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UNIVERSITY OF MINNESOTA
Department of Agriculture
and
UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Economics
and
Farm Security Administration
Cooperating

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Report

of the

FARM MANAGEMENT SERVICE

for

FARMER-BORROWERS

of

Rural Rehabilitation Division
of
The Farm Security Administration

For the Year
1938

Northern Minnesota

Name: _____

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Mimeographed Report No. 110
Division of Agricultural Economics
University Farm
St. Paul, Minnesota
June, 1939

Report of the Farm Management Service for Farmer-Borrowers of
the Rural Rehabilitation Division - Northern Minnesota

Prepared by T. R. Nodland, W. P. Ranney and G. A. Pond

INDEX

	Page
Introduction	1
Map - Type-of-Farming Areas in Minnesota	3
Factors Related to Variations in Financial Progress	3
Factors Related to Variations in Operator's Labor Earnings	4
Summary of Livestock, Number of Workers, and Expenses	8
Thermometer Chart	9
Yields of Crops	10
Distribution of Acres in Farm	11
Summary of Operator's Labor Earnings	12
Summary of Inventories and Net Worth	13
Summary of Farm Perquisites, Miscellaneous Personal Income, and the Family Net Income	14
Summary of Household and Personal Expenses	16
Some Comparisons with Averages for 1936 and 1937	18

INTRODUCTION

The analysis of the records and preparation of this report were under the direction of G. A. Pond, W. P. Ranney and T. R. Nodland of the Division of Agricultural Economics, University of Minnesota. The records had been kept and closed under the general supervision of Lloyd I. Nelson, former state director, R. S. Harris, acting state director, and the state personnel of the Rural Rehabilitation Division of the Farm Security Administration.

The Rural Rehabilitation Division has made loans to several thousand farmers in Minnesota, who, on account of the recent depression and droughts, were having difficulty in obtaining and maintaining credit from other sources. Many of the farmers would not have been able to continue farming without the credit secured from Rural Rehabilitation. The latter organization has required their borrowers to keep a system of farm records as a means of helping them to increase their incomes and control their expenses in order that their debts may be liquidated and a fair standard of living may be maintained. To further this purpose the Farm Security Administration arranged to have these records summarized and analyzed in order that they may be made more useful to these farmer-borrowers. The Divisions of Agricultural Economics and Agricultural Extension of the University of Minnesota and the Bureau of Agricultural Economics at Washington, D. C., have cooperated in the summarization, analysis, and interpretation of these records, realizing that this is an opportunity to aid directly a large group of worthy farmers, and to obtain valuable information for research, teaching and extension purposes, thereby being enabled to serve many farmers in this state.

About two-thirds of the records included in this report were kept by tenant-operators; only 118 of the operators owned all or part of the farms that they operated. The classification of the farms by counties, type-of-farming areas, and form of tenure is shown in Table 1, page 2.

Note: Completion of this project was made possible by workers supplied on Works Progress Administration Project No. 465-71-3-350, and Federal Students' Work Project No. 78-70. Sponsor: University of Minnesota.

Table 1. Number of Records Included*--Classified by Counties, Type-of-Farming Areas** and Form of Tenure***

Area 5						Area 7					
County	(O)***	(C)	(C.S.)	(L.S.)	Totals	County	(O)	(C)	(C.S.)	(L.S.)	Totals
Anoka	3	2	2	0	7	Clay	1	1	9	0	11
Benton	0	1	0	0	1	Kittson	1	0	2	0	3
Chisago	0	1	0	0	1	Marshall	1	1	3	0	5
Isanti	0	1	2	0	3	Norman	1	0	13	0	14
Kanabec	9	5	4	0	18	Polk	3	0	4	0	7
Mille Lacs	3	1	3	0	7	Wilkin	0	0	10	0	10
Morrison	0	2	2	0	4	Totals	7	2	41	0	50
Pine	0	1	0	0	1						
Totals	15	14	13	0	42						

Area 6						Area 8					
County	(O)***	(C)	(C.S.)	(L.S.)	Totals	County	(O)	(C)	(C.S.)	(L.S.)	Totals
Becker	1	1	3	1	6	Aitkin	2	1	0	0	3
Douglas	4	3	11	0	18	Beltrami	27	3	3	0	33
Mahnomen	1	1	2	0	4	Carlton	1	1	0	0	2
Marshall	3	1	4	0	8	Cass	3	4	4	0	11
Otter Tail	6	6	34	0	46	Clearwater	12	3	6	1	22
Pennington	7	1	3	0	11	Hubbard	3	2	3	0	8
Polk	1	1	4	0	6	Itasca	12	2	2	0	16
Red Lake	3	0	0	0	3	Lake of Woods	1	0	0	0	1
Todd	0	1	0	0	1	St. Louis	8	0	0	0	8
Wadena	1	2	3	0	6	Totals	69	16	18	1	104
Totals	27	17	64	1	109						

Total					
	(O)	(C)	(C.S.)	(L.S.)	Totals
N. Minn.	118	49	136	2	305

*The number of records per county is not in proportion to the number of records submitted. There was considerable variation in acceptability of records among the counties.

**The type-of-farming areas are shown in the map on page 3.

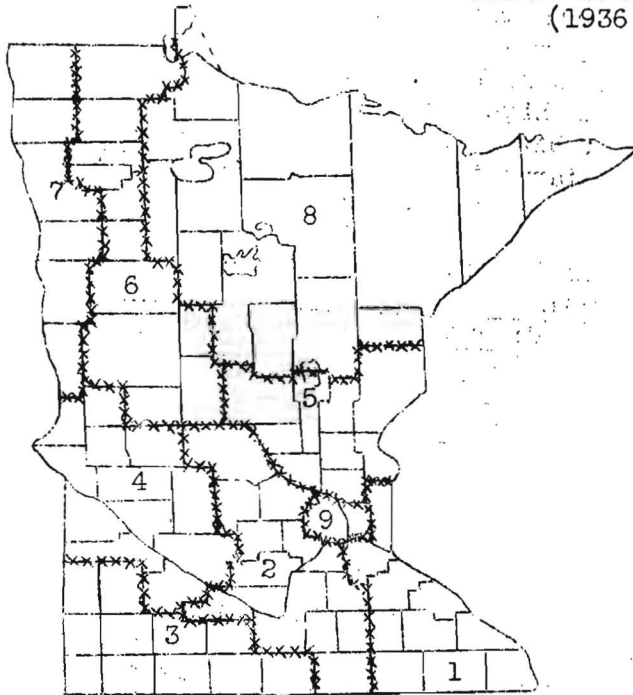
*** (O) designates owner-operated farms; (C), tenant farms with cash leases; (C.S.), tenant farms with crop share and cash leases; and (L.S.), tenant farms with livestock share leases.

