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ANNUAL FARM BUSINESS REPORT

EASTERN NEBRASKA

26 Farms

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, Acting Director
Lincoln 1

FARM BUSINESS REPORT

EASTERN NEBRASKA

1947

Arthur G. George, Department of Rural Economics*

This report is made from farm business records kept by 26 farmers in Cass, Dodge, Nemaha, Otoe, Saunders, and Washington counties covering the 1947 calendar year. This area is located in eastern and southeastern Nebraska. Four of these counties touch the Missouri river on the east and two are in the next tier of counties to the west. The area contains rolling land for the most part except for Missouri and Platte river bottom lands which comprise an appreciable part of this area. Combinations of a fertile soil, favorable climate and adequate rainfall make this a very productive area. Corn is the most important single crop followed by oats, wheat and alfalfa in appreciable amounts. Cattle feeding and hog production are the leading livestock enterprises.

Excessive rainfall in the spring and early summer of 1947 prevented timely planting and cultivation of corn. Much corn was washed out or the ground was too wet for planting. The greater part of the summer was excessibly hot and dry. These circumstances resulted in a much smaller than average corn crop and low yields of other crops as well.

The year was characterized by high industrial activity in the United States, a high level of employment and an active demand for farm products both at home and abroad. Prices received by farmers were high as were prices paid by them. Net dollar returns were higher than normal. For these 26 farms the average rate earned on the investment was 16.6 per cent after paying all operating costs and allowing wages to the operator and other unpaid labor at $125 per month. These 26 farms returned $8,039 to the operator for his work and ability as a manager. This amount was the return to the operator after deducting from net receipts $125 per month for the labor of other members of the family who did field work, and an allowance of 5 per cent interest for farm capital.

The 9 most profitable farms of the group had average earnings of 24.6 per cent or an average labor and management wage of $13,131. The 9 least profitable farms earned an average of 8.6 per cent on the investment or a labor and management wage of $3,682.

The number of records obtained was too few to be representative of all farms in this area, but they give important clues as to the type of organization and management that will result in greatest returns on most farms in the area.

The data from the farm records are presented in 12 tables which follow. Tables 1 through 6 show beginning and closing inventories, summary of land use, both in acres and per cent of total land in farms, summary of income and expenses including inventory changes with resultant earnings, and a comparison of factors

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*Cooperating agencies: The Department of Rural Economics and Agricultural Extension Service of the College of Agriculture, University of Nebraska, and farmers in Cass, Dodge, Nemaha, Otoe, Saunders and Washington counties.

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that affect farm incomes on the farms in this area. Each of these tables show average data for the 26 farms, for the 9 most profitable, and for the 9 least profitable farms. They are presented without further discussion. Tables 7 to 12, inclusive, show the influence of certain important factors on incomes as found on the 26 farms studied. A brief discussion accompanies each table.

The thermometer chart is a device for showing at a glance how an individual compares with the average of the group for each of the efficiency factors shown. The rating of each operator is marked on the particular circular received by each farmer who contributed a record.

Explanations and Definitions

1. Work Unit (Productive Man Work Unit). The amount of work a man can do in a ten hour day when working on crops and productive livestock at average speed with the type of equipment in most common use in his community.

2. Productive man work required for major crops and types of livestock.

Item	Unit	Hours of labor required Eastern Nebraska	Central Nebraska
Milk cow butterfat production			
More than 160 pounds	1 head	130	130
Less than 160 pounds	1 head	100	100
Feeder cattle	1 head	15	15
Other cattle	1 animal unit	40	40
Hogs	100 lbs. gain	3	3
Sheep, farm flock	1 animal unit	35	35
Poultry	100 head	200	200
Corn, husked	1 acre	8	7
Corn, hogged	1 acre	4	4
Corn, silage	1 acre	14	10
Wheat	1 acre	6	4
Oats, barley	1 acre	6	5
Soybeans	1 acre	9	-
Alfalfa hay	1 acre	12	9
Seed (alfalfa or clover)	1 acre	10	-
Other hay	1 acre	6	3
Temporary pasture	1 acre	3	3
Sorghum (Grain or hay)	1 acre	8	6

3. Animal Unit: One cow, one bull, one feeder, 2 stock cattle 1-2 years old, 4 calves under one year, 7 sheep, 1,000 pounds of hogs produced, 100 head of poultry.

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Table 1. Summary of beginning inventories on 26 Eastern Nebraska farms, 1947.

