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# Southeastern South Dakota Farm Record Summary 1944 Second Annual Report

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1944

SECOND ANNUAL REPORT

# SOUTHEASTERN SOUTH DAKOTA FARM RECORD SUMMARY

32 FARMS

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Agricultural Experiment Station
in cooperation with
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# SECOND ANNUAL REPORT OF THE SOUTHEASTERN SOUTH DAKOTA FARM RECORD PROJECT, 1944

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## Introduction

This is the second annual report of the farm record study started by the Experiment Station in 1943. Farm record cooperators are located in two areas of the state, namely the Southeastern and North Central Areas. A summary of the results of the North Central area are included in a separate pamphlet.

The analysis of the farm record data and the preparation of the report was carried out by the Experiment Station under the direction of C. R. Hoglund. The organization and educational work in the field was handled largely by the Extension Service under the guidance of Lyle Bender and George Anderson, Extension Farm Management Specialists. The following is a list of counties covered in the study and the county agents who actively cooperated in the project.

| County | Agent | Number of records |
|---|---|---|
| Clay | Carl O. Reed | 2 |
| Lake | Howard Schultz | 8 |
| Lincoln | No agent | 2 |
| Minnehaha | J. Ervin Boyd | 13 |
| Moody | C. M. Culhane | 7 |

The farm record cooperators were visited one or two times during the year and again at the end of the year when the records were closed. Thirty-six farm records were closed but only 32 are included in this report. The records not used were either incomplete or not typical of the area. The cooperators kept records which included cash receipts and expenses, beginning and end of year inventories of feed and seed, machinery and equipment, buildings and land and livestock; crop record; livestock record and a record of farm produce and fuel used by the household. Additional information was obtained on crop and livestock practices used, crop varieties, feed fed to productive livestock and on family and hired labor.

Operator's labor earnings have been calculated on a full owner basis in order to more nearly compare all farms on an equal basis. However, each cooperator received an earnings statement on the basis of his actual tenure situation. Summary of farm inventories and earnings are prepared as though the operator was a full owner except for table 18 in which a comparison is made between owners, part-owners and tenants for earnings and various farm organization and management efficiency factors.

The farm record data used in this report have been tabulated for high profit and low profit farms as well as for the entire group. Summaries of farm inventories, crop acreage and yields, livestock numbers, farm produce used in home and farm earnings are given in the following tables for the high profit, low profit and the average of all farms.

Operator's labor earnings, farm organization and efficiency measures and other related factors have also been calculated for size of farm and tenure comparisons

## Climatic Conditions

Above normal rainfall during the growing season made it difficult for farmers to plant their crops, particularly corn, at the proper time. Much of the lower lying land was so wet that the planting of small grain was impossible in many cases and the planting of corn was retarded considerably. The cool, moist conditions the early part of the season stimulated excessive weed production which tended to reduce small grain yields. Excessive moisture at harvest time damaged some grain. Much of the corn produced in this area during 1944 carried a high percent of moisture. However, most corn yields were very favorable. Total precipitation for the year averaged 6 to 12 inches above normal.

Table 1. Monthly and Annual Precipitation and Departure from Normal, Flandreau, Sioux Falls, Vermillion, and Wentworth Weather Stations, 1944.

| Month | Flandreau | | Sioux Falls | | Vermillion | | Wentworth | |
|---|---|---|---|---|---|---|---|---|
| | 1944 | Departure | 1944 | Departure | 1944 | Departure | 1944 | Departure |
| January | 1.03 | + 0.55 | 1.51 | + 0.86 | 1.30 | + 0.75 | 1.29 | + 0.77 |
| February | 1.28 | + 0.74 | 1.60 | + 0.88 | 1.11 | + 0.33 | 1.22 | + 0.72 |
| March | 0.72 | - 0.30 | 0.95 | - 0.34 | 0.81 | - 0.42 | 0.89 | - 0.14 |
| April | 2.80 | + 0.49 | 2.96 | + 0.36 | 3.99 | + 1.47 | 3.46 | + 1.27 |
| May | 3.97 | + 0.75 | 4.35 | + 0.57 | 5.51 | + 2.00 | 4.20 | + 0.86 |
| June | 3.64 | - 0.40 | 4.82 | + 0.52 | 6.29 | + 2.38 | 5.32 | + 1.28 |
| July | 4.30 | + 1.71 | 4.58 | + 1.45 | 6.19 | + 3.01 | 4.32 | + 1.42 |
| August | 6.69 | + 3.76 | 7.36 | + 4.15 | 6.98 | + 4.04 | 8.48 | + 5.44 |
| September | 2.05 | - 0.37 | 1.85 | - 0.79 | 3.83 | + 0.67 | 1.72 | - 0.87 |
| October | 0.59 | - 0.84 | 0.37 | - 1.17 | 0.42 | - 1.15 | 0.45 | - 1.06 |
| November | 2.09 | + 1.14 | 1.86 | + 0.80 | 1.23 | + 0.14 | 1.81 | + 1.05 |
| December | 0.03 | - 0.55 | --- | - 0.76 | 0.15 | - 0.54 | --- | - 0.55 |
| 1944 Total | 29.19 | + 6.68 | 32.21 | + 6.53 | 37.81 | +12.68 | 33.16 | +10.19 |
| 1943 Total | 28.63 | + 5.51 | 23.45 | - 2.97 | 23.53 | - 1.93 | 28.69 | + 4.95 |

## Definition of Terms and Measures Used

1. Operator's labor earnings-is the measure of financial success used in this report. It is a measure of the relative financial success of a farmer and represents the returns for his year's work (including family living from the farm) above all farm expenses, and a deduction for the value of unpaid family labor and an interest charge for the use of farm capital.