Although the predominant type of farming is not the same in all of the above counties, the system of farming did not vary greatly among the farms included in this report. Every farmer sold some dairy products, mostly in the form of cream for manufacture into butter. A few farms had special whole milk or retail cream markets. On nearly every farm there were, besides the dairy cows, young dairy cattle, and a few hogs and chickens, and on some farms there were sheep and turkeys. The proportion of total receipts that came from sales of livestock and livestock products varied from farm to farm.

About 2,000 records were submitted by the borrowers of the Rural Rehabilitation Division in Minnesota. Of this number, 305 are included in this report and 312 in a similar report for southern Minnesota.**** The other records were either too incomplete or did not represent a full year's record because the loans were obtained late in the year 1938. Only full twelve months' records are included in these reports. The majority were started March 1, 1938, and a few on January 1 and February 1.

****Mimeographed Report No. 109.

MAP - TYPE-OF-FARMING AREAS IN MINNESOTA
(1936 Revision)



Legend

1. Southeast dairy and livestock.
2. South Central dairy and livestock.
3. Southwest livestock and cash grain.
4. West Central livestock and cash grain.
5. East Central dairy and potatoes.
6. Northwest dairy and livestock.
7. Red River Valley small grain, potatoes and livestock.
8. Northern, cut-over, dairy, potatoes and clover seed.
9. Twin Cities suburban truck, dairy and fruit.

FACTORS RELATED TO VARIATIONS IN FINANCIAL PROGRESS

The borrower clients of the Farm Security Administration are interested in making financial progress--to pay off their debts or to accumulate assets for future debt payments while maintaining a fair standard of living. The first payments on the principal of the Farm Security Administration loan was usually due one year after the loan was made. In a number of cases, this would not be until after the end of the account book year. In order to show financial progress or change in the ability of the farmers to pay on debts, the "change in net worth" was calculated. An increase in net worth at least tends to enhance the security back of the loans and vice versa. A change in net worth may occur in any one of ten different ways. The frequencies of occurrence for each one of these ways are shown in Table 2.

Table 2. Relation of Change in Net Worth to Changes in Total Assets and Liabilities

Increase in Net Worth		Decrease in Net Worth	
Nature of change	No. of farms	Nature of change	No. of farms
1. Decrease in total liabilities; total assets remaining the same	0	6. Increase in total liabilities; total assets remaining the same	1
2. Increase in total assets; total liabilities remaining the same	1	7. Decrease in total assets; total liabilities remaining the same	0
3. Decrease in total liabilities and an increase in total assets	110	8. Increase in total liabilities and a decrease in total assets	15
4. Increase in total assets greater than increase in total liabilities	74	9. Decrease in total assets greater than decrease in total liabilities	35
5. Decrease in total liabilities greater than decrease in total assets	55	10. Increase in total liabilities greater than increase in total assets	14
Total -	240	Total -	65

Variations among farmers in changes in net worth may be due to similar variations in net income*, or in household and personal expenses,** or both. The relationships of these different variations are shown in Table 3. It is quite evident that both lower household and personal expenses and higher incomes are responsible for improvements in net worth among these farmers; but much wider variations in changes in net worth are due to differences among farms in net income than to the variations among families in household and personal expenses.

Table 3. Relationships of Net Income and Household and Personal Expenses to Changes in Net Worth

Household and personal expense groups	Net Income Groups					
	\$799 and less		\$800 to \$1199		\$1200 and more	
	No. of farms	Change in net worth	No. of farms	Change in net worth	No. of farms	Change in net worth
\$599 and less	111	+\$86	25	+\$399	6	+\$812
\$600 to \$799	40	-6	44	+255	9	+608
\$800 and more	10	-263	28	+33	32	+450

In the lowest net income group 111 families spent less than \$600 and 10 families spent more than \$800 for household and personal purposes; while in the highest net income group only 6 spent less than \$600 and 32 spent more than \$800. This correlation between household and personal expenses and net incomes is shown more clearly on pages 14 to 17. The data on these pages also show that the families with the higher net incomes are not spending all of this income; many of them are paying on debts or are accumulating assets. On the other hand, the families with very low net incomes are losing in net worth even though they are spending a pitifully small amount for household and personal purposes. Until these families are able to earn more, they have a big problem in managing their household and personal budgets; they will be interested in comparing their expenditures against those of other families of similar size and with approximately the same net income, pages 14 to 17.

FACTORS RELATED TO VARIATIONS IN OPERATOR'S LABOR EARNINGS

It is quite apparent that these borrowers are in great need of larger net incomes. Operator's labor earnings*** constitute the greater part of their net incomes. The expenses, receipts and other items which make up the operator's labor earnings are shown on page 12. Each operator's figures are shown in the "your farm" column of his own report. Undoubtedly, he is interested in knowing why his earnings differ from those of other farmers; the reasons may be found in the following analysis.

*Net income is given as item 33 on pages 14 and 15. It is the total earnings including perquisites of the farmer, his family, and his capital plus any personal income, relief, grants, surplus commodities, etc. It is the amount available for household and personal expenditures and for savings.

**Household and personal expenses are given as item 41 on pages 16 and 17. They include cash expenses plus interest and depreciation on personal share of auto, plus house rental and farm perquisites and minus board for hired labor. They do not include life insurance premiums, investments, new houses, new autos or payments on debts.

***Operator's labor earnings is the farmer's return for his services as a laborer and manager. It is computed by first adding together the cash farm receipts, farm perquisites, and any increase in net farm capital; from this total is deducted the sum of cash farm expenses, any decrease in net farm capital, cost of boarding hired labor, a charge for the use of the net farm capital figured at 5 per cent, and a charge for the services of unpaid family labor. (Only the operator's share of income, expenses, and earnings are included.)

There is a wide range in operator's labor earnings among these farms; the highest is \$1822 and the lowest is a loss of \$329—a difference of \$2151. Some of the causes of the differences in earnings may be beyond the control of the farmer. The farms are located in wide areas of quite diverse characteristics. It is significant, however, that the data in this report indicate that certain factors that are considerably within the farmer's control are closely related to his earnings. The seven factors used in this analysis are as follows:

Table 4. Relation of Butterfat Production per Cow to Operator's Labor Earnings

Group	Pounds of Butterfat per Cow Average	No. of farms	Average operator's labor earnings
149 and less	125	83	\$471
150 to 209	181	132	557
210 and more	242	90	675

High production per cow tends to lower the cost of producing a pound of butterfat. This is important on those farms on which butterfat sales are the major source of income.

