University of Nebraska - Lincoln
DigitalCommons@University of Nebraska - Lincoln

Historical Materials from University of Nebraska-Lincoln Extension

Extension

7-1949

EC840 Revised 1949 Corn Production Costs Nebraska 1948

Arthur G. George

Follow this and additional works at: http://digitalcommons.unl.edu/extensionhist

George, Arthur G., "EC840 Revised 1949 Corn Production Costs Nebraska 1948" (1949). *Historical Materials from University of Nebraska-Lincoln Extension*. 2323.
http://digitalcommons.unl.edu/extensionhist/2323

This Article is brought to you for free and open access by the Extension at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Historical Materials from University of Nebraska-Lincoln Extension by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

AGRI
S
85
E7
#840
E.C. 840-48

July
1949

E. C.
840
1948

CORN PRODUCTION COSTS

RECEIVED
MAY 27 1971
COLLEGE OF AGRICULTURE
LIBRARY

NEBRASKA

1948

Nebraska
Cooperative Extension Work
in Agriculture and Home Economics
U. of N. Agr'l College and U. S. Dept. of Agr. Cooperating
H. G. Gould, Associate Director
Lincoln 1

CORN PRODUCTION COSTS

NEBRASKA, 1948

Arthur G. George, Department of Rural Economics

Average costs to produce a bushel of corn in 1948, computed from 158 records obtained from 8 counties were as follows for each of the counties concerned:

Boone	$ .70	Pawnee	$ .65
Cass	.66	Phelps (dry land)	.84
Douglas	.71	Phelps (irrigated)	.69
Fillmore (dry land)	.60	Saunders	.54
Fillmore (irrigated)	.76	Washington	.65

The data for the different counties appear in Tables 1 to 10. All tables except Numbers 1, Boone county and 5, Fillmore county irrigated, show 3 columns of figures. The first column gives average figures for all records used in a particular table, the second and third columns show average figures for approximately one-third of the records used having lowest and highest costs per bushel, respectively. An insufficient number of records were obtained for Tables 1 and 5 to make a justifiable breakdown into low and high cost groups. Averages only of all applicable records appear in these two tables. The records were obtained from 3 rather distinct regions which vary as to soils, topography and rainfall. The records on irrigated corn do not represent a distinct geographical region but rather a distinct type of agriculture.

A separate tabulation of the records follows where the records were grouped by regions and comparative average costs and yields per acre shown. For purposes of this report, the Eastern Region is represented by the records from Cass, Douglas, Pawnee, Saunders, and Washington counties; the Central Region includes the dry land records from Boone and Fillmore counties, the Southwest Region the dry land records from Phelps county and the Irrigated Region includes the records on irrigated corn from Fillmore and Phelps counties.

Pumps were used on all farms in Fillmore county where records on irrigated corn were obtained. The records on irrigated corn from Phelps county came from farms where the gravity system of irrigation is used, except in one instance where a pump was used.

Date in the following table show that in 1948 under dry-land conditions it cost progressively more on the average to produce a bushel of corn going from east to west in the state. At the same time average costs per acre decreased from east to west as did average yields. Average costs per acre for labor, power, equipment and other items likewise decreased from east to west. Average costs per acre under irrigation in Fillmore and Phelps counties were greater both in each of the expense classifications shown and in total costs per acre than in any of the other

---

Cooperating Agencies: The Department of Rural Economics and the Agricultural Extension Service of the College of Agriculture, University of Nebraska, and farmers in counties concerned.

1000c

30242bk-8/49

regions. The average yield per acre under irrigation was slightly lower than the yield in the Eastern Region. The average cost per bushel under irrigation was greater than the average costs per bushel in the Eastern and Central Regions but lower than that in the Southwest Region.

Average corn costs per acre and per bushel by regions in Nebraska, 1948.