2. Productive man work units-is a measure of size of business used in this report. A work unit represents the amount of work that a farm worker can do in a 10-hour day working at average efficiency. For example, it requires about 13 hours of man labor to produce an acre of corn and 140 hours to care for a milk cow for a year. Thus an acre of corn would represent 13 work units and a milk cow 140 work units.

The work unit standards used in this report are shown in the following tables:

| Crops | | | Livestock | | |
|---|---|---|---|---|---|
| Item | per | No. of work units | Item | per | No. of work units |
| Corn, grain | acre | 1.3 | Milk cows | cow | 14.0 |
| Corn, hogged off | " | .8 | Other dairy cattle | animal unit | 4.0 |
| Corn and cane silage | " | 1.9 | Beef cows | cow | 4.0 |
| Sorghum | " | 1.3 | Other beef cattle | animal unit | 4.0 |
| Potatoes | " | 4.0 | Bulls | head | 4.0 |
| Small grain | " | .7 | Litter | litter | 4.0 |
| Alfalfa hay | " | 1.0 | Other hogs | head | .5 |
| Other tame hay | " | .8 | Ewes | head | .5 |
| Wild hay | " | .5 | Other sheep | head | .2 |
| | | | Hens | 100 | 20.0 |
| | | | Chickens raised | 100 | 4.0 |

3. Work unit per worker - is a measure of the efficient use of labor on a farm.

4. Livestock increase - is the value of gross livestock sales plus or minus changes in inventory values of livestock from the beginning to the end of the year.

5. Crop yield index - is a comparison of the yield per acre of all crops on a given farm or group of farms with the average yield of all crops for the entire groups of farms studied. For example, a farm with a crop yield index of 105 means that the average yield for this farm is 5 percent greater than the average.

6. Crop selection index - is a measure of the success of a farmer or group of farmers in choosing high value crops. Crops were rated as A, B, C and D. All of the acres in A crops, one-half of acres in B crops and one-fourth of acres in C crops were used in calculating the percent of cropland in high return crops. The group average was then considered 100 with variations compared to this average. The following crops were rated as A crops: alfalfa, alfalfa and grass mixtures and corn. The following were rated as B crops: silage, soybeans, sweet clover, mixed legume hay and pasture, and oats. C crops were wheat, flax and annual hay and pasture crops. All other crops were rated as D.

7. Livestock returns per $100 feed fed - is a measure of the efficiency in converting feed into livestock products. It is obtained by dividing the value of the net livestock increase by the value of feed fed to all productive livestock during the year. This figure is multiplied by 100.

8. Part-owner - is a farmer who owns part of the land he operates and rents the rest.

Table 2. Summary of Farm Inventories, 1944*

| Item | Your farm | Average of 32 farms | 7 most profitable farms | 7 least profitable farms |
|---|---|---|---|---|
| | Beginning of Year | | | |
| Horses and mules | $_____ | $ 247 | $ 256 | $ 299 |
| Productive livestock (total) | _____ | 5,110 | 7,951 | 3,408 |
| Cattle | _____ | 3,337 | 5,914 | 1,942 |
| Hogs | _____ | 1,428 | 1,739 | 1,195 |
| Sheep | _____ | 135 | 83 | 58 |
| Poultry | _____ | 210 | 215 | 213 |
| Feed and seed | _____ | 2,657 | 4,431 | 1,969 |
| Mach. and equipment (total) | _____ | 2,684 | 3,733 | 1,704 |
| Power machinery | _____ | 989 | 1,385 | 545 |
| Crops and gen. mach. | _____ | 1,422 | 1,999 | 968 |
| Livestock equipment | _____ | 273 | 349 | 191 |
| Improvements (farm)** | _____ | 3,728 | 3,983 | 3,683 |
| Land | _____ | $14,005 | $14,370 | $12,456 |
| Total Farm Capital | $_____ | $28,431 | $34,724 | $23,519 |
| | End of Year | | | |
| Horses and mules | $_____ | $ 226 | $ 264 | $ 269 |
| Productive livestock (total) | _____ | 4,816 | 7,265 | 3,662 |
| Cattle | _____ | 3,319 | 5,345 | 2,334 |
| Hogs | _____ | 1,026 | 1,614 | 1,042 |
| Sheep | _____ | 271 | 114 | 34 |
| Poultry | _____ | 200 | 192 | 202 |
| Feed and seed | _____ | 3,940 | 6,645 | 2,652 |
| Mach. and equipment (total) | _____ | 2,804 | 3,650 | 1,642 |
| Power machinery | _____ | 1,035 | 1,356 | 499 |
| Crops and gen. mach. | _____ | 1,475 | 1,871 | 949 |
| Livestock equipment | _____ | 294 | 423 | 194 |
| Improvements (farm)** | _____ | 3,634 | 3,918 | 3,519 |
| Land | $_____ | $14,005 | $14,370 | $12,456 |
| Total Farm Capital | $_____ | $29,425 | $36,112 | $24,200 |

* These include value of both owner's and operator's share of farm capital investment.

