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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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Summary Report

of the

FARM MANAGEMENT SERVICE

for

FARMER-BORROWERS

of

Rural Rehabilitation Division
of
The Farm Security Administration

For the Year
1936

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SUMMARY REPORT OF THE FARM MANAGEMENT SERVICE FOR FARM-BORROWERS
OF THE RURAL REHABILITATION DIVISION
PREPARED BY W. P. RANNEY AND G. A. POND

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INTRODUCTION

The analysis of the records and preparation of this report were under the direction of W. P. Ranney and G. A. Pond of the Division of Agricultural Economics, University of Minnesota. The records had been kept and closed under the general supervision of S. H. Rutford, former state director, and Lloyd I. Nelson, present state director, and the state personnel of the Rural Rehabilitation Division of the Farm Security Administration, with counsel and aid from S. B. Cleland and J. B. McNulty of the Division of Agricultural Extension, University of Minnesota. The above parties were aided in the closing and summarization of the records by the Division of Rural Sociology of the University of Minnesota and the Bureau of Agricultural Economics, United States Department of Agriculture.

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 several divisions of the University of Minnesota mentioned previously and the Bureau of Agricultural Economics at Washington 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 2,100 records were submitted by the borrowers of the Rural Rehabilitation Division in Minnesota. Of this number, 859 full twelve-months' records were analyzed. The majority of these were started March 1, 1936, but many were started February first and April first, and a few on January first. The remainder, 1,241 records, were either too incomplete or did not represent a full year's record because the loans were obtained late in the year 1936. Limited computations were made on most of these incomplete records.

For the purpose of this study, the state was divided into two sections; the southern part containing type-of-farming areas 1, 2, 3, 4 and 9 (see map page 4); and the northern part containing type-of-farming areas 5, 6, 7 and 8. The records for each of these sections were also divided into three groups on the basis of farm ownership and type of lease for tenant farms, because only the operator's share of receipts and expenses are included. The number of records for each form of tenure in each county is recorded on page 5.

Note: Completion of this project was made possible by workers supplied on Works Progress Administration Project Number 4841, Sub-Project Number 420B, and Federal Students' Work Project Number 41-100. Sponsor: University of Minnesota.

Each of the six groups of records was analyzed in separate reports as follows:

No. 88, Owner-operated farms - Southern Minnesota (48 records).
No. 89, Tenant-operated farms - cash leases - Southern Minnesota (83 records).
No. 90, Tenant-operated farms - crop-share and cash leases - Southern Minnesota (271 records).
No. 91, Owner-operated farms - Northern Minnesota (194 records).
No. 92, Tenant-operated farms - cash leases - Northern Minnesota (92 records).
No. 93, Tenant-operated farms - crop-share and cash leases - Northern Minnesota (171 records).

Although the predominant type of farming is not the same for all of the southern part of the state or for all of the northern part of the state, the system of farming did not vary widely among the farms in each section from which records were obtained. 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. The proportion of total receipts that came from sales of livestock and livestock products varied from farm to farm. As all of these farms were affected by the severe drouth of 1936, receipts from the sale of crops were much less than normal and purchases of feed above normal. The southeastern portion of the state was not affected by the drouth as severely as the remainder of the state.

The data were compiled so as to show the average figures for all of the farmers included in each report, the average of one-fifth of those farmers ranking highest in operator's labor earnings, and of the one-fifth ranking lowest in operator's labor earnings. Each farmer received a report with his own figures copied in a special "your farm" column. He was able to compare his own figures with the averages of all farms and the most successful and least successful groups included in his respective report. In order to emphasize his comparative standing in certain factors related to earnings, graduated bars were colored for each farmer on a thermometer chart in his report.