Table 5. Relation of Returns from Other Productive Livestock to Operator's Labor Earnings

Group	Per cent Returns were of the Average of all of the 305 Farms (productive livestock other than cows) Average	No. of farms	Average operator's labor earnings
79 and less	58	84	\$422
80 to 119	99	142	583
120 and more	148	79	698

These farms have, in addition to the dairy herd, quite an investment in other classes of productive livestock, such as young cattle, hogs, sheep or poultry. High returns from this livestock usually are accompanied with greater profits from the livestock. This means another addition to the farmer's earnings.

Table 6. Relation of Crop Yields to Operator's Labor Earnings

Group	Per cent Crop Yields were of the Average of all of the 305 Farms Average	No. of farms	Average operator's labor earnings
79 and less	59	91	\$496
80 to 119	99	123	549
120 and more	140	91	665

High production per acre, up to certain limits, tends to lower the cost per bushel of grain or per ton of hay. Any possible method of management that will increase crop yields and therefore lower cost of production more than the extra expense incurred in securing the higher yields should be given consideration.

Table 7. Relation of Choice of Crops to Operator's Labor Earnings

Group	Per cent of tillable land in high return crops* Average	No. of farms**	Average operator's labor earnings
22 and less	11	41	\$584
23 to 62	45	103	654
63 and more	75	43	692

*Crops included are listed in a footnote on page 10.

**Owner farms were omitted as many of these had very few acres in crops.

Additions can be made to earnings by putting a greater percentage of the tillable land into those crops that generally tend to bring in the higher net returns as shown on page 11. The relative returns from the various crops vary among the different parts of this area, the classification shown on page 11 represents a composite selection for the entire area.

Table 8. Relation of Size of Business to Operator's Labor Earnings

Days of Productive Work		No. of farms	Average operator's labor earnings
Group	Average		
279 and less	230	78	\$408
280 to 419	342	142	548
420 and more	548	85	748

Average farm earnings tend to increase with an increase in size of business. For farmers operating their farms at a loss, the larger the volume of business the larger will be the loss, but a farmer who is making a profit could make a larger profit if he increased his size of business, provided that in so doing he does not lower materially the efficiency in some one or more important branches of his business. Those farmers who have large businesses usually have more flexibility of their organization than does the man with a small business, and can utilize more efficiently and to better advantage available labor, power, machinery and buildings.

Table 9. Relation of Amount of Work Accomplished per Worker to Operator's Labor Earnings

Days of Productive Work per Worker		No. of farms	Average operator's labor earnings
Group	Average		
199 and less	162	68	\$267
200 to 299	247	132	517
300 and more	376	105	828

More days of productive work accomplished per worker reduce the labor charge per unit of business. Higher labor accomplishment is secured in several ways. In the first place, the business must be large enough so that there will be at least sufficient work available for the family labor. The farm must be so organized that the labor requirements are well distributed throughout the year. Handling pastures in such a way that as large a proportion as possible of the year's feed for livestock may be obtained from them helps to reduce labor requirements. Proper planning of the farm work and economical use of labor saving machinery help to increase the work accomplished per worker.

Table 10. Relation of Power and Machinery Expense to Operator's Labor Earnings

Days of Productive Work per \$100 Power and Machinery Expense		No. of farms	Average operator's labor earnings
Group	Average		
109 and less	92	64	\$495
110 to 209	155	165	558
210 and more	296	73	649

It cannot be said that all farmers would earn more by cutting power and machinery expenses. Some farms are under-equipped. But on a number of farms excessive expenses constitute the main factor causing earnings to be very low.

Some farmers keep their cash outlays for power and equipment low by careful management. Oftentimes necessary repairs and improvements are made by using the available farm labor rather than by hiring the work done. In so far as possible, careful managers do their repairing and overhauling before spring work begins, or on rainy days or in other spare time during the summer. They reduce the number of

horses to the minimum required for efficient operation. In some cases where handled properly, farmers offset some or all of the power and machinery expense by owning part of their equipment cooperatively with neighbors and by using their equipment for outside work.

Table 11. Relation of Farmer's Standing in Seven Factors Discussed in Tables 4 to 10 to Operator's Labor Earnings

No. of factors in which farm excels	No. of farms	Your farm	The length of the shaded lines are in proportion to the average operator's labor earnings	Average operator's labor earnings
7	2	_____	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	\$1052
6	17	_____	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	996
5	39	_____	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	778
4	68	_____	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	687
3	78	_____	XXXXXXXXXXXXXXXXXXXX	476
2	64	_____	XXXXXXXXXXXX	433
1 or 0	37	_____	XXXXXXXXXX	333

The data in Table 11 show that few farmers have a monopoly on efficiency. Quite often farm operators show efficient management in one part of the farm business, which is offset by poor results in other phases. These farmers get medium returns while those who fall down all along the line get the lowest returns, and, on the other hand, those few who can manage to attain high efficiency in all parts of their organization receive returns well above the average.

Table 12. Classification of Operator's Labor Earnings and Related Factors by Type-of-Farming Areas and by Form of Tenure

Type of farming area	No. of farms	Operator's labor earnings	Pounds B.F. per cow	% other live-stock returns of aver.	Crop yields % of average	% land in high return crops	Days of Productive Work		
							Total	Per worker	Per \$100 power & machinery expense
V	42	\$535	196	117	102	36	334	246	172
VI	109	609	179	100	97	42	400	295	161
VII	50	749	191	113	122	53	468	331	138
VIII	104	453	179	87	89	58	308	231	211
Form of tenure*									
(O)	118	443	175	95	99	55	335	234	194
(C)	49	516	191	95	94	41	327	246	164
(C.S.)	136	695	188	107	101	46	413	313	160
(L.S.)	2	624	200	84	104	51	672	419	256

The higher average earnings for farms in type-of-farming area VII and for farms operated under crop share and cash leases were primarily due to the larger average size of the farm businesses in these two groups. But in general, there were not great differences in earnings between the different type-of-farming areas or between the different form-of-tenure groups. No one area or group had a monopoly on high standing in all of the factors related to earnings.

But there were wide variations in earnings and related factors among the farms within each area and group. Hence, it will be worth-while for each cooperator to study carefully his ranking on pages 8 and 9, and his data on pages 10 to 13, and learn his standing in respect to each of the above factors and the elements of strength and weakness in his farm business.