** Does not include value of dwelling.

Table 3. Crop Acreage Summary, 1944

| Item | Your Farm | Average of 32 farms | 7 most profitable farms | 7 least profitable farms |
|---|---|---|---|---|
| Corn for grain | ____ | 102.3 | 145.5 | 82.9 |
| Sorghum forage | ____ | 1.5 | --- | 1.1 |
| Corn and cane silage | ____ | 3.5 | 5.0 | 1.3 |
| Miscellaneous | | 1.2 | 1.7 | .3 |
| Total Row Crops | | 108.5 | 152.2 | 85.6 |
| Wheat | ____ | 2.1 | 3.5 | .6 |
| Oats | ____ | 72.7 | 103.8 | 63.0 |
| Barley | ____ | 7.0 | --- | 5.7 |
| Rye-grain | ____ | 1.1 | 3.3 | 1.9 |
| Flax | ____ | 8.9 | 10.5 | 3.6 |
| Miscellaneous | | 2.1 | 5.0 | 2.7 |
| Total Small Grain | | 94.0 | 126.1 | 77.4 |
| Alfalfa hay | ____ | 15.9 | 20.0 | 11.3 |
| Other tame hay | | 2.7 | 1.8 | 6.7 |
| Total Tame Hay | | 18.6 | 21.8 | 18.0 |
| Rotation Pasture | | 11.8 | 13.8 | 3.4 |
| Total Tame Hay & Past. | | 30.5 | 35.7 | 21.4 |
| Idle and Fallow | | 2.5 | 8.3 | 2.4 |
| Total Tillable Land | | 236.5 | 322.3 | 136.8 |
| Native hay | ____ | 4.4 | 6.7 | 8.6 |
| Native pasture | ____ | 38.8 | 37.2 | 55.7 |
| Farmsteads, roads, etc. | | 15.9 | 14.2 | 10.0 |
| Total Acres Operated | | 295.6 | 380.4 | 261.1 |
| % of farm in cropland | ____ | 80.2 | 85.6 | 74.0 |
| % of cropland in row crops | ____ | 45.9 | 46.8 | 44.4 |
| % of cropland in sm. grain | ____ | 39.5 | 38.8 | 40.5 |
| % of cropland in hay & past. | ____ | 12.9 | 11.8 | 11.4 |

Table 4. Crop Yield Summary, 1944

| Crop | Your farm | Average of 32 farms | 7 most profitable farms | 7 least profitable farms |
|---|---|---|---|---|
| Corn for grain | ____ | 52.0 | 58.1 | 48.1 |
| Wheat | ____ | 15.4 | --- | 12.3 |
| Oats | ____ | 36.9 | 42.6 | 27.8 |
| Barley | ____ | 14.1 | --- | 13.8 |
| Rye | ____ | 14.5 | 20.0 | 8.9 |
| Flax | ____ | 7.7 | 8.8 | 5.5 |
| Alfalfa hay | ____ | 2.5 | 2.4 | 2.2 |
| Other tame hay | ____ | 1.9 | 2.0 | 1.8 |
| Sorghum forage | ____ | 2.1 | --- | 2.5 |
| Silage | ____ | 8.2 | 8.3 | 5.6 |
| Native hay | ____ | 1.5 | 1.6 | 1.4 |

Table 5. Livestock Summary, 1944

| Number of: | Your Farm | Average of 32 farms | 7 most profitable farms | 7 least profitable farms |
|---|---|---|---|---|
| Horses | _____ | 3.6 | 3.7 | 4.5 |
| Beef cows | _____ | 3.5 | 4.9 | 3.8 |
| Beef heifers | _____ | 1.2 | 1.9 | 1.9 |
| Other beef cattle | _____ | 5.2 | 11.8 | 2.4 |
| Steers | _____ | 15.5 | 36.1 | 3.7 |
| Milk cows | _____ | 9.4 | 8.4 | 10.3 |
| Dairy heifers | _____ | 2.8 | 1.4 | 3.1 |
| Other dairy cattle | _____ | 6.4 | 4.9 | 7.4 |
| Bulls | _____ | 1.0 | .8 | .9 |
| Ewes | _____ | 9.8 | 7.0 | 3.3 |
| Other sheep | _____ | 8.6 | 1.4 | .1 |
| Litters of pigs | _____ | 11 | 11 | 9 |
| Hens and pullets | _____ | 207 | 205 | 209 |
| Total Units Prod. Livestock* | _____ | 44 | 66 | 34 |

* A unit of productive livestock is equal to one mature cow, 2 yearlings, 7 sheep, 14 lambs, 5 sows, 10 pigs and 100 hens.

Table 6. Farm Produce and Fuel Furnished to Household, 1944

| Item | Quantity: Your Farm | Quantity: Average of 32 farms | Quantity: 7 most profitable farms | Quantity: 7 least profitable farms | Value: Your Farm | Value: Average of 32 farms | Value: 7 most profitable farms | Value: 7 least profitable farms |
|---|---|---|---|---|---|---|---|---|
| Whole milk, qts. | _____ | ~~340~~ 1360 | ~~345~~ 1380 | ~~173~~ 692 | $_____ | $102.06 | $103.50 | $52.00 |
| Cream, qts. | _____ | 156 | 147 | 174 | _____ | 70.01 | 66.33 | 78.15 |
| Farm-made butter, lbs. | _____ | 89 | 72 | 127 | _____ | 48.97 | 39.38 | 69.94 |
| Eggs, doz. | _____ | 168 | 208 | 167 | _____ | 50.49 | 62.28 | 50.05 |
| Poultry, lbs. | _____ | 156 | 248 | 128 | _____ | 39.25 | 62.00 | 32.00 |
| Cattle, lbs. | _____ | 564 | 921 | 500 | _____ | 67.62 | 110.50 | 60.00 |
| Hogs, lbs. | _____ | 450 | 308 | 608 | _____ | 58.52 | 40.04 | 78.98 |
| Potatoes, bu. | _____ | 16 | 19 | 19 | _____ | 19.46 | 24.25 | 23.96 |
| Vegetables | | | | | _____ | 87.30 | 91.00 | 97.50 |
| Fruits | | | | | _____ | 4.66 | --- | --- |
| Farm Fuel | | | | | _____ | 15.43 | 9.00 | 12.50 |
| Total Value | | | | | $_____ | $563.77 | $608.28 | $555.08 |