As stated previously, the Farm Security Administration is vitally interested in at least three things in connection with their clients: (1) their financial ability to continue at farming; (2) the gradual liquidation of their debts; and (3) their improved standard of living. However, in the above six reports, the data were classified on the basis of high and low operator's labor earnings, and the thermometer chart represented a picture of factors related to these earnings. The reason that this emphasis was placed on operator's labor earnings is because this measure of the financial success of the farm business was highly related to the three things mentioned above, about which the Farm Security Administration is very much concerned. The present summary serves to demonstrate these latter relationships more clearly. It is presented in five divisions:

1. A compilation in parallel columns of the averages shown in Reports Nos. 88 to 93 inclusive, enabling the readers to make comparisons between the averages of the various groups (pages 6 to 19 inclusive.)

2. An analysis of factors related to variations in financial progress among the farmers (pages 20 to 23 inclusive.)

3. An analysis of farm organization and management factors related to variations in operator's labor earnings among farms (pages 24 to 27 inclusive.)

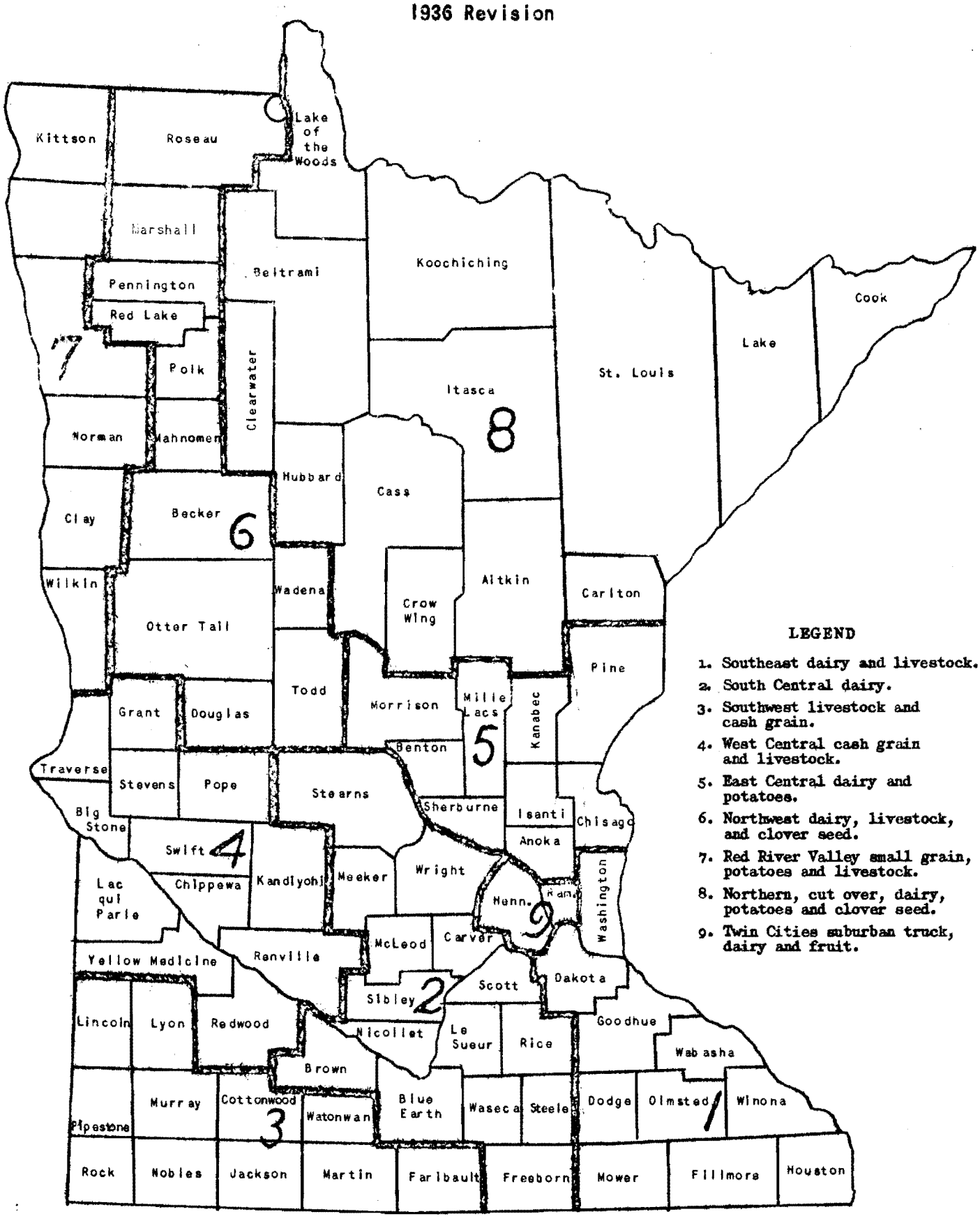
4. Differences in earnings and financial progress - miscellaneous groupings (pages 28 to 30 inclusive.)

