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EC865 Certified Potato Production Costs : Growing and Harvesting Costs Only Nebraska 1934

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Certified Potato Production Costs Growing and Harvesting Costs Only

Nebraska

1934

Nebraska
COOPERATIVE EXTENSION WORK
IN AGRICULTURE AND HOME ECONOMICS
U. of N. Agr'l. College & U. S. Dept. of Agr. Cooperating
W. H. Brokaw, Director, Lincoln

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ACKNOWLEDGMENT

This report has been made possible through the co-operation of growers of certified seed potatoes in western Nebraska who kept and submitted records on their costs of potato production.

The co-operators were obtained and the record blanks placed through the Nebraska Certified Potato Growers Association. The association has actively cooperated in encouraging the keeping of records and rendered assistance in their collection.

The Extension Service and the Department of Rural Economics of the Nebraska College of Agriculture cooperated in furnishing the necessary blank forms, in assisting in the collection of the records, in analyzing and tabulating the data and in preparing this report.

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CERTIFIED POTATO PRODUCTION COSTS, NEBRASKA, 1934
GROWING AND HARVESTING COSTS ONLY

Arthur G. George

This circular gives a preliminary report on the cost of producing certified potatoes in western Nebraska for the crop year 1934. The data presented herewith cover only the costs of growing and harvesting the 1934 potato crop. The costs of storage and marketing will be submitted later after which another report will be made covering both growing and harvesting costs and storage and marketing costs.

The figures used in this report were obtained from 57 different potato growers located in the panhandle section of Nebraska. The investigation was sponsored by the Nebraska Certified Potato Growers Association and was carried on with the cooperation of the Department of Rural Economics and the Extension Service of the Nebraska College of Agriculture. Record forms were prepared by the cooperating agencies and were placed in the hands of growers by the Nebraska Certified Potato Growers Association. The completed records covering costs of growing and harvesting the potato crop were collected through a personal visit to each grower by a representative of the agricultural college in company with a representative of the potato growers' association. To save time and expense this was done at the time bin inspections were made in the fall. Each grower who submitted a record of his growing and harvesting costs was furnished a supplemental blank on which to submit his report on storage and marketing costs. It is hoped each grower will send this report to the office of the potato growers association. The association will send all such reports to the agricultural college where they will be analyzed and summarized.

For purposes of analysis and summarization the records have been divided into three groups as follows: (1) non-irrigated, where cash rent is customarily given for the use of rented potato ground; (2) non-irrigated where it is customary to give a share of the crop as rental for the use of potato ground; and (3) irrigated, where the share rent custom prevails. The summarized data for the first group appear in Table 1, for the second group in Table 2, and for the third group in Table 3. Each grower who submitted a record for this study will receive a copy of this circular containing the figures for his potato enterprise in the column headed "Your farm" in the table which fits his classification as to water dependence and tenure. Table 1 shows data for 23 farms, Table 2 for 20 farms, and Table 3 for 14 farms.

Each table is made up of three columns of figures, each column showing itemized costs per acre for growing, for harvesting and total cost per acre for these operations. Table 1 in addition shows the cash rent charge per acre, the number of acres seeded, the number of acres harvested, the yield per acre and the cost per bushel. Tables 2 and 3 do not include cash rent but show instead the tenant yields. The first column of each of the three tables shows average figures for the group, the second column shows average figures for the one-third of each

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group which had the lowest costs per bushel, and the third column shows figures for the one-third of the group which had the highest costs per bushel.

Cash expenditures have been charged according to cost data given by the individual growers. Non-cash charges have been computed according to the following scale:

Man labor	20 ¢ per hour
Horse labor	9 ¢ per horse hour
Tractor power	
2-plow size	65 ¢ per hour
3-plow size	$1.00 per hour
Equipment	
Horse drawn	3½¢ per horse hour
Tractor drawn	
2-plow size	14 ¢ per hour
3-plow size	21 ¢ per hour
Hauling (if with truck)	1½¢ per bushel

Where hauling was done with a team and wagon the charge was computed for horse power and equipment according to the scale above.

No land charge is included in the acre costs except where cash rent was paid. Bushel costs indirectly include a charge for land use since all costs other than for land use are charged to the tenant yields.