Region	Labor	Power	Equipment	Other	Average total costs per acre	Yields per acre (bus.)	Costs per bushel
Eastern	$6.91	$5.94	$3.82	$3.41	$20.08	57.6	64 ¢
Central	5.70	4.80	3.23	2.48	16.21	39.5	65 ¢
Southwest	3.45	3.18	2.39	2.03	11.05	19.9	84 ¢
Irrigated	7.85	6.83	4.65	6.80	26.13	57.4	72 ¢

Cultural practices varied somewhat between the different regions. When all records are considered, the greater part of the corn ground was disked twice before planting. The prevalence of plowing for seed-bed preparation is indicated by these percentages of corn ground plowed in the different regions: Eastern Region, 44 per cent; Central Region, 29 per cent; Southwest Region 2 per cent, and Irrigated Region 48 per cent. Listing was the method of planting most commonly used. Of the corn acreage covered by the records, the percentages of listed corn by regions were Eastern 78 per cent, Central 82 per cent, Southwest 99.8 per cent, and Irrigated 49 per cent. Listed corn in all regions was usually cultivated once with a lister corn cultivator and twice with a regular cultivator. Surface planted corn was usually cultivated three times.

The records from all regions show that by far the greater part of the corn was husked with mechanical pickers. Ninety three per cent of the entire acreage covered by the records was harvested by this method. Regionally the percentages of acreage husked by mechanical pickers were Eastern 87 per cent, Central 88 per cent, Southwest 99.8 per cent, and Irrigated 96 per cent.

In this report no direct charge was made for the use of the land. Costs per bushel indirectly include a land charge since all direct costs were charged to the tenant's share of the crop. In the case of owner operators the going share rent was used to determine the tenant's share of production. Acre costs as given do not include a charge for the use of land.

The records from Saunders county showed the lowest average cost per bushel to produce corn of all the counties studied. The cost per bushel in Saunders county was 54 cents, the acre cost $17.98, and the yield per acre was 58.3 bushels. The highest county average cost per bushel was 84 cents, for the dry-land record keepers from Phelps county. Here the average cost per acre was $11.05 and the average yield per acre was 19.9 bushels. The record keepers from this group had both the lowest average acre cost of all the counties or groups considered and the lowest average yield per acre.

30242bk-8/49

Average bushel costs in the different counties showed quite remarkable uniformity. In the 10 groups studied, the average costs per bushel ranged between 60 and 71 cents. Two counties had average costs greater than 71 cents per bushel and one county had an average cost per bushel less than 60 cents.

Unusually favorable weather conditions and generally adequate rainfall in 1948 resulted in much higher than average corn yields per acre in most sections of Nebraska. The lower corn yields on dry land in Phelps county, however, were due in part at least to hot, dry weather after mid-August.

Average yields and man hours per acre as shown by the record keepers in the different counties follow:

County	Average yields per acre (Bushels)	Average number of man hours per acre
Boone	47.2	7.86
Cass	50.6	6.72
Douglas	56.1	6.95
Pawnee	59.6	7.98
Saunders	58.3	5.43
Washington	63.6	7.49
Fillmore (dry land)	31.8	4.19
Fillmore (irrigated)	60.7	9.41
Phelps (dry land)	19.9	3.45
Phelps (irrigated)	54.0	8.34

The average number of hours of labor required to produce an acre of corn showed considerable variation between the counties. The record keepers on dryland corn ground in Phelps county used about 3.45 hours on the average to produce and harvest an acre of corn. This was the lowest average hour requirement of any of the counties or groups studied. The most hours used by any of the groups was 9.41 hours per acre used by the irrigated corn growers in Fillmore county.

Average man hour requirements to produce an acre of corn in the other counties were Boone 7.86 hours, Cass 6.72 hours, Douglas 6.95 hours, Pawnee 7.98 hours, Saunders 5.43 hours, Washington 7.49 hours, Fillmore dry land 4.19 hours, and Phelps irrigated 8.34 hours.

