

CROP COSTS AND RETURNS



OATS

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NORTH DAKOTA
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North Dakota ranked second in the nation in the production of oats in 1969 and 1970. Cash farm marketings from oats account for 4.4 per cent of the income from crops in the state. About 56 per cent of the oats produced in North Dakota are used on the farm for feed and seed.

The 2,897,000 acres planted in 1970 was the largest acreage of oats during the 44 years for which statistics are available. Table 1 shows the planted acreage, yield per planted acre, and production for oats in North Dakota for the period 1965 to 1970.

TABLE 1. PLANTED ACREAGE, YIELD PER PLANTED ACRE, AND PRODUCTION OF OATS IN NORTH DAKOTA, 1965-1970

Year	Planted Acreage (000)	Yield Per Planted Acre (Bu.)	Production in Bushels (000)
1965	2,168	48.9	106,038
1966	2,146	37.4	80,196
1967	1,910	33.0	62,974
1968	2,254	45.9	103,390
1969	2,682	53.4	143,127
1970 ^a	2,897	39.9	115,541

^aPreliminary

Source: North Dakota Crop and Livestock Statistics, Annual Summaries for 1966, 1967, 1968, and 1969, Statistical Reporting Service, United States Department of Agriculture and Department of Agricultural Economics, North Dakota State University, Fargo, North Dakota.

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Changes in production practices, the acceptance of new technology, and government programs require producers to be constantly examining their farm organization and the alternative methods of producing crops to attain a higher and more stable income. The costs and returns data presented here can help serve as a guide in making production decisions.

The state has been divided into four areas--western, west central, east central, and Red River Valley (Figure 1). Costs and returns for oats are presented for each of the four areas based on typical cropping practices used (Table 2). The input and output data used are what is being achieved on well-managed farms in each area. The size of farm used in arriving at the production costs was 1,159 cropland acres in the western area, 1,065 cropland acres in the west central and east central areas, and 855 cropland acres in the Red River Valley area.

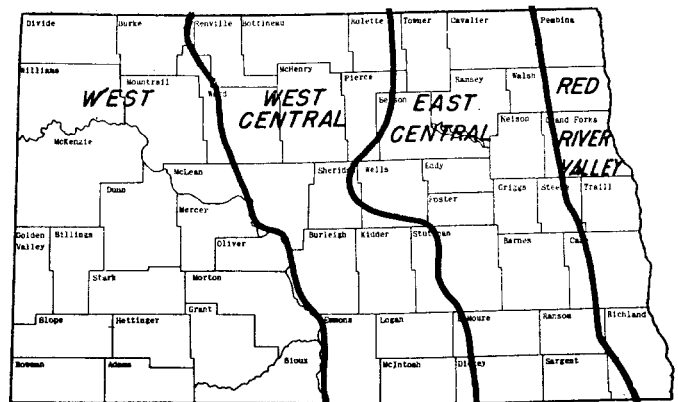


FIGURE 1. State Areas Used in Costs and Returns Data

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North Dakota State University
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TABLE 2. OATS: CROP COSTS AND RETURNS BY AREAS OF NORTH DAKOTA^a

Crop Production and Cost Inputs		WESTERN				WEST CENTRAL		EAST CENTRAL		R. R. VALLEY	
		Summerfallow		Continuous Crop ^b		Continuous Crop ^b		Continuous Crop ^b		Continuous Crop ^b	
		Budget	Yours	Budget	Yours	Budget	Yours	Budget	Yours	Budget	Yours
1	Yield Per Acre	71		50		58		70		82	
2	Unit Price	\$.55		\$.55		\$.53		\$.55		\$.58	
3	GROSS RETURNS	\$39.05		\$27.50		\$30.74		\$38.50		\$47.56	
<u>Direct Production Costs.</u>											
4	Seed	\$ 2.10		\$ 2.10		\$ 2.10		\$ 2.10		\$ 2.10	
5	Fertilizer	\$ 2.16		\$ 3.91		\$ 4.40		\$ 4.96		\$ 6.15	
6	Spray	\$.40		\$.40		\$.40		\$.40		\$.40	
7	Repairs:	\$.77									
<u>Summerfallow Year</u>											
8	Crop Year	\$ 2.36		\$ 2.90		\$ 3.00		\$ 3.17		\$ 3.19	
9	Fuel & Oil:	\$.45									
<u>Summerfallow Year</u>											
10	Crop Year	\$.92		\$.97		\$.97		\$ 1.17		\$ 1.18	
11	Interest On Operating Capital	\$.63		\$.57		\$.59		\$.63		\$.68	
12	Crop Insurance	\$ 2.00		\$ 1.37		\$ 1.15		\$ 1.27		\$ 1.00	
13	Custom Cost	\$ 1.00		\$ 1.00		\$ 1.00		\$ 1.00		\$ 1.00	
<u>TOTAL DIRECT COSTS</u>											
14	Land Cost	\$12.79		\$13.22		\$13.61		\$14.70		\$15.70	
<u>RETURN OVER DIRECT COSTS</u>											
15	Fixed Costs	\$26.26		\$14.28		\$17.13		\$23.80		\$31.86	
<u>Machinery Depreciation:</u>											
16	Summerfallow Year	\$13.40		\$ 6.70		\$ 8.00		\$10.55		\$17.60	
<u>Crop Year</u>											
17	Interest on Machinery, Housing, & Insurance:	\$.58									
18	Summerfallow Year	\$ 2.88		\$ 3.32		\$ 3.50		\$ 3.64		\$ 3.65	
<u>Crop Year</u>											
19	Interest on Machinery, Housing, & Insurance:	\$.98									
20	Summerfallow Year	\$ 2.37		\$ 2.80		\$ 2.28		\$ 2.86		\$ 3.22	
<u>TOTAL FIXED COSTS</u>											
21	Operator Labor & Management Return	\$20.21		\$12.82		\$13.78		\$17.05		\$24.47	
<u>AVERAGE OPERATOR & MANAGEMENT RETURN PER ACRE</u>											
22	Operator Labor & Management Return	\$ 6.05		\$ 1.46		\$ 3.35		\$ 6.75		\$ 7.39	
<u>MENT RETURN PER ACRE</u>											
23	Operator Labor & Management Return	\$ 3.02		\$ 1.46		\$ 3.35		\$ 6.75		\$ 7.39	
<u>LABOR REQUIREMENT PER ACRE IN HOURS</u>											
24	Operator Labor & Management Return	1.85		1.47		1.47		1.78		1.84	