* (O) designates owner-operated farms; (C), tenant farms with cash leases; (C.S.), tenant farms with crop share and cash leases; and (L.S.), tenant farms with live-stock share leases.

Factors Related to Variations in Operator's Labor Earnings

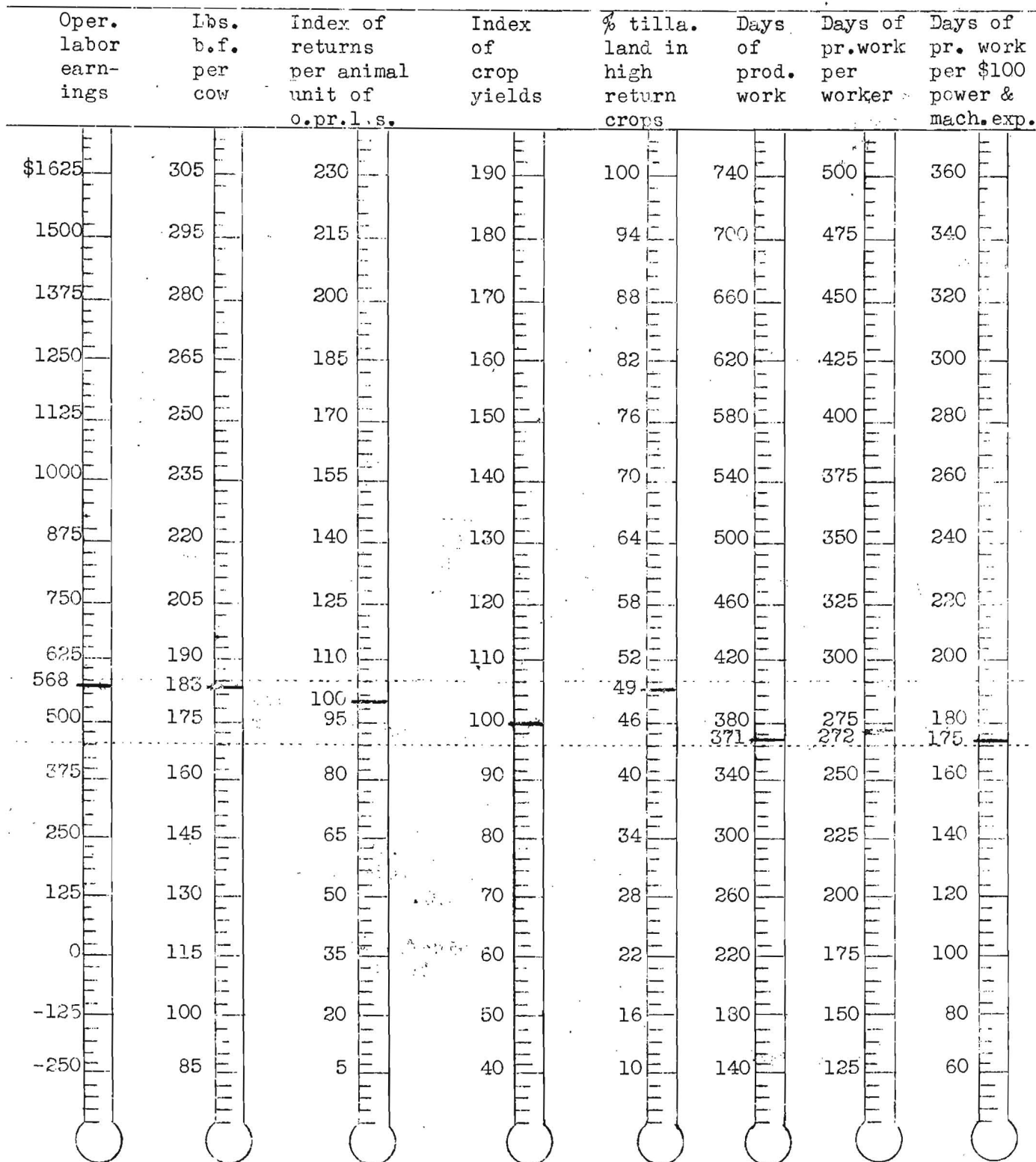
Factors used in chart on page 9.	Your farm	Average of 305 farms	61 most profit-able farms	61 least profit-able farms
Operator's Labor Earnings	\$ _____	\$568	\$1087	\$ 92
Pounds of butterfat per cow	_____	183	193	163
Index returns over feed (other prod. livestock)*	_____	100	120	88
Index of crop yields**	_____	100	112	97
% of tillable land in high return crops***	_____	49	50	53
Size of business - days of productive work****	_____	371	487	335
Days of productive work per worker	_____	272	377	205
Days of prod.work per \$100 power & mach.exp.*****	_____	175	165	153
Summary of livestock, productive work, number of workers and expense				
Gross returns per cow	\$ _____	\$56	\$61	\$47
" " " head of other cattle	_____	22	27	19
" " " cwt. of hogs produced	_____	7.05	7.37	6.22
" " " head of sheep	_____	3.56	4.11	2.62
" " " hen	_____	1.71	1.74	1.67
" " " cwt. of turkeys produced	_____	16.60	16.00	18.89
Animal units of cows	_____	7.8	8.7	7.5
" " " other cattle	_____	4.1	4.7	3.8
" " " hogs	_____	.8	1.3	.6
" " " sheep	_____	.8	.4	.9
" " " hens	_____	.4	.6	.4
" " " turkeys	_____	.1	.1	-
" " " productive livestock (total)	_____	14.0	15.8	13.2
Prod. livestock ani. units per 100 A. in farm	_____	9.9	9.3	9.6
Days of prod. work on productive livestock	_____	206	240	192
" " " " " crops	_____	133	207	121
" " " " " (miscellaneous)	_____	32	40	22
Total number of workers	_____	1.4	1.3	1.7
" " family workers	_____	1.3	1.2	1.7
" " hired workers	_____	.1	.1	-
Number of horses	_____	2.7	3.1	2.8
" " colts	_____	.4	.5	.3
Tractor and horse expense per crop acre	\$ _____	\$1.98	\$1.59	\$2.52
Total power expense per day of productive work	_____	.54	.55	.61
Machinery expense per day of productive work	_____	.15	.15	.17
Power & machinery expense per day of prod. work	_____	.69	.70	.78

*Other productive livestock includes young cattle, hogs, sheep and poultry. Returns are calculated by subtracting beginning inventory and purchases from the sum of end inventory, sales of animals and their products, and value of home used animals and animal products. The index is made up of the percentages that the returns for each class of livestock are of the average returns for that class of livestock, weighted by the number of animal units of each class of livestock.

