

Production Costs For Sunflowers in the Red River Valley

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Sunflower acreage in North Dakota reached an all time high in 1967 with 127,000 acres (Table 1). About 42 per cent of this acreage was oil varieties and the remaining was in birdseed and confectionary varieties. The large 1967 acreage increase resulted from increased interest in sunflower oil and introduction of higher oil producing varieties than previously available. During the eight-year period, 1962 to 1969, the gross value of production ranged from a low of \$448,000 to a high of \$6,296,000. On a planted acre basis, the range was from \$24.22 to \$51.85 with an average gross return for the eight-year period of \$44.20.

Table 1. Sunflower seed — planted acres, yield per planted acre, total production, and price per hundredweight, North Dakota, 1962 to 1969.

Year	Planted Acres	Yield Per Planted Acre	Total Production	Price Per Hundredweight
		lbs.	Thous. lbs.	dollars
1962	13,000	942	12,250	5.50
1963	31,000	939	29,100	4.35
1964	18,500	584	10,800	4.15
1965	25,500	833	21,250	5.00
1966	49,000	862	42,240	5.70
1967				
Oil	52,800	1,104	58,275	4.50
Non-oil	74,200	1,000	74,225	4.95
All	127,000	1,043	132,500	4.75
1968				
Oil	20,000	1,120	22,410	3.85
Non-oil	68,000	988	67,200	4.60
All	88,000	1,018	89,610	4.41
1969				
Oil*	22,200	1,086	24,100	3.50
Non-oil*	87,800	833	73,100	4.75
All*	110,000	884	97,200	4.44

*Preliminary.

Source: North Dakota Crop and Livestock Reporting Service, Sunflower Seed, U.S. Department of Agriculture, Statistical Reporting Service and Agricultural Experiment Station, North Dakota State University, Fargo, North Dakota, December 11, 1968 and December 19, 1969.

Information on costs of producing sunflowers also is an important part of the crop planning procedure. Table 2 shows all costs associated with growing an acre of sunflowers. Cost are broken down into two practices — using fertilizer and without fertilizer. Chemicals and artificial drying were not included as part of the costs because very few operators used them, and therefore they were not considered a typical practice.

The assumption was made that the farm operator owned all of the resources used in the pro-

duction process. It was also assumed that the output was stored on the farm until it could be marketed. The cost of delivering the crop to market is included in the cost estimates.

Table 2 shows that variable costs were \$8.60 without fertilizer and \$12.35 with fertilizer. Fixed

Table 2. Sunflower production costs per planted acre, 1969.

Cost Item	Without Fertilizer	With Fertilizer
Variable Production Costs:		
Seed	\$ 1.40	\$ 1.40
Repairs	3.45	3.60
Fuel, grease and oil	1.20	1.25
Fertilizer		3.30
Chemicals (not generally used)		
Artificial drying (not generally used)		
Storage	.75	.90
Crop insurance	1.80	1.90
Total Variable Costs	\$ 8.60	\$12.35
Fixed Costs:		
Real estate taxes	\$ 2.15	\$ 2.15
Land charge, \$210 @ 6%	12.60	12.60
Machinery ownership	5.65	5.90
Storage	1.65	2.00
Interest on operating capital, 8% for 9 months	.50	.75
Operator labor		
1.95 hours @ \$2.00	3.90	
2.25 hours @ \$2.00		4.50
Total Fixed Costs	\$26.45	\$27.90
Total Production Costs	\$35.05	\$40.25

costs were \$26.45 and \$27.90 without and with fertilizer. Fixed costs include all land charges, real estate taxes and interest on the current market value of \$210 per acre at 6 per cent. Machinery ownership costs includes depreciation, interest on investment, taxes, insurance, and housing for all machinery used in sunflower production. The charge for operating capital was 8 per cent for the nine months that it would be invested. Operator labor was charged at \$2.00 per hour.

Total production costs were \$35.05 without fertilizer and \$40.25 with fertilizer. These costs include a charge for all resources used except management. For example, if the gross income was \$35.05 per acre and no fertilizer was used, land receives a return of \$12.60, operating capital receives \$0.50, the operator receives \$3.90 for his labor, and the cost of all other inputs would be

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covered. If the gross income was over \$35.05 the excess would be a return to management.

The difference between total production costs with and without fertilizer was \$5.20. All but three costs changed when fertilizer was added. The added costs included the fertilizer and a fertilizer attachment added to the planter, the cost of fertilizer handling time, and the extra cost to handle the increased output. Output must increase enough to at least cover the extra costs of using fertilizer, \$5.20 in this example. If output did not increase enough to cover this cost, then the practice should be dropped or analyzed to see what adjustments are needed to make the practice profitable.

What additional equipment is required for sunflowers in addition to the typical small grain equipment? The producer must have row cultivating equipment and must invest in a sunflower harvest attachment for his combine or hire the work done.

Sunflowers generally are grown under contract. Production costs help us make a better analysis of production or marketing contracts.

Farming is highly competitive so business adjustments must be studied constantly and decisions made on what to do, how to do it, how much to do, and when to do it. Production costs and returns provide the guides for making production decisions. The cost information presented here can be

used as a guide for the individual farmer to make a decision as to how sunflowers might fit into his cropping program. You are encouraged to use your own costs where possible. Each farm has a different mix or amount and quality of resources to use. Therefore, costs vary from farm to farm and the most profitable crop combination differs from farm to farm.

FROM THE DIRECTOR (from page 2)

admitted to a graduate program of study. Thus both the foreign and American students represent a high level of intelligence and competence. We believe this mix of students at the graduate level is mutually highly desirable. The foreign student brings to our faculty, students, and agricultural research program many ideas and inspirations which serve to make our total program more meaningful and useful. They also bring a willingness to work as they learn. At the same time, they are at liberty to pick and choose those items of knowledge and technique which can be made useful in their native country when they return.

History clearly indicates the value of education as it affects the general welfare of mankind. The modest sum utilized for Graduate Research Assistants pays handsomely in dividends right back into North Dakota as well as making a very positive contribution to international relations and the agriculture of our sister nations.

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