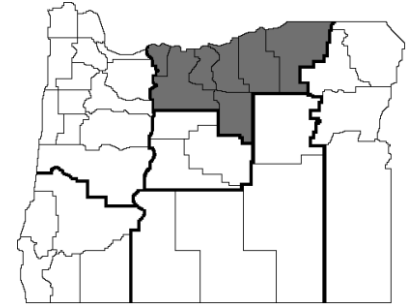


Enterprise Budget

Wheat (Winter) Following Fallow, Direct Seed, 12-18 inch Precipitation Zone, North Central Region

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This enterprise budget estimates the typical costs and returns of producing winter wheat using direct seed production practices in a 12-18 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 3,800-acre farm with 1,900 acres in winter wheat production each year following 1,900 acres of fallow. The average annual precipitation is 12 to 18-inches. Wheat yields in this cropping system range from 50 to 80 bushels per acre. A typical yield in this budget is 65 bushels per acre.

Land

A land lease charge of \$188 per acre is included to represent the cost of leasing or owning land. This correlates to the payment a landowner would receive under a one-third crop-share lease, the most common arrangement 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 3,800-acre farm in an 12-18 inch

precipitation zone. 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, rotary mower, field sprayer, and drill. Grain is harvested using a combine, a bank out wagon, semi-truck and trailer and an older truck. 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 \$173 per acre, giving a net return above variable cash costs of \$379 per acre. Total costs were \$431 per acre when all costs are considered. A break-even price of \$2.66 per bushel would be required to cover variable cash costs, and \$6.63 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 After Fallow Rotation, Direct Seed, 12-18 inches Precipitation Zone, \$/acre economic costs and returns.

GROSS INCOME							Quantity	Unit	\$/Unit	Total	Price/Bu	Your Income
Winter Wheat							65	bushels	8.50	\$552.50	\$8.50	_____
Total gross income										\$552.50	\$8.50	_____
VARIABLE CASH COSTS			Description	Labor	Machinery	Materials	Total	Cost/Bu	Your Cost			
Fallow establishment & maintenance												
	Rotary mower	1.00	appl.	1.06	5.90	0.00	6.96	0.11	_____			
	Herbicides	3.00	appl.	0.87	12.07	33.00	45.93	0.71	_____			
	Chemicals	\$11.00	/acre						_____			
Crop Production												
	Drill seed	1.00	appl.	0.61	3.72	58.58	62.92	0.97	_____			
	Wheat seed	75.00	lbs						_____			
		\$ 0.19	/lb						_____			
	Nitrogen	70.00	lbs						_____			
		\$ 0.60	/lb						_____			
	Sulfur	10.00	lbs						_____			
		\$ 0.70	/lb						_____			
	Herbicides	1.00	appl.	0.29	4.02	12.00	16.31	0.25	_____			
	Chemicals	\$11.00	/acre						_____			
Harvesting Operations												
	Combine			0.69	3.01	0.00	3.70	0.06	_____			
	Hauling grain			2.27	8.36	0.00	10.62	0.16	_____			
	Wheat Commission	\$ 0.05	/bu	0.00	0.00	3.25	3.25	0.05	_____			
Other Charges												
	Pickup & truck repairs, fuel & lube			0.00	9.63	0.00	9.63	0.15	_____			
	Other machinery			0.00	0.42	0.00	0.42	0.01	_____			
	Miscellaneous			4.47	1.00	5.00	10.47	0.16	_____			
	Interest: operating capital	12.00	mons	<u>0.00</u>	<u>0.00</u>	<u>2.81</u>	<u>2.81</u>	<u>0.04</u>	_____			
Total variable costs				\$10.25	\$48.12	\$114.64	\$173.02	\$2.66	_____			
Total gross income minus variable costs							\$379.48	\$5.84	_____			
FIXED CASH COSTS							Unit	Total	Cost/Bu	Your Cost		
Insurance - Hail, Fire & Crop Revenue Coverage ¹							acre	<u>22.50</u>	<u>0.35</u>	_____		
Total fixed cash costs								22.50	\$0.35	_____		
Total gross income minus variable plus fixed cash costs								\$356.98	\$5.49	_____		
FIXED NON-CASH COSTS							Unit	Total	Cost/Bu	Your Cost		
Machinery and equipment - depreciation & interest							acre	\$38.46	0.59	_____		
Pickup, truck & ATV - depreciation & interest							acre	9.36	0.14	_____		
Land interest charge							acre	<u>187.85</u>	<u>2.89</u>	_____		
Total non-cash costs								\$235.68	\$3.63	_____		
Total fixed costs								\$258.18	\$3.97	_____		
Total of all costs per acre								\$431.19	\$6.63	_____		
Net projected returns								\$121.31	\$1.87	_____		

¹Hail & Fire (\$4.50/acre) & 85% Crop Revenue Coverage at (\$18/acre).

