

CROP ENTERPRISE

B U D G E T



NO-TILL DRYLAND WINTER WHEAT/FALLOW ROTATION, GOSHEN COUNTY, WYOMING

Brian Lee, *Assistant Research Scientist, SAREC*

John Ritten, *Associate Professor,
Department of Agricultural and Applied Economics*

Tom Foulke, *Senior Research Scientist,
Department of Agricultural and Applied Economics*

This crop budget models is for a representative no-till dryland wheat/fallow operation in southeast Wyoming. A two-year wheat/fallow rotation is a typical operation for dryland farming in southeast Wyoming; the budget shows the costs associated with 2 acres (wheat production and fallowed land). The operations described in this budget are typical for a southeast Wyoming operation. Operations and values used in this budget are the best estimates from multiple sources in southeast Wyoming and the Nebraska Panhandle, including University of Nebraska state crop budgets (Klein et al., 2017a; Klein et al., 2017b). University of Minnesota machinery cost estimates were used to establish use-related and total power use costs (Lazarus, 2015).

Many different winter wheat varieties are planted to dryland acres in Wyoming. Buckskin variety has historically been the most popular wheat variety seeded in the state of Wyoming, although recently acreage has dropped and other varieties including, Pronghorn and Goodstreak, have increased. These varieties, and their corresponding historical yields, are includ-

ed in this budget. Another wheat variety, Cowboy, has seen an increase in acreage, but it still fairly new (USDA-NASS, 2017b.)

Land

This budget assumes the land base is owned by the producer. Real estate opportunity cost is assumed at 4 percent per acre. Real estate taxes are assumed to be 1 percent per acre. The per-acre land value is estimated as the average value of irrigated cropland in the state of Wyoming, according to the most current Wyoming Agricultural Statistics Service survey (USDA-NASS, 2017a).

Labor

This budget assumes labor is provided by the landowner at \$25 per hour for all field operations except the custom application of fertilizer, assumed at \$6.50 per acre by a chemical supply company or \$3.96 per acre if done by landowner.

Capital

Interest on operating capital is included at 5.5 percent. This percentage represents interest paid to a lending institution on loaned capital. Interest is charged on operating capital for cash expenses for a 6-month time period. This percentage should be adjusted based on the individual producer's situation.

Field Operations

The enterprise budget is based on an assumed yield of 40 bushels (spreadsheet shows 45) per acre. This budget is also based on a one-crop-in-two-years assumption. No crop insurance is assumed for this budget, but there are various options available. Planting occurs in September, with a 20-foot, no-till disk. Two fertilizer applications are used in the wheat acre enterprise



EXTENSION

Conventional Dryland Winter Wheat/Fallow, Southeast Wyoming, 2017

No-till Wheat/Fallow Rotation, 45 bushel/acre goal
(1 year wheat, 1 year fallow)

No-till Wheat

Field Operations	Use-Related Cost/Acre	Total Cost/Acre
Drill	\$11.00	\$13.95
Spray	\$3.03	\$3.96
Spray	\$3.03	\$3.96
Combine Dryland Truck	\$29.16	\$34.07
Total No-till Wheat Field Operations	\$46.22	\$55.94

Materials and Services	Type	Rate	Unit	Per Unit Price	Total
Fertilizer	11-52-0	25	lbs	\$0.25	\$6.25
Custom Fertilizer Application		1	ac	\$6.00	\$6.00
Fertilizer	28-0-0-5	8	gallon	\$1.38	\$11.04
Seed	Wheat	60	lbs	\$0.15	\$9.00
	Dicamba	0.6 oz.	ounce	\$12.10	\$7.26
	Barrage 2,4-D	4 oz.	ounce	\$0.16	\$0.64
Herbicide	Hel-Fire adjuvant	64 oz./100	ounce	\$0.16	\$1.02
	Round-Up	32 oz.	ounce	\$0.15	\$4.72
	Barrage 2,4-D	16 oz.	ounce	\$0.16	\$2.56
Hauling Grain	Custom	45	bushel	\$0.12	\$5.40
Total Materials and Service					\$53.89
Total Operations, Materials and Services					\$109.83

FALLOW

Field Operations	Use-Related Cost/Acre	Total Cost/Acre
Spray	\$3.03	\$3.96
Spray	\$3.03	\$3.96
Spray	\$3.03	\$3.96
Total Fallow Field Operations	\$9.09	\$11.88

Materials and Services	Type	Rate	Applied Price	Total
Herbicide 1	Round-Up	32	ounce	\$4.72
	Hel Fire surfactant	64 oz./100	ounce	\$1.02
Herbicide 2	Round-Up	32	ounce	\$4.72
	Barrage 2,4-D	16	ounce	\$2.56
	Hel Fire surfactant	64 oz./100	ounce	\$1.02
Herbicide 3	Round-Up	32	ounce	\$4.72
	Hel fire surfactant	64 oz./100	ounce	\$1.02
Herbicide 4	Dicamba	0.6	ounce	\$7.26
	Hel Fire surfactant	64 oz./100	ounce	\$1.02
Fallow Production Cost/Acre				\$39.96
Total Field Operations				\$67.82
Listed Operations, Materials, and Services				\$161.67
Annual Interest on Operation Capital	5.50% for 6 months	5.50%	\$149.16	\$8.20
Total Operations, Materials, and Services				\$169.87

Overhead Field	Insurance, Vehicles, Office			\$20.00
Real Estate Opportunity Cost	Dryland	\$770.00	acre	\$30.80
Real Estate Taxes		\$770.00	acre	\$7.70
Overhead Fallow	Insurance, Vehicles, Office			\$20.00
Real Estate Opportunity Cost	Dryland	\$770.00	acre	\$30.80
Real Estate Taxes		\$770.00	acre	\$7.70
Total Overhead				\$117.00
Total Cost Including Overhead				\$286.87
Cost per Bushel				\$6.37
Cash Cost per Bushel				\$3.84

budget. One fertilizer application of 10-34-0 is applied in the fall at planting and another of 46-0-0 (dry urea) in the spring. Harvest occurs in July using a combine with a 20-foot wheat head. The fallow land is sprayed with an herbicide mix three times from May to June. Per-acre, use-related, and total cost for implements, with associated power units, are averaged over all sizes by implement type in the operation portion of the budget. Using this approach encapsulates all possible tractor types and horsepower sizes.

Sources:

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Lazarus, William F. 2015. "Machinery Cost Estimates." University of Minnesota Extension, St. Paul, MN. <http://www3.extension.umn.edu/sites/default/files/download/Machinery%20Cost%20Estimates%20June%202015.pdf>

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