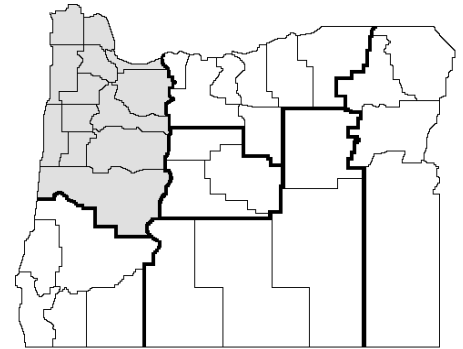


Enterprise Budget

Cauliflower, Processed Market, Willamette Valley Region

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This enterprise budget estimates the typical per-acre costs for producing cauliflower in the Willamette Valley for the processed market. It should be used as a guide to estimate your actual costs and does not represent any specific farm.

The major assumptions used in constructing this budget are discussed below. An attempt has been made to report typical cultural practices used in processed market, cauliflower production; however, this does not represent the only production method. Assistance provided by area producers is greatly appreciated.

Typical Farm

The typical farm growing processed market vegetables, conventionally and organically in the Willamette Valley consists of 1000 total tillable acres. Other crops include sweet corn, broccoli, bush beans, and grass seed. It has four tractors pulling various pieces of equipment and mechanical harvester.

Land and Irrigation

This budget is based on 50 acres of cauliflower production. Average production is 6 tons per acre at a gross price to the grower of \$350 per ton.

The land is owned, however, a \$200 per acre lease rate is charged as a return on investment to the owner for his/her investment in the land, and property taxes of \$20 per acre are charged as a fixed cash cost.

Irrigation equipment costs are based on a good used system with a \$50 per acre per year repair and maintenance cost. The irrigation system is composed of "overhead" types of systems such as travelers, linear pivots and/or permanent big guns. Pumping expenses are based on electricity costs of \$3.50 per inch of water applied during the growing season.

Labor

General hand labor is hired at a rate of \$11 per hour, and tractor drivers are paid \$16.50 per hour, both of which include workers compensation, unemployment insurance, and other labor overhead expenses.

Capital

Interest on operating capital (8 percent) is treated as a cash expense. One-half of the cash expenses are borrowed for a 6 month period. Interest on intermediate and long term capital (8 percent) is treated as a non-cash opportunity cost to the owner.

Machinery and Equipment

The machinery and equipment used in the budget reflect the typical machinery complement for a 1000-acre farm growing processed market vegetables in the Willamette Valley.

A detailed breakdown of machinery values is shown in Table 2. Estimated machinery costs are shown in Table 3, assuming straight line depreciation. The machinery costs are estimated based on the total farm use of the machinery. Table 4 shows the per acre labor, variable, and fixed costs for certain machinery operations in the field.

Gasoline costs \$2.50 per gallon, and diesel costs \$2.50 per gallon.

Operations

The cultural operations are listed approximately in the order in which they are performed. A 225-hp tractor is used to pull the moldboard plow and disk. A 150-hp tractor is used to pull the harrow/roller packer, rotovator, and field cultivator. A 110-hp tractor is used to pull the fertilizer spreader and harvest aid. A 70-hp tractor is used to pull the row crop planter and flail mower. Table 1 shows operation rates and units. Fractional rates indicate operation applies to more than one crop cycle with costs allocated proportionally. Total costs for custom services such as liming are allocated as materials.

Break even Analysis

Tables 5 and 6 show returns per acre for cash and total costs at various yields and prices. Refer to table footnotes for interpretations.

