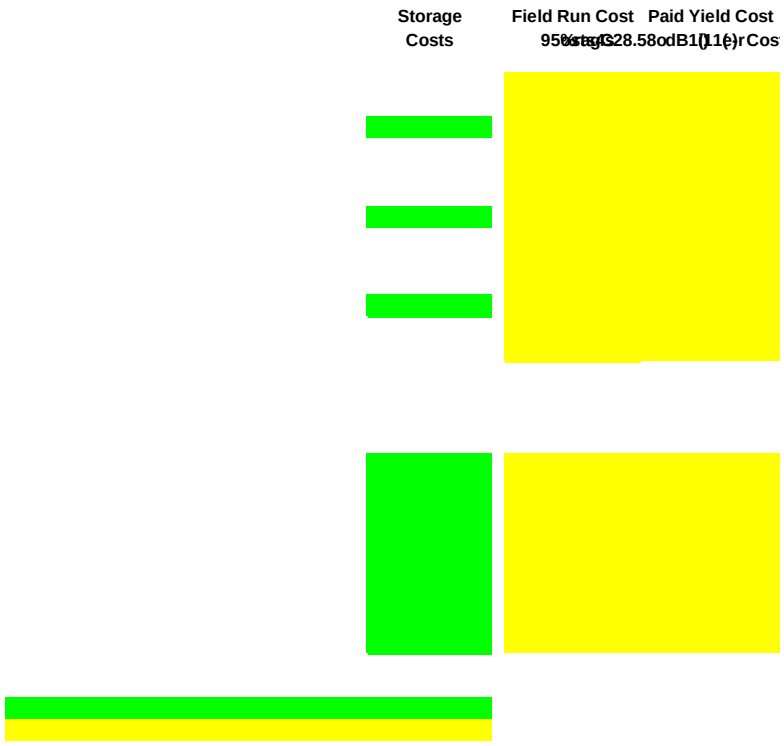
Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre
Gross Returns				
Potatoes	425.00	cwt	7.50	$3,187.50
Total Gross Returns				**$3,187.50**
Operating Inputs				
Seed:				**$350.75**
G-3 Russet Burbank Seed	23.00	cwt	13.50	310.50
Seed Cutting	23.00	cwt	1.75	40.25
Fertilizer:				**$341.35**
Dry Nitrogen - Preplant	155.00	lb	0.40	62.00
Dry P2O5	205.00	lb	0.38	77.90
K2O	215.00	lb	0.31	66.65
Sulfur	85.00	lb	0.22	18.70
Liquid Nitrogen	105.00	lb	0.50	52.50
Liquid P2O5	35.00	lb	0.56	19.60
Micronutrients & Foliars	2.00	acre	22.00	44.00
Pesticides & Chemicals:				**$267.05**
Seed Treatment	23.00	cwt	0.65	14.95
Admire Pro	8.00	oz	1.25	10.00
Quadris Flowable	8.00	fl oz	1.50	12.00
Outlook 6EC	20.00	fl oz	1.00	20.00
Prowl 3.3EC	2.00	pt	5.15	10.30
Metribuzin 75DF	0.75	lb	11.90	8.93
Other:				**7.28**
Geab-al arm puboe	2.26		11.35	25.65
	1.00	acre	7.50	7.50

Item	Quantity Per Acre	Unit	Price or Cost	Value or Cost/Acre
Ownership Costs:				
				5.75
				192.00
				64.00
				625.00
				42.00
				139.00
Total Ownership Costs				**$1,067.75**
Ownership Costs per Unit				**$2.51**
Total Costs per Acre				**$2,784.11**
Total Cost per Unit				**$6.55**
Returns to Risk				**$403.39**

Notes:

Breakeven Analysis:

	- 5%	Base	+ 5%
		Yield	
Price	**403.75**	**425**	**446.25**
Operating Cost Breakeven	$4.25	$4.04	$3.85
Ownership Cost Breakeven	$2.64	$2.51	$2.39
Total Cost Breakeven	$6.90	$6.55	$6.24
		Price	
Yield	**$7.13**	**$7.50**	**$7.88**
Operating Cost Breakeven	240.9	228.8	217.9
Ownership Cost Breakeven	149.9	142.4	135.6
Total Cost Breakeven	390.8	371.2	353.5


Storage Costs
Field Run Cost
Paid Yield Cost