

Enterprise Budgets

Prepared by the Economics Department, Utah State University

The following crop and livestock enterprise budgets were prepared by personnel at Utah State University with input from farmers and ranchers. These budgets are provided to assist farmers and ranchers in evaluating alternatives that may increase the profitability of their operation. The costs and returns commonly vary for a particular farm or ranch from those shown. Therefore, a column has been provided to adapt the budget to reflect the costs and returns for a specific farm or ranch enterprise.

Questions concerning these budgets should be referred to the appropriate contact individual in the Economics department at Utah State University in Logan at 435- 797-2310.

Budgets published in this and previous additions of Utah Agricultural Statistics as well as budgets for other crop and livestock enterprises may be found on the extension web page at Utah State University, <http://extension.usu.edu/>.

Index of Enterprise Budgets by Subject and Year Most Recently Published in Utah Agricultural Statistics, 1993-2008

Alfalfa Hay, establishment with oat hay	1998	Deer Hunt Pack Trip	1996
Alfalfa Hay, establishment, Grand County	1994	Floriculture	2004
Alfalfa Hay, irrigated, East Millard County	2001	Elk	1997
Alfalfa Hay, dryland, Box Elder County	2002	Grass Hay, Rich County	2006
Alfalfa Hay, Uintah County	2008	Grass Hay, Daggett County	2007
Alfalfa Haylage, Millard County	2001	Lawn Turf	2006
Apples, Utah County	1994	Machinery & Equipment Costs	2008
Barley, wheel-line irrigation, Cache County	2002	Manure & Waste Disposal, Dairy	1998
Beans - Dry edible, dryland	1993	Oat Hay, San Juan County	2003
Beef Cattle		Oats, San Juan County	2003
Background feeder cattle	2000	Onion Production	2005
Beef heifer replacement	1998	Ostrich	1995
Cow/calf	1997	Pasture, irrigated	1995
Cow/calf northern Utah	2004	Pasture, Native Meadow	1993
Cow/calf, southern Utah	2000	Pasture Establishment	1995
Cow/calf/yearling, Rich County	1996	Peaches, Box Elder County	1994
Cow/calf, Tooele & Duchesne Counties	2007	Pheasants	1995
Cull Cows	2006	Potatoes, chipper, Box Elder County	1994
Feeder cattle	2005	Pumpkin	1997
Feeder steer calves	2003	Raspberry	1996
Finish cattle	2000	Safflower, dryland	1999
Bison, Cow/Calf, 50 Cows	2001	Safflower, irrigated	2005
Canola, Spring irrigated	1996	Sheep, range	1997
Cantaloupe	2006	Soybean	1998
Cherries, Tart	1995	Swine, farrow to finish	1998
Corn for grain, Box Elder County	2002	Swine, Hog Finishing	1993
Corn Silage, Cache County	2002	Tomatoes	2003
Corn, Sweet	1996	Triticale	1996
CRP Contract, per acre	2001	Turkeys, Hen	2000
Custom Operators Rates	2007	Watermelons	1996
Dairy		Wheat, dryland	2008
Holstein Heifer Replacement	2001	Wheat, Spring, irrigated	1994
Jersey Heifer Replacement	2000	Wheat Straw Residue	1997
Milk Cows, Jersey	1998	Wheat, Soft White Winter, Irrigated, Box Elder Co	2000
Milk Cows, Holstein	2001		
Dairy Bull	1998		

Enterprise Budgets: Costs and Returns per acre from growing dryland hard red winter wheat using chemical fallow in Box Elder County, 2008.

