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MINNESOTA FARM MANAGEMENT SERVICE NOTES

No. 53

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RETURNS FROM WHEAT AND POTATO CROPS

Returns from Spring Wheat

Farmers in Minnesota intend to drill the same total acreage to spring wheat this year as last, according to the "Intentions to Plant" report issued March 21. Thruout the United States farmers are planning to increase the acreage by 1.6 per cent. Government reports indicate that the United States winter wheat crop has come thru the winter in much better shape than a year ago, and that we shall have about the same number of bushels to harvest in 1927 as in 1926. As a general rule the weather is a greater factor in causing fluctuations in total production than is a change in the acreage planted.

Spring wheat is the most important small grain crop in the Red River Valley. What does it cost to produce a bushel of spring wheat in this section of the state, and how much is a man likely to receive for every hour he puts on the wheat crop? The figures in the table were obtained on a group of farms near Crookston, Polk County, Minnesota.

Cost and Returns per Acre in Producing Spring Wheat - Crookston,  
Polk County, Minnesota - 1926  
An average of 1225 acres on 15 farms

Items of Cost	Average		Range	
Man labor	6 $\frac{3}{4}$ hrs.	4 $\frac{1}{2}$	-	10 $\frac{1}{2}$
Horse hours	17 $\frac{3}{4}$ hrs.	7 $\frac{3}{4}$	-	26 $\frac{1}{4}$
Tractor	$\frac{1}{4}$ hr.	0	-	1
Total labor cost	\$3.57	\$2.16	-	\$4.69
Seed	2.35	1.97	-	2.78
Twine	.36	.08	-	.50
Threshing	.84	.44	-	1.40
Manure	.33	0	-	1.64
Machinery	1.00			
Marketing	.04	0	-	.39
Land charge	4.00			
Total cost	\$12.49	\$10.68	-	\$14.85
Credit for hail insurance	.04	0	-	.26
Net cost	\$12.45	\$10.68	-	\$14.85
Yield	14 $\frac{3}{4}$ bu.	3.3	-	23.3
NET RETURN PER ACRE	\$5.99	-\$7.13	-	\$15.36
Cost per bushel	.84	.59	-	3.42
RETURN PER MAN HOUR	1.13	.00	-	1.86
Dec. 1 price per bu.	1.25			

Note: Man labor was charged at 25¢ per hour and horse labor at 8 $\frac{1}{2}$ ¢.

One of the most striking things exhibited by the above table is the variation between individual farms in almost every factor of cost. The net return varied from a loss of \$7.13 per acre to a gain of \$15.36. The return per man hour ranged from nothing to \$1.86 per hour. Figures such as these suggest the importance of keeping farm records and of studying the methods of the successful farmer.

Cost and Returns per Acre in Producing Spring Wheat

Average net cost per acre, Crookston 1926	\$12.45
Ten year average yield, Polk County (1917-26)	13½ bu.
Five year average farm price, Minnesota (1921-25)	\$1.14 per bu.
Value of crop per acre	15.10
NET RETURN PER ACRE	2.65
Cost per bushel	.94
RETURN PER MAN HOUR	.65

The above table is offered in an attempt to present a clearer picture of the returns to be expected from spring wheat in Polk County over a period of years than the results of any one year would show. These figures indicate that farmers in this locality over a period of years can reasonably expect to make an average wage of approximately 65 cents per hour for labor spent on the production of spring wheat.

D.C. Mumford.

Returns from Potatoes

Potato production is more speculative than most of the farm enterprises because of the extreme fluctuations in price. The last two years have been years of high prices and large profits. The following table shows the cost of raising potatoes per bushel for two areas of the state. Figures for 1926 only are available for Polk County but both 1925 and 1926 data are presented for Pine County. As the price received for the 1926 potatoes sold was about \$1.00 per bushel, a substantial margin of profit was obtained. At this price the net return per acre for Polk County would have been \$29.55 and for Pine County \$60.37, and the return per hour \$1.00 and \$1.03 respectively.