5. Classification of household and personal expenses (pages 31 to 34 inclusive.)

TYPE-OF-FARMING AREAS IN MINNESOTA

Areas Outlined by County Boundaries

1936 Revision



LEGEND

1. Southeast dairy and livestock.
2. South Central dairy.
3. Southwest livestock and cash grain.
4. West Central cash grain and livestock.
5. East Central dairy and potatoes.
6. Northwest dairy, livestock, and clover seed.
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.

Number of Records Included* - Classified by Counties, Type of Farming areas and Farm of Tenure**

Southern Minnesota

Area I

County	(O)	(C)	(C.S.)
Dakota	2	13	9
Dodge	2	5	8
Fillmore	1	2	17
Goodhue	0	1	1
Houston	2	2	4
Mower	0	5	14
Olmsted	0	4	12
Wabasha	1	1	2
Washington	3	7	0
Winona	3	6	4
Totals	14	46	71

Area II

County	(O)	(C)	(C.S.)
Blue Earth	0	0	1
Carver	1	3	1
Freeborn	0	1	2
Le Sueur	1	1	1
McLeod	0	3	1
Meeker	1	1	4
Nicollet	0	2	1
Rice	2	1	1
Scott	1	1	1
Sibley	0	1	0
Stearns	11	8	38
Steele	1	2	0
Waseca	2	0	3
Wright	2	4	9
Totals	21	28	64

Area III

County	(O)	(C)	(C.S.)
Cottonwood	0	0	2
Faribault	0	0	1
Jackson	0	0	2
Lincoln	0	0	17
Lyon	0	0	7
Martin	0	0	1
Murray	0	0	2
Pipestone	2	0	16
Rock	0	1	3
Watonwan	0	0	4
Totals	2	1	55

Area IV

County	(O)	(C)	(C.S.)
Big Stone	0	0	1
Chippewa	0	0	6
Grant	1	2	8
Pope	3	4	23
Redwood	0	0	12
Renville	0	1	6
Stevens	0	0	12
Swift	0	0	1
Traverse	0	0	1
Yellow Med.	1	0	11
Totals	5	7	81

Area IX

County	(O)	(C)	(C.S.)
Hennepin	5	1	0
Ramsey	1	0	0
Totals	6	1	0

Northern Minnesota

Area V

County	(O)	(C)	(C.S.)
Anoka	2	0	1
Benton	0	3	0
Chisago	2	0	0
Isanti	1	2	0
Kanabec	8	7	8
Mille Lacs	6	2	6
Morrison	0	4	6
Pine	2	3	1
Sherburne	2	0	3
Totals	23	21	25

Area VI

County	(O)	(C)	(C.S.)
Becker	7	6	12
Douglas	7	5	9
Mahnomen	5	0	5
Marshall	0	1	1
Ottertail	9	3	26
Pennington	1	0	2
Polk	4	1	1
Red Lake	1	0	5
Roseau	6	5	1
Todd	0	5	3
Wadena	2	6	8
Totals	42	32	73

Area VII

County	(O)	(C)	(C.S.)
Clay	1	0	10
Kittson	3	0	2
Marshall	2	0	2
Norman	2	0	1
Polk	1	4	9
Wilkin	1	0	10
Totals	10	4	34

Area VIII

County	(O)	(C)	(C.S.)
Aitkin	9	6	2
Beltrami	24	2	3
Carlton	4	3	0
Cass	0	5	6
Clearwater	21	11	11
Crow Wing	0	3	2
Hubbard	3	2	5
Itasca	13	1	3
Kooch.	15	2	5
L. of Wds.	3	0	2
St. Louis	27	0	0
Totals	119	35	39