Many dry land fields planted to potatoes in western Nebraska in 1934 were not harvested due to crop failure. The records received for this study do not cover many of these abandoned fields and to that extent do not present a fair cross section of potato growing costs. The figures presented show the extent of this abandonment which averaged 3½ per cent for the farms appearing in Table 1 and 5.1 per cent for those appearing in Table 2. No abandonment was found in the records of those farms where irrigation was practiced. In this report all costs incurred on potato ground which was not harvested have been charged to such of the crop as was harvested on each farm. This resulted in high costs where abandonment was heavy. Had those growers who had heavy abandonment, submitted their records on potato growing costs, the costs per acre and per bushel would have shown much higher than are those found in Table 1 and Table 2.

Differences in Costs

DRY LAND POTATOES.---A brief discussion of the causes of different costs will be given for the different groups. Referring to Table 1 we find that the data presented show the average cost per bushel to grow and harvest potatoes was 76 cents. When we compare cost items of the low-cost farms with the high-cost farms we find some interesting contrasts. There is very little difference in growing cost items except for the item of seed. The seed cost per acre for the low-cost farms was $8.34 but for the high-cost farms it was $14.32. There was a higher percentage of abandonment on the high-cost farms than on the low-cost farms, so that the average growing cost per acre for the former was $24.00 and for the later $16.41. Harvesting

costs per acre were higher for the low-cost farms due primarily to the higher yields per acre. For the low-cost group the harvesting cost was $6.27 per acre and the average yield 48 bushels. The harvesting cost per acre for the high-cost group was $3.62 and the average yield 16.4 bushels per acre. Cash rent for the low-cost farms averaged $1.92 per acre as compared with $2.42 for the high-cost farms. The total cost per acre based on acres harvested including all charges for growing and harvesting was $24.60 for the low-cost farms and $30.04 for the high-cost farms. The average cost per bushel for the former group was 51 cents and for the latter group $1.84. This wide difference in costs per bushel was due in the main to the difference in yield per acre. The yield per acre for the high-cost farms was practically only one-third that of the low-cost farms.

Table 2 shows data for 20 dry land potato growers where a crop share basis was used to give a land charge by charging all costs other than for land usage to the tenant's share. The average cost per acre based on acres harvested, was $21.94, the yield 38 bushels per acre, the tenant yield 29.2 bushels per acre, and the cost per bushel 75 cents. Growing costs per acre for the low-cost farms of this group were practically the same as for the high-cost farms based on the seeded acreage. The abandonment on the high-cost farms was 9 per cent and only about 2 per cent on the low-cost farms, so that based on acres harvested the growing cost per acre was slightly higher for the high-cost than for the low-cost farms. Harvesting costs per acre for the low-cost farms were $6.11 and for the high-cost farms $3.56. The total cost per acre for the low-cost farms was $22.31 and for the high-cost farms $21.17. These figures show a slight advantage in favor of the high-cost farms. In the matter of yields per acre, we find a decided advantage for the low-cost farms. The average yield per acre on these farms was 85.8 bushels of which 66.4 bushels was the tenant's share. The average yield per acre for the high-cost farms was only 16.5 bushels and the tenant's share 12.8 bushels. The average cost per bushel for the low-cost farms was 34 cents as compared with $1.65 for the high-cost farms.

IRRIGATED POTATOES.--The average cost per bushel to grow and harvest potatoes for 14 farms under irrigation was 32 cents (See table 3). The cost per acre was $46.38, the average yield 194.7 bushels, and the tenant's share 146 bushels. The 5 low-cost farms produced potatoes through growing and harvesting for 22 cents a bushel. The cost per acre on these farms was $45.47 and the average yield per acre was 279 bushels of which the tenant's share was 209.2 bushels. The cost per bushel for the 5 high-cost farms was 55 cents, the acre cost $50.38 and the yield 122.8 bushels per acre of which the tenant's share was 92.1 bushels. All items of growing costs with the exception of seed treatment were higher for the high-cost farms than for the low-cost farms. The most important item of difference was in seed costs. For the low-cost group, the seed charge was $19.05 per acre while for the high-cost farms it was $28.10. The average growing cost per acre for the low-cost farms was approximately 75 per cent as much as for the high-cost farms. These costs were $30.23 and $41.34, respectively, for the low-cost and high-cost farms. Since the production per acre was greater for the low-cost than for the high-cost farms we should expect the cost for harvesting to be greater for the low-cost group. Such was found to be the case. Harvest costs were $15.24 per acre for the low-cost farms and $9.04 for the high-cost farms. Higher costs to-

gether with lower yields per acre resulted in a higher average cost per bushel for the high-cost than for the low-cost farms.