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EXTENSION SERVICE

Table 1. Cauliflower, Processed Market, 2010, \$/acre economic costs and returns

GROSS INCOME		Quantity	Unit	\$/Unit	Total	Price/Ton	Your Income	
Cauliflower		6.00	Ton	\$350	\$2,100	\$350		
VARIABLE CASH COSTS								
	Descript	Units	Labor	Mach.	Materials	Total	Cost/Ton	Your Cost
<i>Field Preparations & Planting</i>								
	Tandem Disk Harrow	2.00 x/acre	3.39	8.59	0.00	11.98	2.00	
	Mold Board Plow	1.00 x/acre	2.13	5.25	0.00	7.39	1.23	
	Harrow/Roller Packer	1.00 x/acre	1.52	3.83	65.00	70.36	11.73	
	Preplant Fert.	\$65						
	Field Cultivator	2.00 x/acre	5.86	15.04	0.00	20.89	3.48	
	Rotovator	1.00 x/acre	3.81	10.98	20.00	34.79	5.80	
	Herbicide	\$20						
	Transplant - Custom	1.00 x/acre	0.00	0.00	400.00	400.00	66.67	
	Transplants	\$250						
	Custom work	\$150						
	Cultivating weeds	2.00 x/acre	1.69	3.68	0.00	5.37	0.90	
	Fertilize	2.00 x/acre	1.39	1.95	65.00	68.33	11.39	
	Top-dress Fert.	\$65						
	Self-Propelled Boom Sprayer	2.00 x/acre	0.86	0.93	40.00	41.79	6.97	
	Insecticide	\$20						
	Irrigation		55.00	0.00	92.00	147.00	24.50	
	Labor, \$11.00	5.00 hours						
	Electricity, \$3.50	12.00 acre-inch						
	Maint. & Repairs, \$50.00	1.00 x/acre						
<i>Harvesting</i>								
	Hand Harvest Labor	36.00 x/acre	396.00	0.00	0.00	396.00	66.00	
	Bin Trailer	4.00 x/acre	37.71	46.62	0.00	84.33	14.06	
	Harvest Aid	4.00 x/acre	37.80	51.95	0.00	89.75	14.96	
	Truck	4.00 x/acre	0.00	14.90	0.00	14.90	2.48	
<i>Post-Harvest</i>								
	Flail Crop Residue	1.00 x/acre	3.05	4.48	0.00	\$7.53	\$1.26	
	Soil Test	1.00 x/acre	\$0.00	\$0.00	\$2.00	\$2.00	\$0.33	
	Lime application, custom	0.25 x/acre	0.00	0.00	75.00	75.00	12.50	
<i>Other Costs</i>								
	Pickup & ATV	1.00 x/acre	0.00	5.31	0.00	5.31	0.88	
	Interest: operating capital	6.0 months	<u>0.00</u>	<u>0.00</u>	<u>59.31</u>	<u>59.31</u>	<u>9.88</u>	
Total variable costs			550.22	173.49	818.31	1,542.03	257.00	
FIXED CASH COSTS					Unit	Total	Cost/Ton	
	Property insurance	1.00 x/acre			acre	25.00	4.17	
	Property taxes	1.00 x/acre			acre	20.00	3.33	
	Land Rent	1.00 x/acre			acre	<u>200.00</u>	<u>33.33</u>	
Total fixed cash costs						245.00	40.83	
FIXED NON-CASH COSTS					Unit	Total	Cost/Ton	
	Machinery and equip - depreciation, interest & insurance				acre	119.58	19.93	
	Pickups, truck & ATV - depreciation, interest & insurance				acre	<u>14.29</u>	<u>2.38</u>	
Total fixed non-cash costs						133.87	22.31	
Total fixed costs						378.87	63.14	
Total of all costs per acre						\$1,920.90	\$320.15	
Net projected returns						\$179.10	\$29.85	

Table 2. Machinery Cost Assumptions

Machine	Size or description	Market value	Hours or <i>miles</i> of annual use	Expected life (years)	Salvage Value
Tractor # 1	4 Wheel dr 225 hp	\$155,000	600	20	\$19,888
Tractor # 2	4 Wheel dr 150 hp	92,000	1,370	20	11,804
Tractor # 3	4 Wheel dr 110 hp	70,000	400	20	8,981
Tractor # 4	2 Wheel dr 70 hp	40,000	980	20	5,132
Tandem Disk Harrow	21 ft	16,500	250	15	1,584
Mold Board Plow	15 ft	16,200	150	15	1,555
Field Cultivator	27 ft	10,000	350	15	960
Harrow/Roller Packer	15 ft	26,900	185	15	2,582
Rotovator	14 ft	15,700	200	15	1,507
Fertilizer Spreader	40 ft spinner broadcast	5,400	200	10	954
Flail Mower	15 ft	10,000	100	20	973
Harvest Aid	36 ft conveyor	17,500	100	20	2,000
Bin Trailer	Wagon	2,800	100	10	495
Self-propelled Boom Sprayer	60 ft	135,000	200	10	5,658
Pickup	3/4 ton 4x4	25,000	12,000	10	9,857
Truck	2 ton	30,000	2,000	20	4,515
ATV	4 wheeler	6,000	500	10	1,772