Receipts	Quantity per acre	Unit	Price per Unit	Value per acre	Total	Your Values
Wheat	35	bushels	\$7.00	\$245.00		
Subtotal Receipts					\$245.00	
Operating costs						
Fallow Year						
Fall Chemical Fallow	1	acre	\$2.10	\$2.10		
May Chemical Fallow	1	acre	\$2.10	\$2.10		
July Chemical Fallow	1	acre	\$2.10	\$2.10		
Operations					\$6.30	
Herbicides (3 applications)						
Glyphosate (1qt/acre)	3	quart	\$12.40	\$37.20		
2,4-D LV6 Ester (½ pt/acre)	1.5	pints	\$2.83	\$4.25		
Surfactant (0.16 oz/acre)	0.8	oz	\$0.65	\$0.52		
Subtotal Herbicide Costs					\$41.97	
Subtotal Operating Costs for the Fallow Year					\$48.27	
Crop Year						
Fertilization						
Spring Fertilizer 46-0-0	35	units	\$0.97	\$33.95		
Application	1	acre	\$2.25	\$2.25		
Ally Extra	0.2	ounces	\$10.66	\$2.13		
Application	1	acre	\$3.00	\$3.00		
Planting						
Seed	65	pounds	\$0.20	\$13.00		
Starter Fertilizer 16-20-0-14	5	units	\$0.67	\$3.35		
Harvest						
Combine	1	acre	\$9.56	\$9.56		
Haul Grain	35	bushel	\$0.35	\$12.25		
Interest on operating capital			7.61%	547.00%		
Subtotal Operating Costs for the Crop Year					\$89.92	
Total Operating Costs for Fallow and Crop Years					\$138.19	
Net Returns above Operating Costs					\$106.81	
Ownership Costs						
425 HP 4WD Tractor		acre		\$0.75		
80' Herbicide Sprayer		acre		\$0.86		
Combine 30' Header		acre		\$10.57		
40' Deep Furrow Drill		acre		\$2.02		
					\$14.20	
Total Operating and Ownership Costs					\$152.39	
Net Returns to Owner (for unpaid labor, management, equity and risk)					\$92.61	

Prepared by Lyle Holmgren, Box Elder county agent, with input from local producers

Net Returns above Operating Costs for Various Prices and Yields

Price (\$ per bushel)	Production in bushels per acre					
	20	25	30	35	40	45
\$5.00	(\$32.94)	(\$9.69)	\$13.56	\$36.81	\$60.06	\$83.31
\$5.50	(\$22.94)	\$2.81	\$28.56	\$54.31	\$80.06	\$105.81
\$6.00	(\$12.94)	\$15.31	\$43.56	\$71.81	\$100.06	\$128.31
\$6.50	(\$2.94)	\$27.81	\$58.56	\$89.31	\$120.06	\$150.81
\$7.00	\$7.06	\$40.31	\$73.56	\$106.81	\$140.06	\$173.31
\$7.50	\$17.06	\$52.81	\$88.56	\$124.31	\$160.06	\$195.81
\$8.00	\$27.06	\$65.31	\$103.56	\$141.81	\$180.06	\$218.31
\$8.50	\$37.06	\$77.81	\$118.56	\$159.31	\$200.06	\$240.81
\$9.00	\$47.06	\$90.31	\$133.56	\$176.81	\$220.06	\$263.31

Enterprise Budgets: Costs and Returns per acre from growing dryland hard red winter wheat using conventional fallow in Box Elder County, 2008.

Receipts	Quantity per acre	Unit	Price per unit	Value per acre	Total	Your Values
Wheat	35	bushels	\$7.00	\$245.00		
Subtotal Receipts					\$245.00	
Operating costs						
Fallow Year						
Fall Chisel Plow	1	acre	\$4.55	\$4.55		
Spring Chisel Plow	1	acre	\$4.55	\$4.55		
Summer Weeding	2	acre	\$3.85	\$7.70		
Subtotal Operating Costs for the Fallow Year					\$16.80	
Crop Year						
Fertilization						
Anhydrous Amm.	45	units	\$0.79	\$35.69		
Application	1	acre	\$2.25	\$2.25		
Planting	1	acre	\$4.96	\$4.96		
Seed	65	pounds	\$0.20	\$13.00		
Herbicide						
Ally Extra	0.2	ounces	\$10.66	\$2.13		
2,4-D	0.75	pint	\$2.82	\$2.12		
Application	1	acre	\$3.00	\$3.00		
Harvest						
Combine	1	acre	\$9.56	\$9.56		
Haul Grain	35	bushel	\$0.35	\$12.25		
capital			7.61%	\$3.37		
Subtotal Operating Costs for the Crop Year					\$88.32	
Total Operating Costs for Fallow and Crop Years					\$105.12	
Net Returns above Operating Costs					\$139.88	
Ownership Costs						
425 HP 4WD Tractor		acre		1.78		
40' Chisel Plow + Weeder Attach		acre		\$0.65		
80' Herbicide Sprayer		acre		0.86		
Combine 30' Header		acre		10.57		
40' Deep Furrow Drill		acre		2.02		
Total Ownership Costs					\$15.88	
Total costs					\$121.00	
Net Returns to Owner (for unpaid labor, management, equity and risk)					\$124.00	