Table 7. Summary of Farm Earnings, 1944

| Item | Your farm | Average of 32 farms | 7 most profitable farms | 7 least profitable farms |
|---|---|---|---|---|
| FARM RECEIPTS | | | | |
| Hogs | $ | $ 3,199 | $ 4,569 | $ 1,900 |
| Cattle | | 3,010 | 7,640 | 527 |
| Dairy products | | 799 | 921 | 521 |
| Eggs | | 535 | 501 | 371 |
| Poultry (includes turkeys) | | 254 | 180 | 218 |
| Sheep and wool | | 163 | 88 | 57 |
| Horses | | 9 | -- | 7 |
| Crops | | 2,699 | 4,481 | 1,771 |
| Machinery & equipment | | 49 | 160 | -- |
| Farm program payments | | 136 | 207 | 88 |
| Income from work off farm | | 274 | 365 | 12 |
| Miscellaneous | | 60 | 140 | 25 |
| (1) TOTAL FARM SALES | $ | $11,187 | $19,252 | $ 5,497 |
| (2) Increase in inventories | | 987 | 1,394 | 674 |
| (3) Family living from farm | | 564 | 608 | 555 |
| (4) TOTAL FARM RECEIPTS (sum 1-3) | $ | $12,738 | $21,254 | $ 6,726 |
| FARM EXPENSES | | | | |
| Auto (farm share) | $ | $ 175 | $ 174 | $ 182 |
| Power, mach. & equip. (upkeep) | | 746 | 993 | 480 |
| Power, mach. & equip. (new) | | 473 | 514 | 179 |
| Farm improvements (upkeep) | | 139 | 306 | 94 |
| Farm improvements (new) | | 89 | 160 | 1 |
| Hired labor | | 435 | 636 | 284 |
| Crop expenses | | 514 | 808 | 331 |
| Feed bought | | 988 | 1,847 | 438 |
| Livestock bought | | 1,554 | 3,384 | 501 |
| Other livestock expenses | | 160 | 263 | 69 |
| Taxes | | 273 | 320 | 241 |
| Insurance | | 50 | 86 | 34 |
| Miscellaneous farm expenses | | 83 | 170 | 31 |
| (5) TOTAL FARM PURCHASES | $ | $ 5,679 | $ 9,661 | $ 2,865 |
| (6) Decrease in inventories | | --- | --- | --- |
| (7) Board furnished hired labor | | 91 | 164 | 66 |
| (8) Unpaid family labor ($80 per mo.) | | 401 | 366 | 400 |
| (9) Interest on farm capital (5%) | | 1,446 | 1,771 | 1,193 |
| (10) TOTAL FARM EXPENSES (sum 5-9) | $ | $ 7,617 | $11,962 | $ 4,524 |
| (11) OPERATOR'S LABOR EARNINGS (4)-(10) | $ | $ 5,121 | $ 9,292 | $ 2,202 |
| (12) RETURNS TO CAPITAL & FAMILY LABOR (sum 8+9+11) | $ | $ 6,968 | $11,429 | $ 3,795 |

Table 8. Summary of Farmer's Net Worth, 1944*

| Item | Your Farm | Rented Farms | Part-owned Farms | Owned Farms |
|---|---|---|---|---|
| Number of farms | | 11 | 8 | 5 |
| **Beginning of Year** | | | | |
| Assets | | | | |
| Total farm capital | $_____ | $ 9,096 | $28,208 | $27,155 |
| Cash on hand and in bank | _____ | 607 | 1,048 | 853 |
| Bonds | _____ | 287 | 1,460 | 1,211 |
| Other assets ** | _____ | 108 | 185 | 600 |
| Total | $_____ | $10,098 | $30,901 | $29,819 |
| Liabilities | | | | |
| Real estate mortgages | $_____ | $ --- | $ 3,321 | $10,696 |
| Chattel mortgages | _____ | 1,891 | 859 | 2,650 |
| Notes & accounts payable | _____ | 114 | 720 | 185 |
| Total | $_____ | $ 2,005 | $ 4,900 | $13,531 |
| Farmer's Net Worth | $_____ | $ 8,093 | $26,001 | $16,288 |
| **End of Year** | | | | |
| Assets | | | | |
| Total farm capital | $_____ | $ 9,936 | $29,754 | $27,455 |
| Cash on hand and in bank | _____ | 727 | 592 | 2,110 |
| Bonds | _____ | 575 | 1,750 | 1,653 |
| Other assets ** | _____ | 1,204 | 2,526 | 800 |
| Total | $_____ | $12,442 | $34,622 | $32,018 |
| Liabilities | | | | |
| Real estate mortgages | $_____ | $ --- | $ 3,004 | $ 9,728 |
| Chattel mortgages | _____ | 1,414 | 475 | 2,430 |
| Notes & accounts payable | _____ | 259 | 569 | 140 |
| Total | $_____ | $ 1,673 | $ 4,048 | $12,298 |
| Farmer's Net Worth | $_____ | $10,769 | $30,574 | $19,720 |
| Change in Net Worth | $_____ | $ 2,676 | $ 4,573 | $ 3,432 |

* This summary includes only the farms for which complete information was available on assets and liabilities.