^aThese costs and returns should not be construed to be the average for North Dakota farmers. Yields and input levels used are higher than the average for each area.^bContinuous cropping assumes summerfallow every third year in western North Dakota and every fifth or sixth year in the Red River Valley.

EXPLANATION OF COST AND RETURN DATA

Line 1, Yields: The yields shown are what can be expected using recommended practices and the levels of inputs shown in Table 2.

Line 2, Price: The oats price used is what one may expect to receive in the foreseeable future. The differences in price among areas take into consideration transportation cost and local demand.

Line 4, Seed: The cost of seed includes newly certified seed every third year with two years of cleaning and treating of home grown seed.

Line 5, Fertilizer: Rates used were the recommended rates for normal precipitation and for soils testing low in phosphate (See Extension Circulars S&F-4, S&F-5, S&F-6, and S&F-7).

Line 6, Spray: The cost of spray is for spraying once for broadleaf weeds.

Line 7, Repairs: Machinery repair costs were estimated on a percentage of the new cost based on agricultural engineering studies.

Line 8, Fuel and Oil: Nebraska tractor tests were used to calculate fuel consumption. Local fuel prices were used in arriving at the value. Diesel tractors and gasoline self-propelled harvesting machines were assumed in calculating fuel costs.

Line 9, Interest on Operating Capital: This cost was figured at nine per cent of the direct production costs. The time period was six months.

Line 10, Crop Insurance: The crop insurance premium used insures 45 per cent of the gross returns. The premium rate used varied by area of the state depending upon the risk as established by insurance companies.

Line 11, Custom Cost: This cost is the application of herbicide by airplane.

Line 14, Land Cost: The charge for land is the average net return that North Dakota landlords received in 1969. This amounted to 7.3 per cent of the current market value of cropland (Table 3).

TABLE 3. CROPLAND VALUE, LAND CHARGE, AND LAND TAXES USED IN CALCULATING LAND COSTS BY AREAS OF NORTH DAKOTA

Area	Land Value	Land Charge	Land Taxes	Total Land Cost
Western	\$ 80	\$ 5.85	\$.85	\$ 6.70
West Central	95	6.95	1.05	8.00
East Central	125	9.15	1.40	10.55
Red River Valley	210	15.35	2.25	17.60

Line 15, Machinery Depreciation: Depreciation is based on normal machinery life using the straight line method of calculating depreciation.

Line 16, Interest on Machinery, Housing, and Insurance: These fixed costs were calculated on the basis of 10 per cent of the average machinery investment.

Line 18, Operator Labor and Management Return: Costs are included for all the resources required to produce oats except labor and management. When the total costs--direct plus fixed--are subtracted from the gross income, this gives a return to the farm operator for his labor and management. No hired labor is assumed in the costs presented.

Line 19, Average Operator Labor and Management Return Per Acre: The returns in line 18 above are not comparable between budgets since the return from the summerfallow budgets represents the return from two acres of land while the return from the continuous crop budget represents one acre. Line 19 divides the summerfallow budget by two to make it possible to compare the per-acre returns between summerfallow and continuous crop.

Line 20, Labor Requirement Per Acre in Hours: The labor requirements include the direct hours of labor to prepare the seedbed, seed, harvest, and store or market the grain. The summerfallow budget hours include the time for both the year of fallow and the crop year.

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