More hours of labor per acre were required on the average where corn was grown under irrigation than under dryland farming. The hour requirement per acre on irrigated corn in Phelps county was 8.34 hours and 9.41 hours on irrigated corn in Fillmore county. The records from Boone, Pawnee, and Washington counties showed average labor requirements to produce an acre of corn between 7 and 8 hours. Between 6 and 7 hours were required in Cass and Douglas counties, between 5 and 6 hours in Saunders county, between 4 and 5 hours in Fillmore county on dry land, and between 3 and 4 hours on dry land in Phelps county.

30242bk-8/49

Table 1. Cost of producing corn on 9 farms, Boone county, Nebraska, 1948.

Item	Your farm	Average of 9 farms
NUMBER OF FARMS		9
LABOR AND POWER PER ACRE: HOURS		
To Husking		
Man		4.83
Horse		1.07
Tractor		3.78
For Husking		
Man		3.03
Horse		3.29
Tractor		1.38
Total		
Man		7.86
Horse		4.36
Tractor		5.16
COSTS PER ACRE		
Labor	$	$ 7.60
Power	$	$ 5.78
Equipment	$	$ 3.65
Other	$	$ 2.78
TOTAL COSTS PER ACRE*	$	$19.81
ACRES IN CORN		109.2
YIELDS PER ACRE: BUSHELS		
Average		47.2
Tenant's Share		28.3
COSTS PER BUSHEL*		$ .70

*Bushel costs include a land charge, acre costs do not.

30242bk-8/49

Table 2. Cost of producing corn on 17 farms, Cass county, Nebraska, 1948.

Item	Your farm	Average of 17 farms	6 Low cost farms	5 High Cost farms
NUMBER OF FARMS		17	6	5
LABOR AND POWER PER ACRE: HOURS				
To Husking				
Man		4.11	3.75	5.00
Horse		.24	--	--
Tractor		3.46	3.19	4.38
For Husking				
Man		2.61	2.26	2.16
Horse		1.38	--	.43
Tractor		1.75	2.15	1.95
Total				
Man		6.72	6.01	7.16
Horse		1.62	--	.43
Tractor		5.21	5.34	6.33
COSTS PER ACRE				
Labor	$	$6.31	$6.07	$6.06
Power	$	$5.32	$5.56	$5.48
Equipment	$	$3.60	$4.34	$3.06
Other	$	$2.90	$2.85	$3.10
TOTAL COSTS PER ACRE*	$	$18.13	$18.82	$17.70
ACRES IN CORN		101.5	98.3	93.2
YIELDS PER ACRE: BUSHELS				
Average		50.6	58.2	38.4
Tenant's Share		27.5	34.4	21.3
COSTS PER BUSHEL*	$	$ .66	$ .55	$ .83

* Bushel costs include a land charge, acre costs do not.

30242bk-8/49

Table 3. Cost of producing corn on 15 farms, Douglas county, Nebraska, 1948.

Item	Your farm	Average of 15 farms	5 Low cost farms	5 High cost farms
NUMBER OF FARMS		15	5	5
LABOR AND POWER PER ACRE: HOURS				
To Husking				
Man		4.91	3.92	6.22
Horse		.64	--	2.37
Tractor		4.31	3.78	4.83
For Husking				
Man		2.04	1.88	2.56
Horse		.64	--	2.33
Tractor		1.60	1.62	1.26
Total				
Man		6.95	5.80	8.78
Horse		1.28	--	4.70
Tractor		5.91	5.40	6.09
COSTS PER ACRE				
Labor	$	$ 6.52	$ 6.27	$ 7.24
Power	$	$ 6.18	$ 5.94	$ 6.86
Equipment	$	$ 3.83	$ 4.12	$ 3.40
Other	$	$ 4.03	$ 3.58	$ 4.72
TOTAL COSTS PER ACRE*	$	$20.56	$19.91	$22.22
ACRES IN CORN		65.5	60.0	53.4
YIELDS PER ACRE: BUSHELS				
Average		56.1	64.9	46.1
Tenant's Share		29.0	33.3	25.5
COST PER BUSHEL*	$	$ .71	$ .60	$ .87

* Bushel costs include a land charge, acre costs do not.

