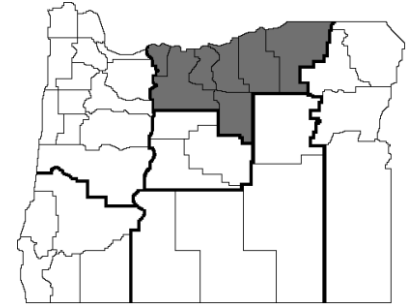


Enterprise Budget

Wheat (Winter) Following a Non-cereal Crop, Direct Seed, Annual Cropping System, 18-24 inch Precipitation Zone, North Central Region

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This enterprise budget estimates the typical costs and returns of producing winter wheat followed by a non-cereal crop in an 18-24 inch precipitation zone. It should be used as a guide to estimate actual costs and returns and is not representative of any particular farm. The major assumptions used in constructing this budget are discussed below. Assistance provided by area producers and agribusinesses is greatly appreciated.

Cropping Pattern

This budget is based on a 2,000-acre farm with 1,000 acres in winter wheat production each year following a non-cereal crop. The average annual precipitation is 18 to 24-inches. Wheat yields in this cropping system range from 80 to 130 bushels per acre. A typical yield in this budget is 110 bushels per acre.

Land

A land lease charge of \$318 per acre is included to represent the cost of leasing or owning land. This correlates to the payment a landowner would receive under a 35 percent crop-share lease, the most common arrangement for annual or continuous cropping of winter wheat in this area, under our assumed prices and yields.

Labor

Typically tractor drivers and harvest labor cost approximately \$12 per hour, all of which include social security, worker's compensation, unemployment insurance, and other labor overhead expenses. For this study, owner labor is valued at the same rate as tractor driver rates, and all labor is assumed to be a cash cost. Labor hours are calculated based on machinery hours.

Capital

Interest on operating capital (5 percent) is treated as a cash expense. One-third of the cash expenses are borrowed for 12-months. Interest on intermediate (6 percent) and long-term capital (4 percent) is treated as a non-cash opportunity cost to the owner.

Machinery and Equipment

The machinery and equipment used in this budget is sufficient for a 2,000-acre farm in an 18-24 inch precipitation zone. The machinery and equipment hours

reflect producing both winter wheat and non-cereal crops, therefore hours may be higher for non-cereal crops than wheat reflecting the additional operations required after a winter wheat crop. A detailed breakdown of machinery values is shown in Table 2. Note: Precision technologies, such as GPS auto-steer and spray boom controller, are included in this budget, which increase machine efficiencies and lowers labor and machinery and equipment hours. Estimated machinery costs are shown in Table 3. The machinery costs are estimated based on the total farm use of the machinery. Gasoline costs \$4.02, on-road diesel \$4.10 and off-road diesel \$3.55 per gallon. Table 4 shows the labor, variable, and fixed costs for certain machinery operations.

Operations

The cultural operations are listed approximately in the order in which they are performed. A 485-hp crawler tractor is used for pulling the bank out wagon, chisel, field sprayer, and drill. A combine is used to harvest both winter wheat and peas. The grain is hauled to Pendleton. A \$0.05 per bushel assessment is paid to the Wheat Commission. A miscellaneous charge of \$10 per acre, which includes additional labor, repairs and maintenance, and materials not included in field operations.

Results

The price for wheat is \$8.50 per bushel, the average price at Portland in 2012. The total gross income in this budget does not include any government program payments. Variable cash production costs were \$212 per acre, giving a net return above variable cash costs of \$723 per acre. Total costs were \$612 per acre when all costs are considered. A break-even price of \$1.93 per bushel would be required to cover variable cash costs, and \$5.56 per bushel to cover total costs. Tables 5 and 6 show the returns per acre for cash and total costs at various yields and prices.

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Table 1. Winter Wheat, Following a Non-Cereal Crop, Direct Seed, Annual Cropping, 18-24 inches Precipitation Zone, \$/acre economic costs and returns.