(footnotes continued on page 10.)

Thermometer Chart

Using your figures from page 8, locate your standing with respect to the various measures of farm organization and management efficiency. The averages for 305 farms included in this summary are located between the two dotted lines across the center of this page.



Yields of Crops per Acre

Crop	Your farm	Average of 305 farms	61 most profitable farms	61 least profitable farms
Winter wheat, bu.	_____	9.8	-	11.0
Spring wheat, bu.	_____	13.0	14.3	11.5
Oats, bu.	_____	24.7	28.8	21.5
Barley, bu.	_____	20.7	22.8	17.0
Rye, bu.	_____	14.0	16.8	10.5
Flax, bu.	_____	7.4	8.8	4.6
Oats and wheat, bu.	_____	24.3	40.0	-
Oats and barley, bu.	_____	21.9	36.1	-
Corn, grain, bu.	_____	23.9	23.4	24.6
Corn, silage, tons	_____	5.8	5.9	4.5
Corn, fodder, tons	_____	2.3	2.2	2.5
Sugar beets, tons	_____	-	-	-
Potatoes, bu.	_____	75.5	78.8	79.8
Alfalfa hay, tons	_____	1.6	1.7	1.8
Red clover and alsike hay, tons	_____	1.5	2.0	1.6
Sweet clover hay, tons	_____	1.3	1.0	1.5
Misc. legumes and mixtures, hay, tons	_____	1.4	1.5	1.5
Timothy, quack, wild hay on tilla. land, tons	_____	1.2	1.4	1.1
Annual hay (small grain, Sudan g.,millet), tons	_____	1.4	1.1	1.8
Alfalfa seed crop, lbs.	_____	71.1	33.4	70.6
Red clover and alsike seed crops, lbs.	_____	129.6	245.0	121.8
Sweet clover seed crop, lbs.	_____	104.6	71.1	70.4
Timothy seed crop, lbs.	_____	100.0	100.0	-
Phalaris hay on non-tillable land, tons	_____	2.6	-	3.2
Wild hay on non-tillable land, tons	_____	1.1	1.0	1.1

(footnotes continued from page 8.)

An animal unit represents one cow, one bull, two head of young cattle, seven head of sheep, fourteen lambs, five hogs, ten pigs, one hundred hens, and 1400 pounds of turkeys produced.

**Given as a percentage of the average.

***All the acres in legumes, wheat, barley, flax, potatoes and truck crops were used in calculating per cent of tillable land in high return crops.

****The total "days of productive work" for any one farm are a measure of size of that farm business. The average number of "ten-hour days" of man labor are as follows per animal unit: cows, 18.5; other cattle, 7.2; hogs, 19.0; sheep, 3.0; hens, 30.0; per acre of crops: alfalfa, 1.75; other hay, 1.0; small grain, 1.3; corn husked, 2.6; corn silage, 3.1; corn fodder, 2.3; potatoes, 6.0; sugar beets, 4.0; garden and truck crops, 10.0.

*****The expense for any one item, as machinery, is calculated by subtracting the sum of end inventory, sales, and hire from the sum of beginning inventory, purchases, repairs, and fuel; to the remainder is added an interest charge of 5 per cent of the investment in that item, respectively; a charge of \$24 per horse and \$12 per colt for feed was included in the total power expenses.

Distribution of Acres in Farm

Crop	No. of farms growing crop	Your farm	Average of 305 farms	61 most profitable farms	61 least profitable farms
Winter wheat	6	_____	.1	.0	.1
Spring wheat	118	_____	10.7	22.9	9.2
Oats	204	_____	14.6	27.5	11.6
Barley	106	_____	6.2	13.8	4.9
Rye	45	_____	2.3	2.7	2.8
Flax	38	_____	2.1	3.5	2.0
Oats and wheat	3	_____	.2	.1	.0
Oats and barley	6	_____	.3	.2	.0
Miscellaneous		_____	.6	.7	.5
Total small grain		_____	37.1	71.4	31.1
Corn, grain	137	_____	5.1	8.5	3.5
Corn, silage	32	_____	1.3	2.2	1.2
Corn, fodder	112	_____	3.1	4.4	2.3
Sugar beets	0	_____	.0	.0	.0
Potatoes	185	_____	1.5	2.7	1.4
Truck crops and garden		_____	.4	.3	.3
Total cultivated crops		_____	11.4	16.1	8.7
Alfalfa	134	_____	6.6	8.4	4.2
Red clover and alsike	20	_____	.9	.1	1.2
Sweet clover	44	_____	3.7	4.9	5.2
Misc. legumes and mixtures	50	_____	3.1	.6	5.1
Timothy, quack, and wild hay	56	_____	4.2	6.7	3.4
Annual hay (small gr., Sudan, millet)	82	_____	2.2	1.8	1.4
Alfalfa seed crop	18	_____	.4	.7	.1
Red clover and alsike seed crops	11	_____	.5	.2	1.8
Sweet clover seed crop	24	_____	1.7	1.7	1.3
Timothy seed crop	1	_____	*	.1	.0
Phalaris (non-tillable)	2	_____	.1	.0	.3
Wild hay (non-tillable)	186	_____	19.6	25.7	23.7
Total hay and grass seed		_____	43.0	50.9	47.7
Total crop acreage		_____	91.5	140.4	87.5
Alfalfa pasture		_____	.1	.1	.0
Sweet clover pasture		_____	1.0	2.5	.8
Red clover or rape pasture		_____	.1	*	.0
Misc. legume pasture		_____	.2	.0	.0
Other tillable pasture		_____	.9	1.7	1.0
Non-tillable pasture		_____	47.5	39.9	47.8
Total pasture		_____	49.8	44.2	49.6
Tillable land not pastured		_____	5.9	7.6	3.5
Timber not pastured		_____	11.7	7.1	14.8
Roads and waste		_____	11.2	11.6	13.7
Farmstead		_____	4.2	5.6	3.8
Total acres in farm		_____	174.3	216.5	172.9
% of land tillable		_____	46	58	40
% of tillable land in high return crops		_____	49	50	53