Summary

Form of Tenure	Southern Minnesota — Type of farming areas: I	II	III	IV	IX	Totals	Northern Minnesota — Type of farming areas: V	VI	VII	VIII	Totals	Totals for State
(O)	14	21	2	5	6	48	23	42	10	119	194	242
(C)	46	28	1	7	1	83	21	32	4	35	92	175
(C.S.)	71	64	55	81	0	271	25	73	34	39	171	442
	131	113	58	93	7	402	69	147	48	193	457	859

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

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

Summary of Farm Earnings (Averages all Farms)

Items	Southern Minnesota 48 Owner-operated farms	Southern Minnesota 83 Cash leased farms	Southern Minnesota 271 Cash Crop-share leased farms	Northern Minnesota 194 Owner-operated farms	Northern Minnesota 92 Cash leased farms	Northern Minnesota 171 Cash Crop-share leased farms
Cash Farm Expenses						
Operating						
Tractor	$ 18	$ 12	$ 22	$ 6	$ 7	$ 12
Auto (farm share) & truck	58	59	49	37	47	49
General machinery & equip.	33	30	32	16	22	25
Buildings, fencing, tiling	11	0	0	9	0	0
Hired Labor	46	35	28	20	19	25
Feed for livestock	156	155	130	134	153	127
Veterinary	0	2	3	0	1	1
Other expense for livestock	20	25	12	8	10	8
Seed	20	27	23	13	10	16
Fertilizer	2	0	0	0	0	0
Threshing	9	12	17	6	4	9
Twine	5	6	9	2	2	4
Other crop expense	14	16	14	13	7	8
Cash rent	10	265	90	8	91	51
Taxes	65	5	7	33	4	5
Insurance	13	7	5	5	3	4
Interest	116	13	12	25	4	6
General Farm	5	7	5	5	4	5
Money loaned out*	4	17	7	0	23	3
Total cash farm oper. exp.	$ 605	$ 693	$ 465	$ 340	$ 411	$ 358
Capital Goods						
Tractor	$ 0	$ 32	$ 16	$ 3	$ 0	$ 1
Auto (farm share) & truck	18	32	21	18	12	16
General machinery & equip.	54	103	77	33	49	71
Buildings, fencing, tiling	25	0	0	44	0	0
Horses	81	94	76	37	34	68
Cows	82	165	82	64	45	73
Other Cattle	7	13	9	4	3	6
Hogs	17	35	26	6	7	9
Sheep	1	4	5	10	4	3
Poultry	8	20	16	9	9	10
Payments on debts (Rur. Reh.)	116	132	119	38	76	94
Payments on debts (other)	263	106	170	112	51	81
Total cash farm cap. pay.	$ 672	$ 736	$ 617	$ 378	$ 290	$ 432
(1) Total cash farm expenses	$ 1277	$ 1429	$ 1082	$ 718	$ 701	$ 790
(2) Decrease in net farm capital	-	-	-	-	-	-
(3) Board for hired labor	25	20	13	9	9	12
(4) Total farm expenses (to page 4)	$ 1302	$ 1449	$ 1095	$ 727	$ 710	$ 802
% actual expenses were of farm budget (Form RA-RR-14)	24x	30x	129x	131x	66x	137x
Total cash farm operating expenses	109%	110%	94%	98%	131%	175%
Total cash farm capital payments	142%	96%	87%	100%	69%	92%

* Includes amount to offset credit sales, and amount of premiums paid on insurance for future years.

x Numbers specify how many farms are included in these groups. Only those farms are included for which Forms RA-RR-14 were provided.
These numbers of farms apply also for following pages where "per cent of budget" is considered.