** Other assets include notes and accounts receivable, postal savings, and all other assets except household and personal property.

Most of the farmers in this study made considerable progress in reducing their indebtedness and in building up reserves in the form of bonds, cash bank deposits and postal savings during 1944. A few farmers have also made advance payments on real estate mortgages. Many of the owners and part-owners have built up reserves in the form of bonds and bank deposits which would be sufficient to completely liquidate their debts. Others have paid up real estate and chattel mortgages. Tenants have accumulated reserves which, in many cases, would be large enough to make a substantial down payment on a farm.

## REASONS FOR VARIATIONS IN FARM EARNINGS

Operator's labor earnings averaged $9,292 for the high profit farms compared to only $2,202 for the low profit farms. The farms in these two groups vary considerably in size and productive resources. However, earnings on farms of the same size having about the same productive resources often differ greatly. What are some of the reasons earnings vary so much from farm to farm? Some of the more important factors affecting earnings will be discussed here.

### Size of Business Important

Size of business as measured in terms of total work units was found to be one of the most important factors affecting earnings. This is particularly true when prices of farm products are high. A small size farm business may provide an adequate farm income if it is very efficiently operated. However, the size of business will need to be large enough to provide full time productive work for the farm family if high earnings are to be attained. Operator's labor earnings averaged $3,500 on the farms with less than 430 work units compared with earnings of about $8,200 on the group of farms with 830 or more work units. The size of farm business can be increased by keeping more livestock, by farming more land or by shifting to more intensive crop and livestock enterprises. This is an excellent time for many farmers to adjust their farming operations to better fit environmental conditions. The relationship of size of business to farm earnings is shown in table 9.

Table 9. Relation of Size of Business to Farm Earnings

| Number of work units | | No. of | Average operator's |
|---|---|---|---|
| Range | Average | farms | labor earnings |
| Under 430 | 354 | 8 | $3,500 |
| 430 - 829 | 566 | 19 | $5,074 |
| 830 and over | 940 | 5 | $8,202 |

### Efficiency in Use of Labor Important

A close relationship exists between the size of farm earnings and the efficiency in use of labor. Earnings are usually higher on the farms on which the greatest amount of work is accomplished per worker. Work units per worker ranged from less than 200 to over 500 for the 32 farms studied. Size of business has a direct bearing on the amount of work accomplished per worker. Labor efficiency can be increased by enlarging the size of business, by distributing labor peaks throughout the season and by the use of labor saving equipment and practices. The use of self-feeders and automatic waterers and the hogging off of corn are three ways of saving labor. The present shortage of farm labor makes it important to use available labor to the best advantage.

Table 10. Relation of Amount of Work Performed Per Worker to Farm Earnings

| Work units per worker | | No. of | Average operator's |
|---|---|---|---|
| Range | Average | farms | labor earnings |
| Under 270 | 223 | 10 | $3,911 |
| 270 - 369 | 323 | 15 | $5,148 |
| 370 and over | 447 | 7 | $6,835 |

High Crop Yields Lower Costs

High yields tend to lower the per bushel or ton cost of crops. Farm earnings are usually higher on farms on which yields are high. High yields are dependent on the use of adapted seed varieties and recommended cropping practices, including a regular rotation. The use of alfalfa or other recommended legumes helps boost yields. The use of commercial fertilizer will increase yields on some farms. The relation of crop yields to earnings is shown in table 11.

Table 11. Relation of Crop Yields to Farm Earnings

| Percent crop yields were of average of all 32 farms | | No. of | Average operator's |
|---|---|---|---|
| Range | Average | farms | labor earnings |
| Under 85 | 69 | 7 | $3,400 |
| 85 - 115 | 102 | 17 | $5,497 |
| 115 and over | 137 | 8 | $5,765 |

Crop Selection Important

Economical livestock production and high earnings are dependent on the choice of crops a farmer makes. It is important that farmers grow the feed crops that produce the greatest quantity of nutrients per acre. The selection of crops that bring high cash returns per acre is also important. The choice of crops should include alfalfa and other legumes which maintain soil fertility and provide high protein feed.

Table 12. Relation of Crop Selection to Farm Earnings

| Percent selection of high return crops were of average of all 32 farms | | No. of | Average operator's |
|---|---|---|---|
| Range | Average | farms | labor earnings |
| Under 85 | 78 | 4 | $5,478 |
| 85 - 114 | 101 | 25 | $4,798 |
| 115 and over | 118 | 3 | $8,010 |

High Livestock Production Needed

The amount and kinds of productive livestock kept on a farm has an important affect on farm earnings. This is particularly true in an area which crops are marketed chiefly through livestock. The farm resources on the farm and the managerial ability of the operator should determine the kinds and amounts of livestock kept. The selection of livestock enterprises that help distribute the labor load throughout the year needs consideration.