Farming is conducted on an extensive scale in the Red River Valley. The average size of the 13 cooperating farms on the Polk County Route was nearly three quarters of a section. The average size of the 25 Pine County farms was about 100 acres. Larger units of machinery used by the farmers in Polk County account for the fewer hours of man labor used. The fall rains in 1926 caused a high labor demand in Pine County, because many fields had to be dug by hand and the potatoes sorted to discard the spoiled ones. The difference in manure charge for the two areas is due to the greater density of livestock on the Pine County farms, the greater value put on the manure, \$1.50 per ton as compared with 50 cents, and the greater amount of hand labor used in spreading it. One of the objects in both areas is to get a low cost per bushel. Those who farm extensively aim to get low costs per acre with fair yields. Those who farm intensively desire high yields and increase the cost per acre to secure them. If the figures presented are representative, the intensive producers have the advantage in potato raising. The data shows a margin of 10 cents per bushel in 1926.

Cost per Acre of Producing Potatoes

	Polk County		Pine County	
	1926		1926	1925
Man hours	39 $\frac{1}{4}$		99	60
Horse hours	60 $\frac{3}{4}$		65 $\frac{3}{4}$	65 $\frac{1}{2}$
Tractor hours	$\frac{1}{4}$		1 $\frac{1}{4}$	$\frac{1}{2}$
Labor cost	\$16.13		\$27.06	\$22.01
Seed cost	22.34		17.50	4.32
Spray cost	1.05		.64	.49
Manure & fertilizer cost	1.80		13.00	6.81
Machine cost	3.00		2.30	2.96
Rock picking cost	--		1.20	1.20*
Marketing cost	1.13		.29	.29*
Land charge	4.00		5.00	5.00
Total cost	\$49.45		\$66.99	\$43.08
Credit for culls	--		1.36	1.07
NET COST	\$49.45		\$65.63	\$42.01
Yield	79 bu.		126 bu.	151 bu.
COST PER BUSHEL	62¢		52¢	28¢

\*Same as 1926 figures because these items were not calculated in 1925

Most producers now are interested in what they may expect for the 1927 crop. Years of high prices have usually been followed by periods of low prices. High prices usually mean increased acreage and therefore greater production. When the market fails to absorb the entire yield, prices break. Indications are that the acreage planted in the United States for 1927 will be 15 per cent greater than was harvested in 1926. A normal yield would cause a total production of about 410 million bushels. This would be about 15 per cent above last year, 27 per cent above the short crop of 1925 and only 3 per cent below the 1924 crop which brought unsatisfactory returns. If the present intentions to plant are carried out and a normal yield results, a reduction in price may be expected for the 1927 crop.

There should be no material change in the cost factors between 1926 and 1927. The charge for seed is the item most subject to variation. Prices for seed will probably be about two-thirds as high in 1927 as in 1926. The seed cost can be minimized by seeding No. 2 potatoes, provided they are free from tuber and plant disease. The price received and the yield will be important factors in influencing the profits. Using the costs per acre as presented, with a yield of 89 bushels for Polk County and 117 bushels for Pine County, the average county yields for the last ten years, the returns per acre and per hour at varying prices are indicated below.

	Polk County				Pine County			
	50¢	75¢	100¢	125¢	50¢	75¢	100¢	125¢
Price per bushel								
Return per acre	-4.95	17.30	39.55	61.80	-7.13	22.13	51.37	80.62
Return per hour	12¢	69¢	126¢	182¢	16¢	54¢	92¢	130¢

Any expansion in acreage this year should be made only in areas naturally well adapted for potato raising, where a large supply of labor is seeking employment, or where markets can be secured without long rail hauls. Producers who increase their acreage with the expectation of obtaining 1925 and 1926 prices may be disappointed. Only those who can secure profits at lower prices should contemplate an increase in acreage.