Summary of Farm Earnings (continued) (Averages of all Farms)

Items	Southern Minnesota 48 Owner-operated farms	83 Cash leased farms	271 Cash Crop-share leased farms	Northern Minnesota 194 Owner-operated farms	92 Cash leased farms	171 Cash Crop-share leased farms
Cash Farm Receipt						
Horses	$ 11	$ 5	$ 11	$ 6	$ 5	$ 8
Cows	34	34	33	28	24	33
Dairy Products	510	494	311	249	320	319
Other cattle	54	34	37	29	27	28
Hogs	286	231	270	25	63	66
Sheep	9	3	12	17	15	5
Wool	3	2	2	6	4	2
Poultry	41	39	30	27	39	25
Eggs	89	70	49	49	46	26
Small Grain	68	71	76	18	14	28
Corn	38	36	22	1	-	1
Hay	1	8	2	6	2	11
Root crops	25	13	1	17	10	12
Other crops	42	18	8	55	13	15
Miscellaneous	30	27	17	21	23	13
Mach. & horses hired out	3	8	3	4	4	2
Income from work off the farm	117	108	72	164	137	119
AAA adjustment payments	15	16	17	5	12	17
Payments from old debts	9	7	11	3	4	5
Money borrowed (Rur. Rehab.)	224	376	257	122	31	167
Money borrowed (elsewhere)*	124	103	129	104	133	93
(5) Total cash farm receipts.	$ 1733	$ 1703	$ 1370	$ 956	$ 929	$ 995
(6) Increase in net farm capital	221	315	162	77	142	127
(7) Farm perquisites (itemized below)	224	295	307	245	270	255
(8) Total farm receipts (sum of (5) & (6)	2178	2313	1839	1278	1341	1377
(4) Total farm exp. (from page 6)	1302	1449	1095	727	710	802
(9) Ret. to cap. & fam. lab. (8) minus (4)	876	864	744	551	631	575
(10) 5% int. on net farm capital	133	31	27	65	22	23
(11) Fam. lab. earnings (9) minus (10)	743	833	717	486	609	552
(12) Unpaid family labor	263	184	198	238	195	187
(13) Oper. lab. earnings (11) minus (12)	480	649	519	248	414	365
% actual total cash farm receipts were of the budget for cash farm receipt (Form RA-RR-14)	120%	139%	122%	114%	141%	117%

Summary of farm Perquisites	Quantities: Southern Minn. 48 Owner-oper. farms	83 Cash leased farms	271 Cash crp-sh. leased farms	Northern Minn. 194 Owner-oper. farms	92 Cash leased farms	171 Cash crp-sh. leased farms	Values: Southern Minn. 48 Owner-oper. farms	83 Cash leased farms	271 Cash crp-sh. leased farms	Northern Minn. 194 Owner-oper. farms	92 Cash leased farms	171 Cash crp-shr leased farms
Whole milk, qt.	851	853	848	832	707	697	$ 38	$ 44	$ 42	$ 40	$ 32	$ 32
Skimmilk, qts	0	25	0	70	62	34	0	-	0	2	1	-
Cream, pts.	169	156	200	234	232	221	21	19	25	31	31	28
Farm-made butter, lbs.	37	31	50	92	61	71	13	11	17	30	21	24
Eggs, doz.	110	113	100	73	70	73	22	20	18	15	13	15
Poultry, no.	32	25	27	23	19	21	15	11	11	9	8	8
Cattle, lbs.	77	65	113	163	96	145	7	4	10	9	6	7
Hogs, lbs.	384	284	359	245	232	276	34	26	32	23	22	26
Sheep, lbs.	0	0	0	4	2	1	0	0	0	1	-	-
Potatoes, bu.	24	17	17	22	22	20	21	18	18	21	18	16
Veg. & Fruit	-	-	-	-	-	-	27	26	18	25	16	14
Fuel, Cds.	6	6	5	19	13	8	26	28	21	39	34	22
House rental	-	-	-	-	-	-	-	88	95	-	68	63
Total value of farm perquisites							224	295	307	245	270	255

* Includes amount to offset credit purchases.