30242bk-8/49

Table 4. Cost of producing dry land corn on 26 farms, Fillmore county, Nebraska, 1948

Item	Your farm	Average of 26 farms	9 Low cost farms	10 high cost farms
NUMBER OF FARMS		26	9	10
LABOR AND POWER PER ACRE: HOURS				
To husking				
Man		2.59	2.37	3.03
Horse		.23	.06	.54
Tractor		2.46	2.32	2.73
For husking				
Man		1.60	1.19	1.88
Horse		.46	.26	.99
Tractor		1.24	1.02	1.29
Total				
Man		4.19	3.56	4.91
Horse		.69	.32	1.53
Tractor		3.70	3.34	4.02
COSTS PER ACRE				
Labor		$ 3.81	$ 3.74	$ 4.14
Power		$ 3.82	$ 3.70	$ 4.00
Equipment		$ 2.81	$ 2.92	$ 2.76
Other		$ 2.18	$ 2.10	$ 2.36
TOTAL COSTS PER ACRE*		$12.62	$12.46	$13.26
ACRES OF CORN		94.6	78.6	96.3
YIELDS PER ACRE: BUSHELS				
Average		31.8	38.8	26.8
Tenant's share		21.1	25.8	17.5
COSTS PER BUSHEL*		$ .60	$ .48	$ .76

* Bushel costs include a land charge, acre costs do not.

30242bk-8/49

Table 5. Cost of producing irrigated corn on 7 farms, Fillmore county, Nebraska, 1948

Item	Your farm	Average of 7 farms
NUMBER OF FARMS		7
LABOR AND POWER PER ACRE: HOURS		
To Husking		
Man		7.39
Horse		.43
Tractor		4.01
For husking		
Man		2.02
Horse		.40
Tractor		1.32
Total		
Man		9.41
Horse		.83
Tractor		5.33
COSTS PER ACRE		
Labor		$8.30
Power		$8.16
Equipment		$5.40
Other		$6.10
Total Costs per Acre*		$27.96
ACRES OF CORN		56.7
YIELDS PER ACRE: BUSHELS		
Average		60.7
Tenant's Share		36.9
COSTS PER BUSHEL*		$ .76

*Bushel costs include a land charge, acre costs do not.

30242bk-8/49

Table 6. - Cost of producing corn on 14 farms, Pawnee county, Nebraska, 1948.

Item	Your farm	Average of 14 farms	5 Low cost farms	5 High cost farms
NUMBER OF FARMS		14	5	5
LABOR AND POWER PER ACRE: HOURS				
To Husking				
Man		4.26	3.37	5.39
Horse		.23	.12	.15
Tractor		3.86	3.21	4.93
For Husking				
Man		3.72	3.17	4.51
Horse		3.80	3.91	4.57
Tractor		1.59	1.10	2.23
Total				
Man		7.98	6.54	9.90
Horse		4.03	4.03	4.72
Tractor		5.45	4.31	7.16
COST PER ACRE				
Labor	$	$ 8.26	$ 7.49	$ 8.69
Power	$	$ 6.00	$ 5.05	$ 7.05
Equipment	$	$ 3.53	$ 3.11	$ 3.67
Other	$	$ 3.04	$ 2.58	$ 3.30
TOTAL COSTS PER ACRE*	$	$20.83	$18.23	$22.71
ACRES IN CORN		69.6	51.5	64.6
YIELDS PER ACRE: BUSHELS				
Average		59.6	56.0	57.6
Tenant's Share		32.2	33.6	28.8
COSTS PER BUSHEL*	$	$ .65	$ .54	$ .79

* Bushel costs include a land charge, acre costs do not.

30242bk-8/49

Table 7. Cost of producing corn on 15 dry land farms, Phelps county, Nebraska, 1948.