GROSS INCOME							Quantity	Unit	\$/Unit	Total	Price/Bu	Your Income
Winter Wheat							110	bushels	8.50	<u>\$935.00</u>	<u>\$8.50</u>	_____
Total gross income										<u>\$935.00</u>	<u>\$8.50</u>	_____
VARIABLE CASH COSTS			Description	Labor	Machinery	Materials	Total	Cost/Bu	Your Cost			
Land Preparation												
Chisel plow			1.00 appl.	0.69	4.85	0.00	5.53	0.05	_____			
Crop Production												
Drill seed			1.00 appl.	0.86	5.56	107.75	114.17	1.04	_____			
Wheat seed			75.00 lbs									
			\$ 0.19 /lb									
Nitrogen			150.0 lbs									
			\$ 0.60 /lb									
Sulfur			15.0 lbs									
			\$ 0.70 /lb									
Herbicides			3.00 appl.	0.87	7.01	33.00	40.88	0.37	_____			
Chemicals			\$ 11.00 /acre									
Harvesting Operations												
Combine grain				0.69	3.01	0.00	3.70	0.03	_____			
Hauling grain				2.27	8.28	0.00	10.54	0.10	_____			
Wheat commission			\$ 0.05 /bu	0.00	0.00	5.50	5.50	0.05	_____			
Other Charges												
Pickup & truck repairs, fuel & lube				0.00	17.29	0.00	17.29	0.16	_____			
Precision technologies				0.00	0.54	0.00	0.54	0.00	_____			
Other machinery				0.00	0.40	0.00	0.40	0.00	_____			
Miscellaneous				4.47	1.00	5.00	10.47	0.10	_____			
Interest: operating capital			12.00 mons	<u>0.00</u>	<u>0.00</u>	<u>3.45</u>	<u>3.45</u>	<u>0.03</u>	_____			
Total variable cash costs				\$9.84	\$47.94	\$154.70	\$212.48	\$1.93				
Total gross income minus variable cash costs									\$722.52	\$6.57		
FIXED CASH COSTS							Unit	Total	Cost/Bu	Your Cost		
Insurance - Hail, Fire & Crop Revenue Coverage ¹							acre	30.50	0.28	_____		
Conservation Practices							acre	<u>0.30</u>	<u>0.00</u>	_____		
Total fixed cash costs								\$30.80	\$0.28	_____		
Total gross income minus variable plus fixed cash costs									\$691.72	\$6.29	_____	
FIXED NON-CASH COSTS							Unit	Total	Cost/Bu	Your Cost		
Machinery and equipment - depreciation & interest							acre	38.73	0.35	_____		
Pickup, truck & ATV - depreciation & interest							acre	11.74	0.11	_____		
Land interest charge							acre	<u>317.90</u>	<u>2.89</u>	_____		
Total non-cash costs								\$368.37	\$3.35	_____		
Total fixed costs								\$399.17	\$3.63	_____		
Total of all costs per acre									\$611.65	\$5.56	_____	
Net projected returns									\$323.35	\$2.94	_____	

¹Hail & Fire (\$4.50/acre) & 85% Crop Revenue Coverage at (\$28/acre).

Table 2. Machinery Cost Assumptions

Machine	Size	Current Market Value	Hours or Miles of Annual	Expected Life (Years)
Tractor, rubber tracked	485 hp	\$200,000	705	15
Combine, used	30' Hillside	125,000	115	10
Swather	16'	50,000	74	10
Chisel plow	40'	54,500	115	15
Cultivator	45'	44,000	51	15
Rotary mower	50'	53,000	174	15
Field sprayer	90'	55,000	96	15
Grain drills	36'	35,100	143	15
Bank out wagon	850 bushel capacity	49,000	126	20
Pickup, two	3/4 ton 4X4, new	80,000	30,000	10
Truck & trailer	Semi, used	52,000	3,000	10
Truck	2 1/2 ton, older	18,000	2,400	10
ATV	4-wheeler new	9,500	3,000	5
Precision technologies	GPS auto-steer, etc.	21,550	N/A	7
Other machinery		16,000	N/A	10

Table 3. Machinery Cost Calculations

Machine	Size	---- Variable Costs ----		---- Fixed Costs ----		Total Cost
		Fuel & Lube	Repairs & Maint.	Depreciation	Interest	
----- Costs per Hour -----						
Tractor, rubber tracked	485 hp	\$40.83	\$13.40	\$15.23	\$17.02	\$86.48
Combine, used	30' Hillside	29.80	22.75	88.48	65.46	206.50
Swather	16'	16.33	20.05	55.06	40.73	132.17
Chisel plow	40'	0.00	30.36	28.67	28.54	87.57
Cultivator	45'	0.00	24.51	52.08	51.85	128.43
Rotary mower	50'	0.00	12.72	18.39	18.31	49.42
Field sprayer	90'	0.00	42.68	34.36	34.20	111.24
Grain drills	36'	0.00	23.48	14.77	14.71	52.96
Bank out wagon	850 bushel capacity	0.00	11.76	17.57	1.47	30.80
----- Costs per Mile -----						
Pickup, costs per vehicle	3/4 ton 4X4, new	\$0.46	\$0.42	\$0.22	\$0.16	\$1.26
Truck & trailer	Semi, used	0.94	0.83	1.43	1.04	4.24
Truck	2 1/2 ton, older	0.92	0.29	0.62	0.45	2.28
ATV	4-wheeler new	3.85	0.02	0.52	0.19	4.58
----- Costs per Acre -----						
Precision technologies	GPS auto-steer, etc.	\$0.00	\$0.54	\$1.54	\$0.65	\$2.72
Other machinery		0.00	0.40	0.80	0.48	1.68

Table 4. Estimated Cost of Each Operation with Power-Unit.