Summary of Farm Earnings (High and Low Profit groups)

Items	Southern Minnesota						Northern Minnesota					
	Owner Operated		Cash leases		Cash, crop-share leases		Owner Operated		Cash leases		Cash, crop-share leases	
	10 mo. prof. farms	10 le. prof. farms	17 mo. prof. farms	17 le. prof. farms	54 mo. prof. farms	54 le. prof. farms	40 mo. prof. farms	40 le. prof. farms	18 mo. prof. farms	18 le. prof. farms	34 mo. prof. farms	34 le. prof. farms
Cash Farm Expenses												
Operating												
Tractor	$ 62	$ 21	$ 11	$ 10	$ 36	$ 24	$ 5	$ 7	$ 18	$ 1	$ 12	$ 24
Auto (f. sh.) & trk	65	58	63	71	52	48	43	31	52	47	50	45
Gen. Mach. & equip.	63	28	35	29	38	35	18	16	32	15	27	29
Bldg. fence, tiling	30	6	0	0	0	0	14	7	0	0	0	0
Mach. & Horse wk. hd.	0	1	0	0	0	0	1	0	0	0	0	0
Hired Labor	133	13	50	26	39	29	20	27	22	19	37	26
Feed for livestock	128	155	158	182	148	197	119	183	179	189	116	130
Veterinary	1	1	5	2	5	3	0	0	0	1	0	2
Oth. exp. for lv'st.	46	16	17	25	18	9	8	10	16	8	10	8
Seed	45	11	31	41	17	32	12	25	16	9	13	15
Fertilizer	9	0	0	1	0	0	0	0	0	0	0	0
Threshing	16	5	16	7	21	15	12	4	7	4	12	10
Twine	9	2	9	4	10	10	2	3	3	1	5	4
Other crop exp.	25	12	20	12	17	11	11	7	13	7	10	8
Cash rent	7	19	430	221	112	93	5	10	100	99	56	67
Taxes	150	60	4	6	8	6	33	38	6	3	5	5
Insurance	22	10	4	3	9	5	4	5	4	3	6	5
Interest	158	158	24	23	21	7	25	43	5	5	9	1
General farm	9	8	11	8	8	6	6	4	9	2	5	11
Money loaned out*	17	1	26	11	11	6	0	1	4	1	5	0
Tot. Cash farm oper. exp.	$ 995	$585	$ 914	$ 682	$570	$ 536	$ 338	$ 421	$ 486	$ 414	$ 378	$ 390
Capital goods.												
Tractor	$ 0	$ 0	$ 44	$ 42	$ 6	$ 6	$ 12	$ 1	$ 2	$ 0	$ 0	$ 1
Auto (f.sh.) & trk	28	8	66	27	35	25	26	23	13	11	20	15
Gen. Mach. & equip.	86	40	169	85	85	73	50	41	74	37	116	78
Bldg. fence, tiling	76	10	0	0	0	0	92	16	0	0	0	0
Horses	114	47	129	63	44	132	38	54	73	15	69	56
Cows	93	37	208	207	84	81	87	84	48	42	116	63
Other cattle	17	5	22	20	12	9	8	3	5	2	9	1
Hogs	41	18	71	31	27	27	6	5	7	8	10	4
Sheep	0	0	2	4	14	5	12	21	4	6	1	6
Poultry	13	5	18	32	18	19	11	9	5	13	16	13
Pay on debts (R.R.)	51	200	219	86	198	119	67	34	90	66	112	101
Pay on debts (other)	854	203	99	81	125	160	117	129	124	33	65	78
Tot. Cash farm cap. pay.	$1373	$ 573	$1047	$ 678	$ 648	$ 656	$ 526	$ 420	$ 445	$ 233	$ 534	$ 416
(1) Tot. cash farm exp.	$2368	$1158	$1961	$1360	$ 1218	$1192	$ 864	$ 841	$ 931	$ 647	$ 912	$ 806
(2) Decr. in net farm cap.	-	96	-	-	-	146	-	107	-	-	-	113
(3) Board for hired labor	68	5	24	16	21	13	12	11	8	19	16	14
(4) Tot. farm exp.	$2436	$1259	$1985	$1376	$ 1239	$1351	$ 876	$ 959	$ 939	$ 666	$ 928	$ 933
% actual exp. were of farm bud. (Form RA-RR-14)	4x	6x	8x	9x	25x	26x	25x	27x	13x	11x	26x	28x
Totl cash farm oper. exp.	106%	96%	88%	135%	89%	101%	98%	112%	143%	158%	89%	374%
Tot. cash farm cap. pay.	304%	93%	111%	91%	60%	141%	107%	111%	93%	37%	88%	123%