*Less than one-tenth of an acre

Summary of Operator's Labor Earnings

	Your farm	Average of 305 farms	61 most profit- able farms	61 least profit- able farms
<u>Cash Expenses</u> \$				
Trac., truck, auto, g. eng., elec., (new) (farm share)		\$34	\$92	\$ 8
" " " " " (exp.) (farm share)		75	126	57
Machinery and equipment (new)		33	64	27
" " " " (expense)		18	25	17
Land, buildings, fences, tiling (new)		52	33	41
" " " " (expense)		5	4	4
Hired labor wages plus cash cost of board		38	61	27
Feed for livestock		67	70	67
Other expense for livestock		15	17	16
Horses bought		27	41	26
Productive livestock bought		66	68	73
Crop (seed, twine, spray)		53	84	49
Taxes, insurance, rent and interest		98	105	108
General farm		5	7	5
Money loaned out		11	11	9
Payments on debts		213	310	194
(1) Total cash expense		810	1118	728
(2) Decrease in net farm capital		-	-	34
(3) Board for hired labor (home raised products)		4	7	4
(4) Total expense /sum of (1), (2) and (3)/		814	1125	766
<u>Cash Receipts</u>				
Horses		9	16	7
Cows		52	67	58
Dairy products		334	399	274
Other cattle		76	106	61
Hogs		94	162	55
Sheep and wool		18	10	20
Poultry and eggs		67	108	59
Small grain and corn		83	173	61
Hay		7	26	2
Other crops		46	73	42
Miscellaneous		32	68	16
Income from work off the farm		87	113	56
Agricultural Conservation payments		34	55	29
Money borrowed		190	216	204
Payments received on accounts receivable		28	38	37
(5) Total cash receipts		1157	1630	981
(6) Increase in net farm capital		159	398	-
(7) Farm perquisites*		259	316	219
(8) Total receipts /sum of (5), (6) and (7)/		1575	2344	1200
(4) Total expenses (from above)		814	1125	766
(9) Returns to net farm cap. & family lab. (8)-(4)		761	1219	434
(10) Interest on net farm capital		51	49	68
(11) Family labor earnings (9) - (10)		710	1170	366
(12) Unpaid family labor		142	83	274
(13) Operator's labor earnings (11) - (12)		568	1087	92

*Includes house rental for tenant-operated farms; on owner-operated farms the value of the house is omitted from the farm capital--hence the house rental is not included with the farm perquisites.

Summary of Inventories and Net Worth

	Your farm		Average of 305 farms	61 most profit- able farms (End of year)	61 least profit- able farms
	Beg. of Year	End of Year			
<u>Farm Inventories</u>					
Land	\$ _____	\$ _____	\$501	\$235	\$949
Farm buildings	_____	_____	287	229	454
Machinery and equipment	_____	_____	299	386	292
Tractor	_____	_____	77	177	53
Truck and trailer	_____	_____	9	3	2
Auto (farm share)	_____	_____	48	77	37
Gas engine (farm share)	_____	_____	8	9	6
Electric equipment (farm share)	_____	_____	2	1	0
Miscellaneous supplies	_____	_____	7	4	8
Feeds and seeds	_____	_____	154	262	135
Horses and colts	_____	_____	261	310	237
Cows	_____	_____	440	497	421
Other cattle	_____	_____	179	235	143
Eggs	_____	_____	58	86	37
Sheep and wool	_____	_____	41	27	44
Poultry	_____	_____	31	44	23
Accounts and notes receivable	_____	_____	20	21	44
(14) Total farm assets	_____	_____	2422	2603	2893
<u>Farm Liabilities</u>					
Farm Security Adm. loans	_____	_____	849	992	771
Other farm liabilities	_____	_____	507	459	808
(15) Total farm liabilities	_____	_____	1356	1451	1579
(16) Net farm capital (14) - (15)	_____	_____	1066	1152	1314
(17) Personal assets*	_____	_____	600	667	771
(18) Cash on hand and in bank	_____	_____	23	48	20
(19) Personal liabilities	_____	_____	52	83	46
(20) Total assets (14) + (17) + (18)	_____	_____	3045	3318	3684
(21) Total liabilities (15) + (19)	_____	_____	1408	1534	1625
(22) Farmer's net worth (20) - (21)	_____	_____	1637	1784	2059
(23) Change in total assets	_____	_____	+148	+325	-18
(24) Change in total liabilities	_____	_____	-28	-127	+11
(25) Change in net worth	_____	_____	+176	+452	-29
% Farm Security Loan is of total liabilities	_____	_____	70	72	61
% total liabilities are of total assets	_____	_____	46	46	46

*Includes value of house on owner-operated farms.

Summary of Farm Perquisites, Miscellaneous Personal Income, and the Family Net Income

	Family Type I			
	Net Income Groups			
	\$599 and less	\$600 to 899	\$900 to 1199	\$1200 and more
Number of farms in group:	8	9	4	1
<u>Farm Perquisites</u>				
<u>Quantities</u>				
Whole milk, qts.	276	548	399	400
Skim milk, qts.	12	41	0	0
Cream, pts.	99	219	282	156
Farm-made butter, lbs.	30	67	49	0
Eggs, doz.	43	84	83	31
Poultry, no.	12	14	24	27
Cattle, lbs.	138	17	156	0
Hogs, lbs.	200	213	444	170
Sheep, lbs.	0	0	0	0
Potatoes, bu.	12	19	21	13
Fuel, cds.	5	13	16	0
<u>Values</u>				
Whole milk	\$ 13	\$ 25	\$ 19	\$ 16
Skim milk	-	1	0	0
Cream	11	21	27	16
Farm-made butter	8	16	10	0
Eggs	7	12	12	5
Poultry	6	5	7	11
Cattle	9	2	11	0
Hogs	14	19	33	17
Sheep	0	0	0	0
Potatoes	4	7	9	5
Vegetables and fruit	15	32	44	12
Fuel	11	23	36	0
(26) House rental (10% of value of house)*	96	80	88	10
(27) Total value	194	243	296	92
<u>Household and personal cash receipts</u>				
Grants and relief	16	7	5	0
Old age assistance and pensions	0	15	0	0
Gifts	4	0	0	0
(28) Misc.(income from invest.,sales of perassets,etc.)	5	4	12	88
(29) Money borrowed (to offset credit purchases)	5	9	125	0
(30) Total household and personal cash receipts	30	35	142	88
(31) Grand total all cash receipts (5) + (30)	1089	744	2544	1903
(1) Total cash farm expenses	807	453	2076	1002
Net cash receipts (31) - (1)**	282	291	468	901
(5) Total cash farm receipts	1059	709	2402	1815
(6) Increase in net farm capital	57	219	383	770
(32) Grand total all income(5)+(6)+(27)+(30)-(29)	1335	1197	3098	2765
(4) Total farm expense	908	454	2082	1002
(33) Net income (32) - (4)***	427	743	1016	1763
Explanation of family types:	Family type I: Husband & wife only (2 in family)			

*House rental is included in this analysis for owner-operated farms as well as tenant-operated farms.