Table 3. Machinery Cost Calculations

Machine	Size or description	--- Variable costs ---		---- Fixed costs ----		Total Cost
		Fuel & Lube	Repairs & Maint.	Depr. & Interest	Insurance	
----- Costs per hour -----						
Tractor # 1	4 Wheel dr 225 hp	\$28.75	\$5.58	\$22.92	\$1.31	\$58.56
Tractor # 2	4 Wheel dr 150 hp	23.00	7.56	5.96	0.34	36.86
Tractor # 3	4 Wheel dr 110 hp	17.25	1.68	15.53	0.89	35.34
Tractor # 4	2 Wheel dr 70 hp	14.38	5.49	3.62	0.21	23.69
Tandem Disk Harrow	21 ft	0	7.49	6.87	0.22	14.58
Mold Board Plow	15 ft	0	6.27	11.24	0.36	17.87
Field Cultivator	27 ft	0.00	5.24	2.97	0.09	8.31
Harrow/Roller Packer	15 ft	0.00	10.92	15.14	0.48	26.54
Rotovator	14 ft	0.00	16.96	8.17	0.26	25.39
Row Crop Cultivation	15 ft	0	3.75	3.07	0.10	6.92
Chisel Plow	15 ft	0.00	9.03	7.91	0.25	17.19
Fertilizer Spreader	40 ft spinner broadcast	0.00	4.19	3.49	0.10	7.78
Flail Mower	15 ft	0.00	4.40	8.90	0.33	13.63
Harvest Aid	36 ft conveyor	0.00	8.00	15.55	0.59	24.14
Bin Trailer	Wagon	0	0.53	3.62	0.10	4.25
Self-propelled Boom Sprayer	60 ft	8.63	9.09	92.80	7.38	117.91
----- Costs per mile -----						
Pickup	3/4 ton 4x4	\$0.24	\$0.05	\$0.24	\$0.08	\$0.62
Truck	2 ton	0.86	1.00	1.33	0.79	3.98
----- Costs per acre -----						
ATV	4 wheeler	\$1.73	\$0.11	\$1.47	\$0.45	\$3.75

Table 4. Estimated Cost of Each Operation with Power Unit

Operation	Tractor	Miles per hour	Acres per hour	Labor costs per acre	-- Machine costs --		Total costs per acre
					Variable costs per acre	Fixed costs per acre	
Tandem Disk Harrow	Tractor # 1	4.50	9.74	\$1.69	\$4.29	\$3.22	\$9.20
Mold Board Plow	Tractor # 1	5.00	7.73	2.13	5.25	4.63	12.02
Field Cultivator	Tractor # 2	7.00	19.48	0.85	1.84	0.48	3.17
Harrow/Roller Packer	Tractor # 2	7.00	10.82	1.52	3.83	2.02	7.38
Rotovator	Tractor # 2	3.00	4.33	3.81	10.98	3.40	18.19
Fertilizer Spreader	Tractor # 3	7.00	23.77	0.69	0.97	0.84	2.51
Harvest Aid	Tractor # 3	0.50	1.75	9.45	12.99	18.64	41.08
Row Crop Planter	Tractor # 4	5.50	6.50	2.54	6.52	2.32	11.38
Flail Mower	Tractor # 4	3.50	5.41	3.05	4.48	2.41	9.95
Self-propelled Boom Sprayer		7.00	38.20	0.43	0.46	2.62	3.52

Table 5. Estimated Per Acre Returns Over CASH Costs at Varying Yields & Prices¹

Price/Ton	----- Tons per Acre -----						
	4.00	4.67	5.34	6.00	6.67	7.34	8.00
\$200	(\$987)	(\$853)	(\$719)	(\$587)	(\$453)	(\$319)	(\$187)
\$250	(787)	(620)	(452)	(287)	(120)	48	213
\$300	(587)	(386)	(185)	13	214	415	613
\$350	(387)	(153)	82	313	547	782	1,013
\$400	(187)	81	349	613	881	1,149	1,413
\$450	13	314	616	913	1,214	1,516	1,813
\$500	213	548	883	1,213	1,548	1,883	2,213

Table 6. Estimated Per Acre Returns Over TOTAL ECONOMIC Costs at Varying Yields & Prices²

Price/Ton	----- Tons per Acre -----						
	4.00	4.67	5.34	6.00	6.67	7.34	8.00
\$200	(\$1,121)	(\$987)	(\$853)	(\$721)	(\$587)	(\$453)	(\$321)
\$250	(921)	(753)	(586)	(421)	(253)	(86)	79
\$300	(721)	(520)	(319)	(121)	80	281	479
\$350	(521)	(286)	(52)	179	414	648	879
\$400	(321)	(53)	215	479	747	1,015	1,279
\$450	(121)	181	482	779	1,081	1,382	1,679
\$500	79	414	749	1,079	1,414	1,749	2,079

¹ Table 5 estimates the returns over cash costs per acre based on varying yields and prices. In this budget, a grower should expect a net return of \$313 per acre, based upon a yield of 6 tons at \$350 per ton. At this yield, the breakeven price is approximately \$298 per ton.

² Table 6 estimates the returns over total economic costs per acre based on varying yields and prices. In this budget a grower should expect a net return of \$179 per acre, based on 6 tons at \$350 per ton. At this yield, the breakeven price is approximately \$320 per ton.