* Includes amount to offset credit sales, and amount of premiums paid on insurance for future years.

x Numbers specify how many farms are included in these groups. Only those farms are included for which Forms RA-RR-14 were provided. These numbers of farms apply also for the following pages where "per cent of budget" is considered.

- Mo--most; Le--least.

Summary of Farm Earnings (continued) (High and Low Profit Groups)

	Southern Minnesota						Northern Minnesota					
	Owner-Operated		Cash Leases		Cash, crop-share leases		Owner-operated		Cash Leases		Cash, crop-share leases	
	10 mo. prof. farms	10 le. prof. farms	17 mo. prof. farms	17 le. prof. farms	54 mo. prof. farms	54 le. prof. farms	40 mo. prof. farms	40 le. prof. farms	18 mo. prof. farms	18 le. prof. farms	34 mo. prof. farms	34 le. prof. farms
Cash Farm Receipts												
Horses	$ 13	$ 2	$ 13	$ 0	$ 7	$ 4	$ 8	$ 3	$ 7	$ 1	$ -	$ 7
Cows	75	34	31	60	37	26	26	32	23	46	44	22
Dairy Products	942	327	669	338	431	257	308	243	392	258	392	266
Other cattle	115	54	45	25	45	23	47	26	32	19	35	18
Hogs	782	194	477	165	437	201	23	32	106	58	78	55
Sheep	25	17	-	2	28	7	31	31	37	16	7	8
Wool	2	9	-	-	1	5	8	10	8	4	2	1
Poultry	46	25	28	82	31	33	41	29	28	61	32	26
Eggs	124	25	105	70	55	41	36	57	26	55	20	16
Small grain	199	53	128	20	152	32	21	20	59	1	47	22
Corn	119	43	99	13	64	5	0	0	-	0	0	-
Hay	3	1	2	3	2	2	4	12	1	2	8	21
Root Crops	97	-	57	4	2	1	28	4	20	2	9	4
Other crops	76	19	16	20	12	3	87	25	42	13	33	19
Miscellaneous	48	10	54	12	19	14	29	25	56	24	16	8
Mach. & horses hired out	9	2	0	1	5	2	8	2	9	0	5	-
Income off farm	69	148	199	89	40	91	248	112	208	74	167	92
AAA payments	38	4	50	10	33	8	7	6	10	7	19	27
From old debts	45	0	13	15	10	6	2	2	4	-	5	9
Borrowed (R. Rehab.)	389	177	388	340	165	423	194	147	22	2	188	206
Borrowed (elsewhere)	193	218	122	83	123	133	124	105	135	71	135	110
(5) Tot. cash farm rec.	$3409	$1362	$ 2496	$1352	$1699	$ 1317	$1280	$ 923	$ 1225	$ 714	$1242	$ 937
(6) Inc. in net farm cap.	881	-	957	23	528	-	341	-	466	25	436	-
(7) Farm perquisites	192	227	334	238	355	301	275	242	302	239	282	237
(8) Tot. farm rec.	4482	1589	3787	1613	2582	1618	1896	1165	1993	978	1960	1174
(4) Tot. farm exp.	$2436	$1259	$ 1985	$1376	$1239	$ 1351	$ 876	$ 959	$ 939	$ 666	$ 928	$ 933
(9) Ret. to cap. & fam. lab.	$2046	330	1802	237	1343	267	1020	206	1054	312	1032	241
(10) 5% int. on net f. cap.	316	107	43	18	36	25	59	77	28	25	18	30
(11) Fam. lab. earnings	1730	223	1759	219	1307	242	961	129	1026	287	1014	211
(12) Unpaid fam. lab.	202	537	129	310	153	393	130	509	162	343	138	392
(13) Oper. labor earnings	1528	-314	1630	- 91	1154	-151	831	-380	864	- 56	876	-181
% actual receipts were of bud. for cash farm rec. (Form RA-RR-14)	85%	153%	135%	119%	125%	111%	145%	101%	141%	101%	144%	103%