Item		Your farm	Averages 26 farms	9 most profitable farms	9 least profitable farms
SIZE OF FARM (Acres)			280	286	266
HORSES	$		$182	$197	$172
PRODUCTIVE LIVESTOCK (TOTAL)	$		$5,383	$6,924	$6,376
Milk cows			643	506	898
Feeder cattle			1,251	2,620	814
Other cattle			971	784	1,266
Hogs			2,312	2,870	3,091
Sheep			4	-	-
Poultry			202	144	307
MACHINERY AND EQUIPMENT (TOTAL)	$		$3,891	$3,558	$4,683
Truck			294	159	517
Automobile			286	318	351
Tractor			898	846	1,057
Other machinery			2,413	2,235	2,758
FEED, GRAIN AND SUPPLIES	$		$5,501	$6,957	$4,795
PERMANENT IMPROVEMENTS	$		$4,529	$4,284	$6,016
LAND	$		$34,028	$33,556	$30,936
TOTALS: BEGINNING INVENTORIES	$		$53,514	$55,476	$52,978

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Table 2. Summary of closing inventories on 26 Eastern Nebraska farms, 1947.

Item		Your farm	Averages 26 farms	9 most profitable farms	9 least profitable farms
SIZE OF FARM			280	286	266
HORSES	$		$120	$135	$ 84
PRODUCTIVE LIVESTOCK (TOTAL)	$		$7,483	$10,725	$7,673
Milk cows			693	597	849
Feeder Cattle			1,983	4,302	1,361
Other Cattle			1,379	1,394	1,588
Hogs			3,233	4,292	3,589
Sheep			2	-	-
Poultry			193	140	286
MACHINERY AND EQUIPMENT (TOTAL)	$		$5,341	$5,926	$5,550
Truck			507	539	511
Automobile			438	302	632
Tractors			1,172	1,459	1,018
Other machinery			3,224	3,626	3,389
FEED, GRAIN AND SUPPLIES	$		$6,056	$7,501	$4,963
PERMANENT IMPROVEMENTS	$		$4,834	$5,027	$6,105
LAND	$		$34,028	$33,556	$30,936
TOTALS: CLOSING INVENTORIES	$		$57,862	$62,870	$55,311

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Table 3. Summary of land use by crops on 26 Eastern Nebraska farms, 1947.

Item	Your farm	Averages		
		26 farms	9 most profitable farms	9 least profitable farms
Corn		91	91	79
Oats		40	42	46
Wheat		30	21	37
Alfalfa		18	17	26
Red Clover		7	10	7
Corn Silage		3	5	3
Tilled Pasture		32	36	21
Wild Hay		1	3	--
Other cropland		14	8	12
Total cropland		236	233	231
Permanent pasture		23	30	14
Farmstead, roads, waste		21	23	21
Total acres in farm		280	286	266
Per cent of total acreage in each use				
Corn		32.5	31.8	29.7
Oats		14.3	14.7	17.3
Wheat		10.7	7.3	13.9
Alfalfa		6.4	6.0	9.8
Red Clover		2.5	3.5	2.6
Corn Silage		1.1	1.7	1.1
Tilled pasture		11.4	12.6	7.9
Wild hay		.4	1.1	----
Other cropland		5.0	2.8	4.5
Total Cropland		84.3	81.5	86.8
Permanent pasture		8.2	10.5	5.3
Farmstead, roads, waste		7.5	8.0	7.9
Total		100	100	100

Table 4. Summary of cash income and cash expenses on 26 Eastern Nebraska farms, 1947.

Item	Your farm	Average 26 farms	Average 9 most profitable farms	Average 9 least profitable farms
Cash Income				
Improvements	$	$ 4	$ 9	$ 4
Horses		33	42	45
Cattle		9,561	18,797	1,863
Hogs		6,352	8,892	7,218
Sheep		10	--	--
Poultry		201	175	293
Egg Sales		637	499	791
Dairy Sales		955	706	1,096
Machinery and equipment		557	553	973
Feed, Grain and Supplies		5,739	5,700	4,301
Labor off farm		27	37	37
Miscellaneous		168	159	141
Total Cash Income	$	$24,244	$35,569	$16,762
Cash Expenses				
Improvements	$	$986	$1,497	$887
Horses		9	20	7
Cattle		4,470	8,058	1,364
Hogs		591	477	1,080
Poultry		81	68	117
Livestock expense		294	228	529
Supplies		166	203	192
Machinery and equipment		3,950	4,991	3,653
Feed, Grain and Supplies		4,500	7,730	2,805
Crop expense		417	442	375
Hired Labor		1,218	1,646	1,120
Taxes		546	634	511
Miscellaneous		304	434	323
Total Cash Expense	$	$17,532	$26,428	$12,963
Net cash gain	$	$6,712	$9,141	$3,799
Net inventory gain	$	$4,449	$7,394	$2,889
Net cash loss		--	--	--
Net inventory loss		--	--	--
Net Farm Gain	$	$11,161	$16,535	$6,688

Table 5. Summary of income and expense including inventory changes on 26 Eastern Nebraska farms, 1947.