Table 13. Relation of Amount of Productive Livestock to Farm Earnings

| Total animal units | | No. of | Average Operator's |
|---|---|---|---|
| Range | Average | farms | labor earnings |
| Under 30 | 21 | 8 | $3,530 |
| 30 - 59 | 39 | 15 | $4,901 |
| 60 and over | 73 | 9 | $7,073 |

Efficient Livestock Feeding Needs Attention

Farmers who produce livestock efficiently usually have higher earnings than inefficient producers. Since such a large proportion of the crops are marketed through livestock in this area, it is extremely important that feed be efficiently used. Livestock returns per $100 feed consumed varied greatly for the 32 farms studied. On a few farms returns were actually less than the cost of the feed. High production per unit, sanitation, balanced rations, adequate pasture, the right kind of shelter plus good management are all important factors contributing to efficient livestock production. Butterfat production per cow, eggs laid per hen and pigs saved per litter were considerably higher on the high profit than on the low profit farms.

Table 14. Relation of Livestock Feeding Efficiency to Farm Earnings

| Livestock returns per $100 feed fed to productive livestock | | No. of | Average operator's |
|---|---|---|---|
| Range | Average | farms | labor earnings |
| Under $120 | $ 98 | 8 | $4,148 |
| $120 - $139 | $160 | 15 | $4,811 |
| $190 and over | $218 | 9 | $6,371 |

## RELATIONSHIP OF EFFICIENCY IN FARMING TO EARNINGS

Farmers who excel in many efficiency factors usually have higher earnings than do those who rank low in most or all of these factors. Some farmers show good management efficiency and high returns in some parts of the farm business which is offset by poor results in other parts of the business. Table 15 illustrates the importance of an efficiently organized and operated farm business.

Table 15. Relation of Number of Factors Above Average to Farm Earnings

| No. of factors above average | No. of farms | Your farm | Average operator's labor earnings |
|---|---|---|---|
| 1 | 6 | $_____ | $2,971 |
| 2 | 6 | $_____ | $4,221 |
| 3 | 10 | $_____ | $4,307 |
| 4 | 5 | $_____ | $7,011 |
| 5 | 3 | $_____ | $8,440 |
| 6 | 2 | $_____ | $9,409 |

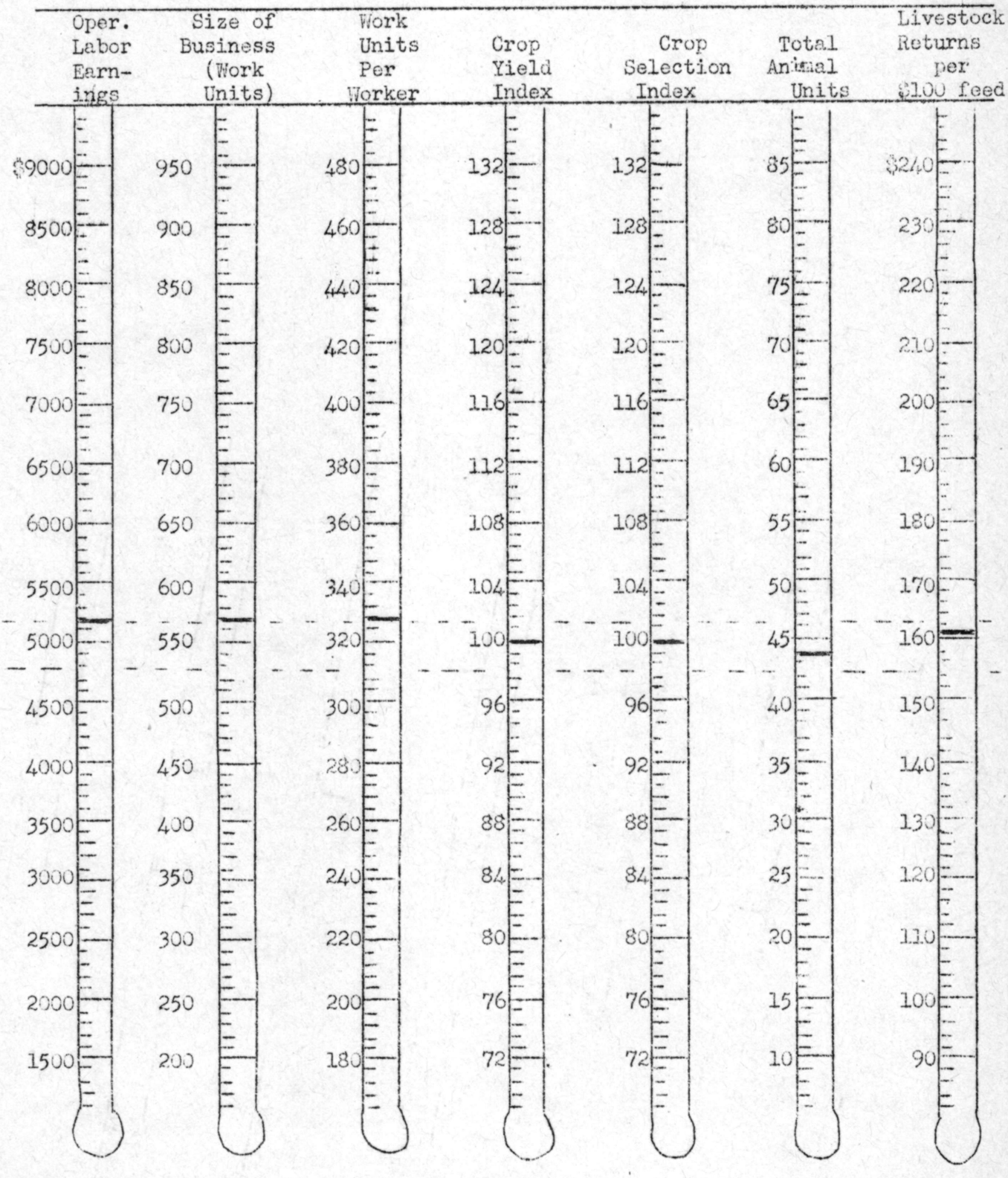
Farmers should study table 16 on page 12 and the thermometer chart on page 13 to determine the weak and strong points in their farm business.