Prepared by Lyle Holmgren, Box Elder county agent, with input from local producers

Net Returns above Operating Costs for various prices and production

Production in bushels per acre

\$/bushel	20	25	30	35	40	45	50
\$4.50	(\$9.87)	\$10.88	\$31.63	\$52.38	\$73.13	\$93.88	\$114.63
\$5.00	\$0.13	\$23.38	\$46.63	\$69.88	\$93.13	\$116.38	\$139.63
\$5.50	\$10.13	\$35.88	\$61.63	\$87.38	\$113.13	\$138.88	\$164.63
\$6.00	\$20.13	\$48.38	\$76.63	\$104.88	\$133.13	\$161.38	\$189.63
\$6.50	\$30.13	\$60.88	\$91.63	\$122.38	\$153.13	\$183.88	\$214.63
\$7.00	\$40.13	\$73.38	\$106.63	\$139.88	\$173.13	\$206.38	\$239.63
\$7.50	\$50.13	\$85.88	\$121.63	\$157.38	\$193.13	\$228.88	\$264.63
\$8.00	\$60.13	\$98.38	\$136.63	\$174.88	\$213.13	\$251.38	\$289.63
\$8.50	\$70.13	\$110.88	\$151.63	\$192.38	\$233.13	\$273.88	\$314.63
\$9.00	\$80.13	\$123.38	\$166.63	\$209.88	\$253.13	\$296.38	\$339.63
\$9.50	\$90.13	\$135.88	\$181.63	\$227.38	\$273.13	\$318.88	\$364.63

Enterprise Budgets: Costs and Returns per acre from growing alfalfa hay Uintah County, 2008

Receipts	Quantity per acre	Unit	Price/cost per unit	Value/cost per acre	Your Value
Alfalfa hay	5.0	tons	\$170.00	\$850.00	
Residue	0.50	AUM	\$12.00	\$6.00	
Subtotal				\$856.00	
Operating costs					
Fertilization					
Phosphate (11-52-0)	144	pounds	\$0.60	\$86.40	
Potassium (0-0-60)	120	pounds	\$0.50	\$60.00	
Custom application	1	acre	\$4.25	\$4.25	
Pesticides/herbicides					
Raptor w/surfactant	5	ounces	\$6.00	\$30.00	
Select	8	ounces	\$1.20	\$9.60	
Custom application	1	acre	\$6.25	\$6.25	
Irrigation (center pivot)	9	irrigations			
Labor	2.00	hours	\$10.00	\$20.00	
Water assessment	1	share	\$10.00	\$10.00	
Repairs/maintenance	1	acre	\$12.00	\$12.00	
Pumping	30	acre inch	\$0.42	\$12.60	
Harvesting					
Swathing	3	acre	\$5.36	\$16.08	
Turning	3	acre	\$1.85	\$5.55	
Baling	5	tons	\$6.37	\$31.85	
Hauling/stacking	5	tons	\$4.83	\$24.15	
Crop insurance (75% Yield, 100% Price)	1	acre	\$15.61	\$15.61	
Interest on operating capital			7.50%	\$10.14	
Subtotal				\$354.48	
Ownership costs (excludes cost of land)				\$221.38	
Establishment costs	1	acre	\$ 55.00	\$55.00	
Insurance	1	acre	\$ 2.00	\$2.00	
Machinery ownership costs	1	acre	\$ 120.38	\$120.38	
Irrigation equipment costs	1	acre	\$ 44.00	\$44.00	
Total costs				\$575.86	
Net returns to owner for unpaid labor, management, equity and risk					
Above operating costs				\$501.52	
Above total listed costs				\$280.14	

Net returns per acre above operating costs

for alternative prices and levels of production

Yield (Ton/Ac)	Selling Price (\$/ton)				
	\$160.00	\$165.00	\$170.00	\$175.00	\$180.00
3.50	\$228.32	\$245.82	\$263.32	\$280.82	\$298.32
4.00	\$302.72	\$322.72	\$342.72	\$362.72	\$382.72
4.50	\$377.12	\$399.62	\$422.12	\$444.62	\$467.12
5.00	\$451.52	\$476.52	\$501.52	\$526.52	\$551.52
5.50	\$525.92	\$553.42	\$580.92	\$608.42	\$635.92
6.00	\$600.32	\$630.32	\$660.32	\$690.32	\$720.32
6.50	\$674.72	\$707.22	\$739.72	\$772.22	\$804.72

Assumptions

1. Alfalfa already established harvested in June, July, and September.
2. Interest computed on fertilization/herbicide costs for 6 months and operating costs for 3 months.
3. Machinery operating costs include: fuel, oil, repairs and labor.
4. Machinery ownership costs are allocated based on equipment used for each crop.
5. Machinery ownership costs include depreciation, interest, insurance, and housing.