Table 2. Machinery Cost Assumptions

Machine	Size	Current Market Value	Hours or Miles of Annual Use	Expected Life (Years)
Tractor, rubber tracked	485 hp	\$200,000	567	15
Combine, used	30' Hillside	125,000	109	10
Rotary mower	26'	53,000	167	15
Field sprayer	90'	55,000	183	15
Air seeder	45'	145,000	97	15
Bank out wagon	850 bushel capacity	49,000	120	20
Pickup	3/4 ton 4X4, new	40,000	15,000	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	\$18.92	\$21.16	\$94.30
Combine, used	30' Hillside	29.80	22.75	93.14	68.91	214.60
Rotary mower	26'	0.00	12.72	19.08	18.99	50.79
Field sprayer	90'	0.00	112.52	90.32	89.92	292.77
Air seeder	45'	0.00	18.87	18.50	24.56	61.92
Bank out wagon	850 bushel capacity	0.00	9.60	0.24	0.16	10.00
----- Costs per Mile -----						
Pickup	3/4 ton 4X4, new	\$0.46	\$0.21	\$0.22	\$0.16	\$1.05
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	\$0.57	\$1.62	\$0.68	\$2.87
Other machinery		0.00	0.42	0.84	0.51	1.77

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

Operation	Tractor	Miles per Hour	Acres per Hour	Labor Cost per Acre	--- Machine Costs ---			Total Cost per Acre
					Variable Cost per Acre	Fixed Cost per Acre		
Combine, used	N/A	6.0	17.46	\$0.69	\$3.01	\$9.28	\$12.98	
Rotary mower	Tractor, rubber tracked	4.0	11.35	1.06	5.90	6.89	13.84	
Field sprayer	Tractor, rubber tracked	4.0	41.46	0.29	4.02	5.31	9.63	
Air seeder	Tractor, rubber tracked	4.5	19.64	0.61	3.72	4.23	8.57	

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

Price/Bushel	----- Bushels per Acre -----						
	50	55	60	65	70	75	80
\$ 7.00	\$ 154.48	\$ 189.48	\$ 224.48	\$ 259.48	\$ 294.48	\$ 329.48	\$ 364.48
\$ 7.50	\$ 179.48	\$ 216.98	\$ 254.48	\$ 291.98	\$ 329.48	\$ 366.98	\$ 404.48
\$ 8.00	\$ 204.48	\$ 244.48	\$ 284.48	\$ 324.48	\$ 364.48	\$ 404.48	\$ 444.48
\$ 8.50	\$ 229.48	\$ 271.98	\$ 314.48	\$ 356.98	\$ 399.48	\$ 441.98	\$ 484.48
\$ 9.00	\$ 254.48	\$ 299.48	\$ 344.48	\$ 389.48	\$ 434.48	\$ 479.48	\$ 524.48
\$ 9.50	\$ 279.48	\$ 326.98	\$ 374.48	\$ 421.98	\$ 469.48	\$ 516.98	\$ 564.48
\$10.00	\$ 304.48	\$ 354.48	\$ 404.48	\$ 454.48	\$ 504.48	\$ 554.48	\$ 604.48
\$10.50	\$ 329.48	\$ 381.98	\$ 434.48	\$ 486.98	\$ 539.48	\$ 591.98	\$ 644.48

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

Price/Bushel	----- Bushels per Acre -----						
	50	55	60	65	70	75	80
\$ 7.00	\$ (81.19)	\$ (46.19)	\$ (11.19)	\$ 23.81	\$ 58.81	\$ 93.81	\$ 128.81
\$ 7.50	\$ (56.19)	\$ (18.69)	\$ 18.81	\$ 56.31	\$ 93.81	\$ 131.31	\$ 168.81
\$ 8.00	\$ (31.19)	\$ 8.81	\$ 48.81	\$ 88.81	\$ 128.81	\$ 168.81	\$ 208.81
\$ 8.50	\$ (6.19)	\$ 36.31	\$ 78.81	\$ 121.31	\$ 163.81	\$ 206.31	\$ 248.81
\$ 9.00	\$ 18.81	\$ 63.81	\$ 108.81	\$ 153.81	\$ 198.81	\$ 243.81	\$ 288.81
\$ 9.50	\$ 43.81	\$ 91.31	\$ 138.81	\$ 186.31	\$ 233.81	\$ 281.31	\$ 328.81
\$10.00	\$ 68.81	\$ 118.81	\$ 168.81	\$ 218.81	\$ 268.81	\$ 318.81	\$ 368.81
\$10.50	\$ 93.81	\$ 146.31	\$ 198.81	\$ 251.31	\$ 303.81	\$ 356.31	\$ 408.81