Item	Your farm	Average of 15 farms	5 Low cost farms	6 High cost farms
NUMBER OF FARMS		15	5	6
LABOR AND POWER PER ACRE: HOURS				
To Husking				
Man		2.17	2.03	2.54
Horse		--	--	--
Tractor		2.17	2.03	2.54
For Husking				
Man		2.10	2.46	1.85
Horse		.72	1.67	.33
Tractor		1.74	1.62	1.68
Total				
Man		4.27	4.49	4.39
Horse		.72	1.67	.33
Tractor		3.91	3.65	4.22
COSTS PER ACRE				
Labor	$	$3.45	$3.66	$3.42
Power	$	$3.18	$3.10	$3.31
Equipment	$	$2.39	$2.11	$2.45
Other	$	$2.03	$1.86	$2.31
TOTAL COSTS PER ACRE*	$	$11.05	$10.73	$11.49
ACRES IN CORN		52.1	57.5	40.0
YIELDS PER ACRE: BUSHELS				
Average		19.9	24.3	15.0
Tenant's Share		13.2	16.2	9.8
COSTS PER BUSHEL*	$	$ .84	$ .66	$ 1.17

*Bushel costs include a land charge, acre costs do not.

30242bk-8/49

Table 8. Cost of producing corn on 19 irrigated farms, Phelps county, Nebraska, 1948.

Item	Your farm	Average of 19 farms	7 Low cost farms	7 High cost farms
NUMBER OF FARMS		19	7	7
LABOR AND POWER PER ACRE: HOURS				
To Husking				
Man		6.22	5.56	6.27
Horse		.03	--	.06
Tractor		4.08	3.84	4.07
For Husking				
Man		2.12	1.94	2.01
Horse		.70	--	1.06
Tractor		1.70	1.84	1.40
Total				
Man		8.34	7.50	8.28
Horse		.73	--	1.12
Tractor		5.78	5.68	5.47
COSTS PER ACRE				
Labor	$	$ 7.40	$ 6.67	$ 7.40
Power	$	$ 5.50	$ 5.46	$ 5.29
Equipment	$	$ 3.90	$ 3.91	$ 3.89
Other	$	$ 7.50	$ 6.49	$ 8.97
TOTAL COSTS PER ACRE*	$	$24.30	$22.53	$25.55
ACRES IN CORN		65.4	73.1	55.1
YIELDS PER ACRE: BUSHELS				
Average		54.0	61.5	43.8
Tenant's Share		35.0	40.8	28.0
COSTS PER BUSHEL*	$	$ .69	$ .55	$ .91

*Bushel costs include a land charge, acre costs do not.

30242bk-8/49

Table 9. Cost of producing corn on 13 farms, Saunders county, Nebraska, 1948.

Item	Your farm	Average of 13 farms	5 Low cost farms	5 High cost farms
NUMBER OF FARMS		13	5	5
LABOR AND POWER PER ACRE: HOURS				
To Husking				
Man		3.21	2.30	4.18
Horse		1.47	--	3.53
Tractor		2.71	2.30	3.02
For Husking				
Man		2.22	1.68	3.13
Horse		1.81	--	4.63
Tractor		1.28	1.63	.81
Total				
Man		5.43	3.98	7.31
Horse		3.28	--	8.16
Tractor		3.99	3.93	3.83
COSTS PER ACRE				
Labor	$	$ 6.08	$ 4.57	$ 8.22
Power	$	$ 4.98	$ 4.62	$ 5.41
Equipment	$	$ 3.48	$ 3.72	$ 3.09
Other	$	$ 3.44	$ 3.71	$ 3.00
TOTAL COSTS PER ACRE	$	$17.98	$16.62	$19.73
ACRES IN CORN		85.5	100.8	86.8
YIELDS PER ACRE: BUSHELS				
Average		58.3	63.7	54.8
Tenant's Share		33.5	38.2	29.1
COST PER BUSHEL*	$	$ .54	$ .43	$ .68

*Bushel costs include a land charge, acre do not.

30242bk-8/49

Table 10. Cost of producing corn on 20 farms, Washington county, Nebraska, 1948.