Enterprise Budgets: Machinery and Equipment Costs

Machinery and Equipment Costs for Conventional Fallow Hard Red Winter Wheat

Operation (Fuel Price - \$4.00/gal)	Purchase Price	Years to Trade	Salvage Value	Hours Used	Acres per hr.	Ownership Costs		Operating Costs		Total Costs	
						per hr.	per ac.	per hr.	per ac.	per hr.	per ac.
Plowing											
425 HP 4WD Tractor	\$250,000	12	\$125,000	450	21	\$38.04	\$1.78	\$93.00	\$4.36	\$131.04	\$6.14
40' Chisel Plow + Weeder Attach	\$50,000	15	\$10,000	250		\$14.91	\$0.70	\$4.00	\$0.19	\$18.91	\$0.89
Totals						\$52.95	\$2.48	\$97.00	\$4.55	\$149.95	\$7.03
Weeding											
425 HP 4WD Tractor	\$250,000	12	\$125,000	450	25	\$38.04	\$1.51	\$93.00	\$3.69	\$131.04	\$5.20
40' Chisel Plow + Weeder Attach	\$50,000	15	\$10,000	250		\$14.91	\$0.59	\$4.00	\$0.16	\$18.91	\$0.75
Totals						\$52.95	\$2.10	\$97.00	\$3.85	\$149.95	\$5.95
Spraying											
425 HP 4WD Tractor	\$250,000	12	\$125,000	450	51	\$38.04	\$0.75	\$93.00	\$1.83	\$131.04	\$2.57
80' Herbicide Sprayer	\$35,000	15	\$17,500	50		\$43.99	\$0.86	\$14.00	\$0.28	\$57.99	\$1.14
Totals						\$82.03	\$1.61	\$107.00	\$2.10	\$189.03	\$3.71
Harvesting											
Combine 30' Header	\$250,000	8	\$125,000	200	11	\$114.90	\$10.77	\$101.97	\$9.56	\$216.87	\$20.33
Totals						\$114.90	\$10.77	\$101.97	\$9.56	\$216.87	\$20.33
Planting											
425 HP 4WD Tractor	\$250,000	12	\$125,000	450	20	\$38.04	\$1.87	\$93.00	\$4.57	\$131.04	\$6.44
48' Deep Furrow Drill	\$60,000	6	\$30,000	150		\$41.13	\$2.02	\$8.00	\$0.39	\$49.13	\$2.41
Totals						\$79.17	\$3.89	\$101.00	\$4.96	\$180.17	\$8.85

Machinery and Equipment Costs for Chemical Fallow Hard Red Winter Wheat

Operation (Fuel Price - \$4.00/gal)	Purchase Price	Years to Trade	Salvage Value	Hours Used	Acres per hr.	Ownership Costs		Operating Costs		Total Costs	
						per hr.	per ac.	per hr.	per ac.	per hr.	per ac.
Spraying											
425 HP 4WD Tractor	\$250,000	12	\$125,000	450	51	\$38.04	\$0.75	\$93.00	\$1.83	\$131.04	\$2.57
80' Herbicide Sprayer	\$35,000	15	\$17,500	50		\$43.99	\$0.86	\$14.00	\$0.28	\$57.99	\$1.14
Totals						\$82.03	\$1.61	\$107.00	\$2.10	\$189.03	\$3.71
Harvesting											
Combine 30' Header	\$250,000	8	\$125,000	200	11	\$114.90	\$10.77	\$101.97	\$9.56	\$216.87	\$20.33
Totals						\$114.90	\$10.77	\$101.97	\$9.56	\$216.87	\$20.33
Planting											
425 HP 4WD Tractor	\$250,000	12	\$125,000	450	20	\$38.04	\$1.87	\$93.00	\$4.57	\$131.04	\$6.44
48' Deep Furrow Drill	\$60,000	6	\$30,000	150		\$41.13	\$2.02	\$8.00	\$0.39	\$49.13	\$2.41
Totals						\$79.17	\$3.89	\$101.00	\$4.96	\$180.17	\$8.85