SUMMARY

The data presented in this study show that yields are the most important factor affecting the cost of producing potatoes. Yields cannot be controlled by the growers but they can be influenced by the methods followed.

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Table 1. Cost of producing potatoes, Nebraska, 1934 (non-irrigated).
(cash rent)

	Your farm	Average of 23 farms	Average of 8 low-cost farms	Average of 8 high-cost farms
NUMBER OF FARMS		23	8	8
GROWING COSTS PER ACRE				
Man labor		$2.14	$2.24	$2.16
Power		3.05	3.45	3.12
Equipment		.76	.86	.78
Seed		10.64	8.84	14.32
Seed treatment		.07	.05	.15
Certification		.90	.81	1.00
Total (Based on acres seeded)		17.56	16.25	21.53
Total (Based on acres harvested)		18.20	16.41	24.00
HARVESTING COSTS PER ACRE				
Man labor		2.73	3.62	2.11
Power		1.00	1.36	.92
Equipment		.23	.30	.22
Sacks		.19	.23	.10
Hauling		.53	.76	.27
Total		4.68	6.27	3.62
LAND CHARGE PER ACRE		2.08	1.92	2.42
Total cost per acre (Based on acres harvested)		24.96	24.60	30.04
NUMBER OF ACRES SEEDED		42.8	48.8	32.8
NUMBER OF ACRES HARVESTED		41.3	48.3	29.4
YIELD PER ACRE: BUSHELS		33.0	48.0	16.4
COST PER BUSHEL		$ .76	$ .51	$1.84

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Table 2. Cost of producing potatoes, Nebraska, 1934 (non-irrigated).
(crop share)

	Your farm	Average of 20 farms	Average of 7 low-cost farms	Average of 7 high-cost farms
NUMBER OF FARMS		20	7	7
GROWING COSTS PER ACRE				
Man labor		$2.53	$2.09	$2.29
Power		2.82	2.88	2.77
Equipment		.77	.70	.69
Seed		9.49	9.11	9.37
Seed treatment		.11	.14	.04
Certification		.92	1.00	.85
Total (Based on acres seeded)		16.64	15.92	16.01
Total (Based on acres harvested)		17.54	16.20	17.61
HARVESTING COSTS PER ACRE				
Man labor		2.61	3.40	1.99
Power		.88	.94	.97
Equipment		.22	.22	.23
Sacks		.15	.33	.08
Hauling		.54	1.22	.29
Total		4.40	6.11	3.56
Total cost per acre (Based on acres harvested)*		21.94	22.31	21.17
NUMBER OF ACRES SEEDED		35.5	20.8	53.6
NUMBER OF ACRES HARVESTED		33.7	20.4	48.7
YIELD PER ACRE: BUSHELS				
Total yield		38.0	85.8	16.5
Tenant yield		29.2	66.4	12.8
COST PER BUSHEL*		$ .75	$ .34	$1.65

*Cost per acre does not include a charge for the use of land while cost per bushel does include such a charge.

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Table 3. Cost of producing potatoes, Nebraska, 1934 (irrigated).

	Your farm	Average of 14 farms	Average of 5 low-cost farms	Average of 5 high-cost farms
NUMBER OF FARMS		14	5	5
GROWING COSTS PER ACRE				
Man labor		$6.07	$4.95	$6.32
Power		4.39	4.10	4.33
Equipment		1.59	1.42	1.56
Seed		20.93	19.05	28.10
Seed treatment		.05	.02	.02
Certification		.80	.69	1.01
Total		33.83	30.23	41.34
HARVESTING COSTS PER ACRE				
Man labor		8.18	9.65	6.01
Power		1.16	1.20	.99
Equipment		.34	.28	.33
Sacks		.34	.29	.35
Hauling		2.53	3.82	1.36
Total		12.55	15.24	9.04
Total cost per acre*		46.38	45.47	50.38
NUMBER OF ACRES		17.5	17.2	16.8
YIELD PER ACRE: BUSHELS				
Total yield		194.7	279.0	122.8
Tenant yield		146.0	209.2	92.1
COST PER BUSHEL*		$ .32	$ .22	$ .55

*Cost per acre does not include a charge for the use of land while cost per bushel does include such a charge.

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