Table 16. Farm Organization and Management Efficiency Factors, 1944

| Item | Your farm | Average of 32 farms | 7 most profitable farms | 7 least profitable farms |
|---|---|---|---|---|
| Operator's Labor Earnings | $ | $ 5,121 | $ 9,292 | $ 2,202 |
| Acres owned | | 118 | 151 | 54 |
| Acres rented | | 176 | 209 | 207 |
| Total operated | | 294 | 360 | 261 |
| **Capital Investment** | | | | |
| Total capital managed | $ | $28,928 | $35,419 | $23,860 |
| Productive livestock | | 4,963 | 7,608 | 3,535 |
| Power and machinery | | 2,744 | 3,691 | 1,673 |
| Rate earned on investment | | 20.3 | 30.0 | 12.9 |
| **Size of Business** | | | | |
| *Work units (total) | | 571 | 726 | 456 |
| On crops | | 229 | 299 | 188 |
| On livestock | | 315 | 390 | 267 |
| Off farm | | 27 | 37 | 1 |
| **Labor Utilization** | | | | |
| Number of workers | | 1.8 | 2.0 | 1.7 |
| *Work units per worker | | 322 | 359 | 273 |
| Crop acres per worker | | 132 | 155 | 110 |
| Animal units per worker | | 25 | 33 | 20 |
| Livestock increase per worker | $ | $ 3,520 | $ 4,461 | $ 2,345 |
| **Crop Organization and Efficiency** | | | | |
| Total acres in crops | | 237 | 322 | 187 |
| *Crop yield index | | 100 | 110 | 90 |
| *Crop selection index | | 100 | 103 | 97 |
| % cropland is of farm | | 80 | 86 | 74 |
| % cropland in row crops | | 46 | 47 | 44 |
| % cropland in small grain | | 40 | 39 | 41 |
| % cropland in hay & past. | | 13 | 12 | 11 |
| **Livestock Org. and Efficiency** | | | | |
| Number of beef cows | | 4 | 5 | 4 |
| Number of milk cows | | 9 | 8 | 10 |
| Number of ewes | | 10 | 7 | 3 |
| Number of litters of pigs | | 11 | 11 | 9 |
| Number of hens | | 207 | 205 | 209 |
| *Total prod. livestock units | | 44 | 66 | 34 |
| *Livestock ret. per $100 feed | $ | $161 | $195 | $133 |
| Pounds butterfat per cow | | 218 | 255 | 160 |
| Eggs laid per hen | | 123 | 130 | 92 |
| Pigs saved per litter | | 5.5 | 6.5 | 5.6 |
| % lamb crop | | 104 | 121 | 44 |
| **Power, Mach. & Equip.** | | | | |
| Power invest. per crop acre | $ | $5.49 | $5.21 | $4.45 |
| Crop mach. inv. per crop acre | $ | $6.04 | $5.95 | $4.68 |

* Measures used in thermometer chart on page 13.

Compare your standing in regards to the measures of farm organization and efficiency with the average for the group shown between the dotted lines. The figures from the bottom to the top of the seven efficiency bars show the range from the least efficient to the most efficient farms.




THERMOMETER CHART

Table 17. Size of Farm Related to Earnings, Farm Organization & Efficiency Factors-1944