Operation	Tractor	Miles per Hour	Acres per Hour	--- Machine Costs ---			Total Cost per Acre
				Labor Cost per Acre	Variable Cost per Acre	Fixed Cost per Acre	
Combine, used	N/A	6.0	17.46	\$0.69	\$3.01	\$8.82	\$12.52
Swather	N/A	10.0	13.58	0.88	2.68	7.06	10.62
Chisel plow	Tractor, rubber tracked	4.0	17.46	0.69	4.85	5.12	10.66
Cultivator	Tractor, rubber tracked	4.0	19.64	0.61	4.01	6.93	11.55
Rotary mower	Tractor, rubber tracked	4.0	23.03	0.52	2.91	2.99	6.42
Field sprayer	Tractor, rubber tracked	4.0	41.46	0.29	2.34	2.43	5.06
Grain drills	Tractor, rubber tracked	4.0	13.97	0.86	5.56	4.42	10.84

Table 5. Estimated Per Acre Returns Over Cash Costs at Varying Yields and Prices.

Price/Bushel	----- Bushels per Acre -----						
	95	100	105	110	115	120	125
\$ 7.00	\$ 421.72	\$ 456.72	\$ 491.72	\$ 526.72	\$ 561.72	\$ 596.72	\$ 631.72
\$ 7.50	\$ 469.22	\$ 506.72	\$ 544.22	\$ 581.72	\$ 619.22	\$ 656.72	\$ 694.22
\$ 8.00	\$ 516.72	\$ 556.72	\$ 596.72	\$ 636.72	\$ 676.72	\$ 716.72	\$ 756.72
\$ 8.50	\$ 564.22	\$ 606.72	\$ 649.22	\$ 691.72	\$ 734.22	\$ 776.72	\$ 819.22
\$ 9.00	\$ 611.72	\$ 656.72	\$ 701.72	\$ 746.72	\$ 791.72	\$ 836.72	\$ 881.72
\$ 9.50	\$ 659.22	\$ 706.72	\$ 754.22	\$ 801.72	\$ 849.22	\$ 896.72	\$ 944.22
\$ 10.00	\$ 706.72	\$ 756.72	\$ 806.72	\$ 856.72	\$ 906.72	\$ 956.72	\$ 1,006.72
\$ 10.50	\$ 754.22	\$ 806.72	\$ 859.22	\$ 911.72	\$ 964.22	\$ 1,016.72	\$ 1,069.22

Table 6. Estimated Per Acre Returns Over Total Costs at Varying Yields and Prices.

Price/Bushel	----- Bushels per Acre -----						
	95	100	105	110	115	120	125
\$ 7.00	\$ 53.35	\$ 88.35	\$ 123.35	\$ 158.35	\$ 193.35	\$ 228.35	\$ 263.35
\$ 7.50	\$ 100.85	\$ 138.35	\$ 175.85	\$ 213.35	\$ 250.85	\$ 288.35	\$ 325.85
\$ 8.00	\$ 148.35	\$ 188.35	\$ 228.35	\$ 268.35	\$ 308.35	\$ 348.35	\$ 388.35
\$ 8.50	\$ 195.85	\$ 238.35	\$ 280.85	\$ 323.35	\$ 365.85	\$ 408.35	\$ 450.85
\$ 9.00	\$ 243.35	\$ 288.35	\$ 333.35	\$ 378.35	\$ 423.35	\$ 468.35	\$ 513.35
\$ 9.50	\$ 290.85	\$ 338.35	\$ 385.85	\$ 433.35	\$ 480.85	\$ 528.35	\$ 575.85
\$ 10.00	\$ 338.35	\$ 388.35	\$ 438.35	\$ 488.35	\$ 538.35	\$ 588.35	\$ 638.35
\$ 10.50	\$ 385.85	\$ 438.35	\$ 490.85	\$ 543.35	\$ 595.85	\$ 648.35	\$ 700.85