**Net cash receipts plus cash on hand at beginning of year less cash on hand at end of year is the amount of cash available for household and personal expenses (31) + (42). No attempt was made to make the cash balance exactly; all records in which the cash did not balance fairly close were discarded.

Summary of Farm Perquisites, Miscellaneous Personal Income, and the Family Net Income

Family Type II					Family Type III					Family Type IV				
Net Income Groups				Your farm	Net Income Groups				Your farm	Net Income Groups				
\$599 and less	\$600 to 899	\$900 to 1199	\$1200 or more		\$599 and less	\$600 to 899	\$900 to 1199	\$1200 or more		\$599 and less	\$600 to 899	\$900 to 1199	\$1200 or more	
30	34	20	11		21	24	16	13		15	47	25	22	
554	531	664	642		595	452	788	792		992	878	960	1070	
52	86	36	96		0	78	32	122		375	224	130	101	
164	222	321	234		191	197	249	338		217	298	293	292	
53	41	40	35		33	57	62	69		103	68	72	69	
53	63	65	107		78	82	70	81		61	84	82	131	
9	10	9	23		13	19	14	21		6	15	16	25	
121	50	173	157		129	136	211	327		230	227	211	347	
243	245	306	432		247	339	266	402		324	375	293	463	
5	0	4	0		0	8	0	0		0	20	0	12	
20	19	21	16		27	33	24	32		26	30	29	54	
15	14	9	11		17	17	19	10		16	19	11	10	

\$27	\$24	\$33	\$30	\$	\$27	\$26	\$37	\$30	\$	\$47	\$46	\$43	\$46
-	1	1	-		0	-	1	1		8	3	1	1
19	28	37	29		24	23	33	38		28	34	32	35
14	12	10	10		9	15	17	19		28	18	20	28
9	11	10	18		14	15	13	14		10	14	13	13
4	4	5	11		7	9	6	10		3	6	7	10
7	2	9	10		8	8	11	17		17	12	13	20
19	19	23	33		18	26	19	31		24	28	23	33
-	0	-	0		0	-	0	0		0	1	0	1
8	7	8	7		11	19	10	13		11	13	13	14
20	37	34	33		24	31	23	50		28	29	34	59
32	27	20	24		40	34	32	24		27	37	25	22
62	70	117	105		59	59	95	116		53	62	96	99
221	242	307	310		241	265	297	363		284	303	320	396

16	20	14	0		32	24	28	15		67	31	8	6
0	0	0	0		0	2	0	35		12	9	0	0
5	6	5	-		18	-	13	0		0	6	11	20
2	12	14	60		23	6	15	104		3	4	18	8
10	18	17	34		6	16	14	1		22	13	18	23
33	56	50	94		79	48	70	155		104	63	55	65
783	976	1473	2128		876	1074	1269	1753		973	1108	1415	1899
518	614	965	1513		560	741	749	1169		666	725	912	1206
235	362	508	615		316	333	520	584		307	383	503	613
750	920	1422	2035		797	1025	1198	1598		869	1045	1360	1834
51	163	230	350		14	174	196	488		21	111	247	436
1045	1363	1985	2955		1125	1496	1747	2603		1256	1509	1964	2711
555	629	970	1528		667	749	761	1174		819	762	951	1295
490	734	1013	1427		458	747	986	1429		437	747	1013	1416

Family type II: Husband, wife, 1 or 2 children under 16 yrs. & no others. (3 or 4 in family)

Family type III: Husband & wife & 1 to 4 others as follows: 1 or 2 persons 16 yrs. or over & none, 1 or 2 under 16 yrs.; or 3 over & 1 under 16 yrs.; or 1 over & 3 under 16 yrs. (3, 4, 5, or 6 in family)

Family type IV: All other classes except broken families. (5 or more in family)

***Net income is the approximate amount available for household and personal expense (41), & change in net worth (25). Small amounts of depreciation or sales of personal assets & discrepancies in cash balance prevent (33) from balancing with (41) and (25) exactly.

Summary of Household and Personal Expenses

	No. of adult equivalents per person*	Your farm	Family Type I				
			Net Income Groups				
			\$599 and less	\$600 to 899	\$900 to 1199	\$1200 and more	
Number of members in family							
Men	1.0		1.00	1.06	1.00	1.00	
Women	.8		1.00	1.00	1.00	1.00	
Boys, 16-18 yrs. old	.9		0	0	0	0	
Girls, 16-18 yrs. old	.8		0	0	0	0	
Boys, 13-15 yrs. old	.9		0	0	0	0	
Girls, 13-15 yrs. old	.8		0	0	0	0	
Children, 7-12 yrs. old	.6		0	0	0	0	
Children under 7 yrs. old	.4		0	0	0	0	
Hired help and others boarded							
Men	1.0		.03	.01	.08	0	
Women	.8		0	0	0	0	
Total number of persons in family			2.00	2.06	2.00	2.00	
(34) Total adult equiv. members of family			1.80	1.86	1.80	1.30	
Total number of other persons in household			.03	.01	.08	0	
Total adult equiv. other persons in household			.03	.01	.08	0	
Household and personal cash expenses							
(35) Food (for family)**		\$	\$118	\$133	\$143	\$239	
Operating and supplies			31	19	16	79	
Furnishings and equipment			8	7	10	48	
Clothing and materials			28	40	32	112	
Health			18	34	18	95	
Development and recreation			13	12	17	53	
Personal			16	14	17	36	
Auto expense (personal share)			35	29	27	74	
(36) Housing expense			1	0	3	0	
(37) Total house & personal cash expenses			268	288	283	736	
Non-cash items of expense							
(38) Food furnished by the farm for the family**			85	140	166	82	
Food furnished by the farm for boarders			0	0	0	0	
Fuel furnished by the farm for the family			11	23	36	0	
Interest and depreciation on auto (pers. share)			13	8	4	9	
(39) Rental value of house (26) - (36)			95	80	85	10	
(40) Total house and personal non-cash expenses			204	251	291	101	
(41) Total house & personal exp. (37) + (40)			472	539	574	837	
Total value of food per adult equiv. in family***			113	147	172	178	
% that purchased food is of total food****			58	49	48	74	
Other personal cash expenditures							
Life insur., savings, loans & investments			7	7	0	35	
New auto (personal share)			11	3	39	194	
New housing			0	1	125	0	
Payments on notes and old bills			7	5	17	0	
(42) Total other personal cash exp.			25	16	181	229	
(23) Change in total assets			-24	+169	+1792	+644	
(24) Change in total liabilities			+60	-39	+1389	-119	
(25) Change in net worth			-84	+208	+403	+763	

*Based on food requirements.