Item		Your farm	Averages 26 farms	9 most profitable farms	9 least profitable farms
Receipts and Net Increases					
Improvements	$	$ --		$ --	$ --
Horses		--		--	--
Cattle		6,281		13,121	1,319
Hogs		6,682		9,837	6,636
Sheep		8		--	--
Poultry		111		104	156
Egg sales		637		499	791
Dairy sales		955		706	1,096
Machinery and equipment		--		--	--
Feed, Grain and Supplies		1,894		--	2,219
Labor off the farm		27		37	37
Miscellaneous		168		159	141
Total receipts and net increases	$	$16,763		$24,463	$12,395
Expenses and Net Decreases					
Improvements	$	$676		$745	$794
Horses		38		40	50
Cattle		--		--	--
Hogs		--		--	--
Poultry		--		--	--
Livestock expense		294		228	529
Supplies		166		203	192
Machinery and equipment		1,943		2,070	1,813
Feed, grain and supplies		--		1,486	--
Crop expense		417		442	375
Hired labor		1,218		1,646	1,120
Taxes		546		634	511
Miscellaneous		304		434	323
Total expenses and net decreases	$	$5,602		$7,928	$5,707
Return to capital and operator's family	$	$11,161		$16,535	$6,688
Value of unpaid labor at $125 per month	$	$1,925		$1,978	$2,000
Net income from investment and management		$9,236		$14,557	$4,688
Average investment	$	$55,709		$59,188	$54,565
Rate earned on investment (%)		16.6		24.6	8.6
Returns to capital and operator's labor and management	$	$10,824		$16,090	$6,410
5% interest on average investment	$	$2,785		$2,959	$2,728
Labor and Management Wage	$	$8,039		$13,131	$3,682

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Table 6. Comparison of factors that affect farm income on 26 Eastern Nebraska farms, 1947.

Item		Your farm	Averages 26 farms	9 most profitable farms	9 least profitable farms
Labor and Management Wage	$		$8,039	$13,131	$3,682
Rate Earned on Investment	%		16.6%	24.6%	8.6%
Size of Business					
Acres in farm			280	286	266
Average number of men			1.9	2.0	2.0
Productive work units			430	514	432
Animal units (Productive livestock)			79	140	51
Cows milked			5.3	3.6	7
Litters of pigs weaned			19	24	24
Pigs weaned			115	155	132
Volume of Production					
Corn, bushels			2,272	2,323	1,865
Oats, bushels			962	1,223	1,013
Wheat, bushels			677	521	857
Alfalfa, tons			30	35	32
Livestock					
Hogs, pounds produced			23,212	36,736	18,873
Dairy sales	$		$955	$706	$1,096
Egg sales	$		$637	$499	$791
Rates of Production					
Corn, bushels per acre			25	25	24
Oats, bushels per acre			24	29	22
Wheat, bushels per acre			23	25	23
Alfalfa, tons per acre			1.7	2.0	1.2
Crop index			100	113	90
Pigs weaned per litter			5.9	6.4	5.6
Dairy sales per cow	$		$179	$198	$157
Egg sales per hen	$		$3.64	$3.68	$3.48
Efficiency					
Productive work units per man			225	251	221
Labor, power and machinery cost per work unit	$		$12.15	$11.48	$11.57
Returns per $100 worth of feed fed to productive livestock	$		$169	$179	$135
Balance					
Per cent of productive work on crops			38	32	39
Per cent of productive work on livestock			62	68	61
Productive livestock units per 100 acres			28	49	19

Influence of Certain Factors on Farm Incomes

SIZE OF BUSINESS.-The volume of sales or the quantity of grain, livestock, and livestock products produced in a year are very important factors in determining income. The size of a business can be measured in number of acres, amount invested, numbers of livestock, days of labor expended, and in other ways. Table 7 considers the number of work units as a measure of size and shows its effect on the labor and management wage. The table shows greater incomes were received on those farms where more work units were employed.

Table 7. Relationship between size of business, as measured by work units, and labor and management wage on 26 Eastern Nebraska farms, 1947.

Work units used		Number of farms	Average labor and management wage
Range	Average		
Below 300	227	9	$3,888
300 to 450	374	9	$6,415
450 and above	722	8	$12,744

CROP YIELDS.-Crop yields have a decided influence on farm incomes. They must be considered in connection with acreage, however, and the kind and number of different crops grown. Table 8 presents crop yield index data and shows that as the index of production per acre increases, incomes increase. The crop yield index is a measure of yields of all crops when the average for all 26 farms is taken as 100.

Table 8. Relation of crop yields to labor and management wage on 26 Eastern Nebraska farms, 1947.