Item	Your farm	Average of 20 farms	6 Low cost farms	7 High cost farms
NUMBER OF FARMS		20	6	7
LABOR AND POWER PER ACRE: HOURS				
To Husking				
Man		4.99	4.71	5.52
Horse		.30	0-	.95
Tractor		4.27	4.10	4.42
For Husking				
Man		2.50	2.50	2.91
Horse		.59	---	1.59
Tractor		1.98	2.43	2.12
Total				
Man		7.49	7.21	8.43
Horse		.89	---	2.54
Tractor		6.25	6.53	6.54
COST PER ACRE				
Labor	$	$ 7.39	$ 7.45	$ 7.40
Power	$	$ 7.21	$ 7.43	$ 6.71
Equipment	$	$ 4.68	$ 5.15	$ 3.79
Other	$	$ 3.64	$ 3.45	$ 3.80
TOTAL COSTS PER ACRE*	$	$22.92	$23.48	$21.70
ACRES IN CORN		100.8	114.5	70.6
YIELDS PER ACRE: BUSHELS				
Average		63.6	70.2	51.3
Tenant's Share		35.1	41.7	26.8
COSTS PER BUSHEL*	$	$ .65	$ .56	$ .81

*Bushel costs include a land charge, acre costs do not.

30242bk-8/49

Scale of Charges for Unpaid Items

All cash outlays as given by cooperating farmers were used in determining these corn costs. Other cost items such as unpaid labor, power, and machinery were charged at going custom rates for the community or at rates based on previous studies. Some of the more important charges used were as follows:

1. Man labor per hour — $ .70

2. Power per hour

Horse	.20
Tractor*	
6 - 10.9 drawbar horsepower	.71
11 - 20.9 drawbar horsepower	.80
21 - 25.9 drawbar horsepower	1.02
26 - 30.9 drawbar horsepower	1.16

3. Equipment costs per acre **

Plow, two bottom, 14 inch	.33
Plow, two or three bottom, 16 inch	.26
Disk, single, 12 foot	.08
Harrow, spike tooth	.04
Lister, two row pull type	.30
Corn planter, two row	.26
Lister cultivator, two row	.20
Cultivator, two row, mounted	.14
Wagon and harness when husking by hand	4¢ per horse hour
Manure spreader	
Small, less than 70 bus.	.44 per hour
Large, 70 bus. or more	.42 per hour
Manure loader	.47 per hour

4. Preliminary preparation. Computed as 20 per cent of costs for labor, power, and equipment for each operation up to husking.

5. Cribbing when corn was picked mechanically 4 cents per bushel. Apportionment of cribbing charges:

Labor	42 per cent
Power	42 per cent
Equipment	16 per cent

---

*Cost of Tractor Power on Nebraska Farms, 1942, Revised. Nebraska Experiment Station Bulletin 324. Based on Table 10. Charges increased on basis of current increases in costs.

**Cost of Operating Machinery on Nebraska Farms. Nebraska Experiment Station Bulletin 391. 1948. Table 10.

30242hk-8/49

6. Husking per acre unless otherwise indicated

County	Picker	Hand per bushel
Boone	$ 6.00	15 ¢
Cass per bushel	.12	12
Douglas per bushel	.10	12
Fillmore, Dry land	4.00	12
Fillmore, Irrigated	6.00	12
Pawnee per bushel	.12	14
Phelps, Dry land	4.00	15
Phelps, Irrigated	5.00	15
Saunders	5.50	15
Washington per bushel	.12	12

Mechanical husking charges were apportioned as follows:

	2-row	1-row
Labor	33%	40%
Power	27%	28%
Equipment	40%	32%

7. Pump irrigation

a. Charges made according to actual records kept in 1948 by individuals in cooperation with the Nebraska College of Agriculture.

b. Where no records were kept, charges used were averages from 6 records kept in Fillmore county in 1948 as follows:

		Per acre
Power		$ 4.48
Pump	$1.13)	2.35
Well	$1.22)	
Total		$ 6.83