**Food for hired help and boarders was computed at the rate of \$12 per month. The total amount for these purposes was deducted from the food purchases and value of home-produced food in the same proportions as these two sources of food were of the total food consumed.

*** $\frac{(35) + (38)}{(34)}$ divided by (34). The figures on this page are arithmetic averages.

**** $\frac{(38)}{(35 + (38))}$ The figures on this page are arithmetic averages.

Summary of Household and Personal Expenses (continued)

Family Type II					Family Type III					Family Type IV			
Net Income Groups					Net Income Groups					Net Income Groups			
\$599 and less	\$600 to 899	\$900 to 1199	\$1200 and more	Your farm	\$599 and less	\$600 to 899	\$900 to 1199	\$1200 and more	Your farm	\$599 and less	\$600 to 899	\$900 to 1199	\$1200 and more
1.00	1.00	1.00	1.00		1.56	1.48	1.76	1.66		1.13	1.15	1.13	1.21
1.00	1.00	.97	1.00		1.19	1.33	1.19	1.30		1.13	1.05	1.00	1.22
0	0	0	0		.43	.24	.19	.16		.27	.18	.33	.59
0	0	0	0		.11	.15	.30	.18		.20	.09	.12	.13
.10	.06	.05	.18		.19	.17	.13	.23		.33	.23	.36	.50
.10	.06	.10	0		0	.21	.25	.38		.20	.19	.44	.49
.43	.41	.25	.27		.48	.29	.31	.46		1.87	1.57	1.52	2.14
.80	1.06	1.00	1.09		.57	.13	.69	.15		1.94	1.83	1.80	1.41
.02	.02	.13	.17		.02	.02	.22	.07		.01	.08	.08	.08
0	.02	.02	.06		.01	.07	0	.08		.01	.02	.03	0
3.43	3.59	3.37	3.54		4.53	4.00	4.82	4.52		7.07	6.29	6.70	7.69
2.55	2.57	2.45	2.55		3.67	3.43	3.90	3.83		4.79	4.26	4.63	5.51
.02	.04	.15	.23		.03	.09	.22	.15		.02	.10	.11	.08
.02	.04	.12	.23		.03	.08	.22	.13		.02	.09	.10	.08
\$107	\$129	\$146	\$149	\$	\$134	\$137	\$183	\$159	\$	\$150	\$158	\$175	\$217
12	27	39	51		24	20	33	42		20	26	44	37
10	17	58	42		7	18	29	28		7	22	31	39
34	53	57	78		36	44	65	77		44	56	70	97
17	31	44	33		21	15	29	20		25	17	29	31
8	21	30	38		20	16	34	45		7	20	33	36
11	21	19	45		12	12	23	48		12	13	16	19
23	34	36	47		25	29	44	44		29	32	43	37
-	1	0	-		0	3	0	4		0	1	-	2
222	334	429	483		279	294	440	467		294	345	441	515
127	142	161	165		125	165	158	213		204	197	193	271
-	2	4	0		10	6	5	6		-	2	2	-
31	27	20	24		40	33	32	24		27	37	25	22
7	10	10	20		10	7	13	5		11	10	10	10
62	69	117	105		59	56	95	112		53	61	96	97
227	250	312	314		244	267	303	360		295	307	326	400
449	584	741	797		523	561	743	827		589	652	767	915
91	106	129	122		73	90	92	100		75	86	83	92
47	48	48	49		51	45	53	43		46	46	48	46
4	6	12	11		4	3	10	23		1	3	7	10
4	11	16	50		4	1	7	14		5	13	12	19
0	3	0	1		0	7	33	76		0	3	-	-
13	15	19	36		16	19	27	20		9	16	14	42
21	35	47	98		24	30	77	133		15	35	33	71
+11	+100	+275	+329		-73	+123	+182	+311		-24	+94	+189	+274
-15	-46	+21	-230		-7	-58	-42	-241		+121	-1	-63	-135
+26	+146	+254	+609		-66	+181	+224	+552		-145	+95	+252	+459

Some Comparisons with Averages for 1936

	1936	1937	1938
Number of farms	457	283	305
<u>Cash Farm Expenses</u>			
Operating	\$365	\$478	\$385
New equipment and purchases of livestock	228	243	212
Payment on debts	153	222	213
Total cash farm expenses	746	943	810
Board for hired labor (home-raised products)	4	6	4
Total farm expenses	750	949	814
<u>Cash Farm Receipts</u>			
Livestock and livestock products	486	636	650
Crops	74	189	136
Miscellaneous	179	163	181
Borrowed	227	290	190
Total cash farm receipts	966	1278	1157
Increase in net farm capital	109	176	159
Farm perquisites	253	270	259
Total farm receipts	1328	1724	1575
Total farm expenses (from above)	750	949	814
Returns to net farm capital and family labor	578	775	761
5% interest on net farm capital	41	43	51
Family labor earnings	537	732	710
Unpaid family labor*	210	172	142
Operator's labor earnings	\$327	\$560	\$568
Number of persons in family	4.8	4.6	4.7
Number of adult equivalent persons in family	3.5	3.4	3.5
Total assets (end of year)	\$2441	\$2730	\$3045
Total liabilities (end of year)	1209	1292	1408
Net worth (end of year)	1232	1438	1637
Change in net worth during year	+127	+254	+148
% total liabilities of total assets	52	48	46
Lbs. of butterfat produced per cow	173	184	183
Yield of corn per acre, bu.	13.2	27.4	23.9
Yield of spring wheat per acre, bu.	5.5	12.8	15.0
Yield of oats per acre, bu.	8.5	26.9	24.7
Yield of barley per acre, bu.	5.7	18.7	20.7
Yield of alfalfa per acre, tons	1.1	1.8	1.6
Yield of potatoes per acre, bu.	35.0	89.2	75.5
Days of productive work	302	346	371
Days of productive work per worker	218	239	272
Food furnished by the farm	\$185	\$189	\$177
Fuel furnished by the farm	31	27	29
Household and personal cash operating expenses	354	376	357
Other household and personal cash expenses (savings)	31	45	45
Household and personal cash receipts	113	81	64
Net income	\$713	\$860	\$834

*The charge for unpaid family labor was computed at the rate of \$43 per month in 1936; \$35 per month in 1937 and 1938.