Crop yield index		Number of farms	Average labor and management wage
Range	Average		
Below 86	77	9	$5,133
86 to 110	96	9	$5,604
110 and above	131	8	$14,046

PRODUCTIVE LIVESTOCK.-Amount of productive livestock, which is all livestock except horses and mules has a distinct influence on farm returns. Experiences of many farmers in eastern Nebraska over a period of years show that livestock farmers obtained greater returns than did crop farmers. For some individual years, however, the opposite may be true. Table 9 shows that greater incomes were received by those farmers who received a considerable part of their incomes from the sale of livestock and livestock products than by those farmers who had but little livestock.

Table 9. Relation of number of animal units of productive livestock to labor and management wage on 26 Eastern Nebraska farms, 1947.

Productive animal units		Number of farms	Average labor and management wage
Range	Average		
Below 35	23	9	$4,966
35 to 55	42	8	$7,421
55 and above	127	9	$11,661

EFFICIENT LIVESTOCK FEEDING.-Many things contribute to high or low returns on the feed fed to productive livestock. Prices of feeds in relation to prices of livestock, quality of feed and type and grade of livestock, balancing of rations, sanitary conditions, health of livestock, and perhaps other factors all have an influence on the amount of returns from a given quantity of feed consumed.

Table 10 shows that farm incomes tend to increase as the returns for each $100 worth of feed fed increases.

Table 10. Relation of returns from feed fed to productive livestock to labor and management wage on 26 Eastern Nebraska farms, 1947.

Returns per $100 worth of feed fed to productive livestock		Number of farms	Average labor and management wage
Range	Average		
Below $150	$129	8	$4,951
$150 to $190	$168	9	$10,208
$190 and above	$220	9	$8,614

USE OF LABOR.-The number of productive work units used on a farm is usually an indicator as to the relative size of that farm. Table 11 shows that as the number of work units per worker increases farm returns increase. This does not mean that an increase in number of workers is necessarily advisable but rather an increase in the number of work units that a man performs that is productive of higher returns.

Table 11. Relation of efficient use of labor to labor and management wage on 26 Eastern Nebraska farms, 1947.

Productive man work units per man		Number of farms	Average labor and management wage
Range	Average		
Below 175	138	9	$6,189
175 to 250	228	9	$7,017
250 and above	311	8	$11,270

LABOR, POWER, AND MACHINERY COSTS.-The costs for labor, power, and machinery constituted considerably more than half the expenses for operating the average of these 26 Eastern Nebraska farms in 1947 when net increases and decreases were considered. An appreciable addition to the cost for these items is apparent when the value of unpaid labor is added. These items of cost in relation to productive work units used, and labor and management wage earned are given in Table 12. The table shows an increase in returns as costs decrease.

Table 12. Relation of labor, power and machinery cost per productive work unit used to labor and management wage on 26 Eastern Nebraska farms, 1947.

Labor, power, and machinery cost per productive man work unit used		Number of farms	Average labor and management wage
Range	Average		
Above $15.50	$19.43	9	$6,953
$15.50 to $10.80	$12.65	9	$8,321
Below $10.80	$9.36	8	$8,944

THERMOMETER CHART. By using the figures for "Your Farm" in Table 6, each operator can determine his standing in comparison with the averages of the farms included in this study. The average for the 26 records used in this summary are located between the lines across the center of the page.

26 Eastern Nebraska farms, 1947.

	Size			Productive rates		Efficiency				Balance		
	Acres per farm	Work units	Live-stock units	Crop yield index	Pigs per litter	Return per $100 feed fed	Work units per man	Labor, power, machinery cost per work unit	Per cent work on live-stock	Live-stock units per 100 acres	Rate earned on in-vest-ment	Labor and manage-ment wage
	455	780	154	130	8.4	$269	375	$2.15	87	53	31.6%	$15,539
	420	710	139	124	7.9	249	345	4.15	82	48	28.6	14,039
	385	640	124	118	7.4	229	315	6.15	77	43	25.1	12,539
	350	570	109	112	6.9	209	285	8.15	72	38	22.6	11,039
	315	500	94	106	6.4	189	255	10.15	67	33	19.6	9,539
Average	280	430	79	100	5.9	$169	225	$12.15	62%	28	16.6%	$ 8,039
	245	360	64	94	5.4	149	195	14.15	57	23	13.6	6,539
	210	290	49	88	4.9	129	165	16.15	52	18	10.6	5,039
	175	220	34	82	4.4	109	135	18.15	47	13	7.6	3,539
	140	150	19	76	3.9	89	105	20.15	42	8	4.6	2,039
	105	80	4	70	3.4	69	75	22.15	37	3	1.6	539

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