| Item | Under 199 Acres | 240 Acres | 320 Acres | 400 Acres | 440 & over Acres |
|---|---|---|---|---|---|
| Operator's Labor Earnings | $ 3,765 | $ 4,550 | $ 4,904 | $ 6,630 | $ 7,048 |
| Number of farms | 7 | 7 | 8 | 6 | 4 |
| Acres owned | 91 | 34 | 121 | 163 | 235 |
| Acres rented | 64 | 209 | 190 | 219 | 224 |
| Total operated | 155 | 243 | 311 | 382 | 459 |
| **Capital Investment** | | | | | |
| Total capital managed | $18,353 | $24,806 | $27,825 | $39,548 | $40,928 |
| Productive livestock | $ 3,493 | $ 3,587 | $ 4,637 | $ 6,891 | $ 8,279 |
| Power and machinery | $ 1,566 | $ 2,338 | $ 2,779 | $ 3,485 | $ 4,479 |
| Rate earned on investment | 21.6 | 19.6 | 19.8 | 21.0 | 19.7 |
| **Size of Business** | | | | | |
| Work units (total) | 401 | 467 | 538 | 767 | 825 |
| On crops | 125 | 199 | 233 | 284 | 372 |
| On livestock | 260 | 243 | 275 | 453 | 412 |
| Off farm | 16 | 25 | 30 | 30 | 41 |
| **Labor Utilization** | | | | | |
| Number of workers | 1.5 | 1.7 | 1.6 | 2.2 | 2.3 |
| Work units per worker | 281 | 284 | 355 | 344 | 362 |
| Crop acres per worker | 90 | 122 | 157 | 140 | 161 |
| Animal units per worker | 23 | 20 | 25 | 29 | 30 |
| Livestock increase per worker | $ 3,841 | $ 2,258 | $ 3,582 | $ 4,406 | $ 3,716 |
| **Crop Organization & Efficiency** | | | | | |
| Total acres in crops | 130 | 199 | 244 | 300 | 370 |
| Crop yield index | 129 | 85 | 96 | 89 | 102 |
| Crop selection index | 100 | 84 | 96 | 101 | 106 |
| % cropland is of farm | 83 | 82 | 77 | 78 | 80 |
| % cropland in row crops | 43 | 48 | 45 | 44 | 50 |
| % cropland in small grain | 36 | 40 | 44 | 40 | 39 |
| % cropland in hay & past. | 20 | 12 | 9 | 14 | 11 |
| **Livestock Org. & Efficiency** | | | | | |
| Number of beef cows | 1 | 2 | 7 | 7 | 1 |
| Number of milk cows | 8 | 6 | 7 | 14 | 12 |
| Number of ewes | 5 | 9 | 15 | 9 | -- |
| Number of litters of pigs | 10 | 10 | 10 | 17 | 10 |
| Number of hens | 204 | 149 | 180 | 197 | 195 |
| Total prod. livestock units | 33 | 33 | 37 | 64 | 66 |
| Livestock returns per $100 feed | $162 | $149 | $167 | $168 | $155 |
| Pounds butterfat per cow | 206 | 203 | 238 | 246 | 177 |
| Eggs laid per hen | 117 | 108 | 134 | 137 | 116 |
| Pigs saved per litter | 6.4 | 4.9 | 4.7 | 5.1 | 7.4 |
| % lamb crop | 103 | 115 | 104 | 95 | -- |
| **Power, Mach. & Equip.** | | | | | |
| Power inv. per crop acre | $6.38 | $5.60 | $5.32 | $4.86 | $5.02 |
| Crop mach. inv. per crop acre. | $5.64 | $5.70 | $6.07 | $6.13 | $7.16 |

Table 18. Tenure Related to Earnings, Farm Organization and Efficiency Factors, 1944

| Item | Your farm | Tenants | Part-Owners | Owners |
|---|---|---|---|---|
| Operator's Labor Earnings* | $_____ | $ 3,227 | $ 4,392 | $ 4,765 |
| Number of farms | | 13 | 13 | 6 |
| Acres owned | _____ | --- | 171 | 257 |
| Acres rented | _____ | 273 | 161 | --- |
| Total operated | _____ | 273 | 332 | 257 |
| **Capital Investment** | | | | |
| Total capital owned** | $_____ | $ 9,768 | $25,918 | $24,790 |
| Productive livestock | $_____ | $ 4,082 | $ 6,316 | $ 3,941 |
| Power and machinery | $_____ | $ 2,631 | $ 3,094 | $ 2,233 |
| Rate earned on investment | _____ | 28.8 | 18.7 | 21.0 |
| **Size of Business** | | | | |
| Work units (total) | _____ | 509 | 640 | 558 |
| On crops | _____ | 214 | 258 | 200 |
| On livestock | _____ | 270 | 357 | 323 |
| Off farm | _____ | 25 | 25 | 35 |
| **Labor Utilization** | | | | |
| Number of workers | _____ | 1.8 | 1.9 | 1.6 |
| Work units per worker | _____ | 284 | 349 | 345 |
| Crop acres per worker | _____ | 120 | 145 | 128 |
| Animal units per worker | _____ | 20 | 30 | 25 |
| Livestock increase per worker | $_____ | $ 2,699 | $ 4,129 | $ 3,979 |
| **Crop Organization & Efficiency** | | | | |
| Total acres in crops | _____ | 215 | 263 | 218 |
| Crop yield index | _____ | 89 | 103 | 135 |
| Crop selection index | _____ | 98 | 100 | 101 |
| % cropland is of farm | _____ | 79 | 80 | 84 |
| % cropland in row crops | _____ | 48 | 44 | 44 |
| % cropland in small grain | _____ | 41 | 40 | 37 |
| % cropland in hay & pasture | _____ | 10 | 15 | 17 |
| **Livestock Org. & Efficiency** | | | | |
| Number of beef cows | _____ | 4 | 4 | 1 |
| Number of milk cows | _____ | 8 | 9 | 10 |
| Number of ewes | _____ | 9 | 7 | 10 |
| Number of litters of pigs | _____ | 11 | 11 | 13 |
| Number of hens | _____ | 157 | 171 | 267 |
| Total prod. livestock units | _____ | 36 | 56 | 37 |
| Livestock ret. per $100 feed | $_____ | $118 | $166 | $176 |
| Pounds butterfat per cow | _____ | 194 | 252 | 214 |
| Eggs laid per hen | _____ | 111 | 125 | 143 |
| Pigs saved per litter | _____ | 4.7 | 5.5 | 6.3 |
| % lamb crop | _____ | 75 | 146 | 97 |
| **Power, Mach. & Equip.** | | | | |
| Power invest. per crop acre | $_____ | $6.07 | $5.48 | $4.25 |
| Crop mach. inv. per crop acre | $_____ | $5.88 | $6.16 | $6.12 |

* Operator's labor earnings are the actual figures for these farms and have not been adjusted to a full owner basis for tenant's and part-owners.

** Includes only the operator's share of farm capital owned.