Summary of Farm Perquisites

Wholemilk	$ 37	$ 50	$ 54	$ 38	$ 45	$ 49	$ 33	$ 42	$ 42	$ 26	$ 37	$ 26
Skim milk	0	0	-	-	0	0	6	0	0	-	-	1
Cream	23	20	18	18	29	27	37	31	32	30	28	26
Farm-made butter	6	13	20	11	17	19	36	21	24	15	28	35
Eggs	17	22	24	12	22	17	15	16	17	13	14	12
Poultry	5	13	12	11	15	9	11	9	6	10	8	7
Cattle	5	7	7	4	9	6	13	10	4	5	10	7
Hogs	27	32	36	18	35	39	23	27	33	18	27	25
Sheep	0	0	0	0	0	0	0	0	0	0	0	1
Potatoes	16	26	18	16	21	21	23	27	19	17	16	14
Veg. & fruit	34	14	20	28	21	11	33	16	18	8	16	8
Fuel	22	30	29	23	25	14	45	43	31	32	22	17
House rental			96	59	116	89			76	65	76	58
Tot. farm perquisites	$192	$227	$ 334	$ 238	$ 355	$ 301	$ 275	$ 242	$ 302	$ 239	$ 282	$ 237

Summary of Household and Personal Expenses and Receipts (averages for all Farms)

	Southern Minnesota			Northern Minnesota		
	48	83	271	194	92	171
	Owner-operated farms	Cash leased farms	Cash Crop-share leased farms	Owner-operated farms	Cash leased farms	Cash Crop-share leased farms
Number of persons in family						
Tot. no. of persons in family	5.3	4.5	4.4	5.0	4.4	4.7
Tot. adult equiv. members of family*	4.1	3.3	3.2	3.7	3.2	3.4
Tot. no. of other persons in h. h.	-	.1	.2	.1	-	.1
Tot. adult equiv. of other pers. in h.h.	-	.1	.2	.1	-	.1
Cash Expenses (other than savings, etc)						
Food	$ 215	$ 206	$ 191	$ 183	$ 184	$ 179
Operating and supplies	45	42	40	18	21	29
Furnishings and equip.	31	32	29	18	24	26
Clothing and materials	68	64	67	60	55	59
Health	24	22	23	19	18	21
Development & recreation	22	16	19	14	15	18
Personal	14	22	13	14	14	15
Pers. share of auto exp.	27	24	26	19	14	14
Pers. share of auto, new	5	8	5	2	4	3
Housing expense	3	1	2	5	2	2
(16) Tot. cash exp. (other than savings, etc.)	$ 454	$ 437	$ 415	$ 352	$ 351	$ 366
% actual (16) of budget (RA-RR-14)	122%	135%	131%	136%	147%	146%
Non-cash items of expense						
(17) Food furnished by the farm	$ 197	$ 179	$ 191	$ 206	$ 168	$ 170
(18) Fuel furnished by the farm	27	28	21	39	34	22
Int. & deprec. in auto (pers. share)	7	3	4	2	1	1
Rental value of house	106	88	95	40	68	63
(19) Total non-cash expenses	$ 337	$ 298	$ 311	$ 287	$ 271	$ 256
(20) Total expenses (16) & (19)	$ 791	$ 735	$ 726	$ 639	$ 622	$ 622
(21) Tot. exp. less board of hired lab. (20)-(3)	766	715	713	630	613	610
Other cash expenditures						
Life ins. & savings	$ 22	$ 12	$ 9	$ 5	$ 6	$ 6
New housing	5			5		
Payments on notes & old bills	11	23	17	29	16	14
(22) Tot. other cash expenditures	$ 38	$ 35	$ 26	$ 39	$ 22	$ 20
(23) Total cash exp. (16) + (22) + (1)	$ 1769	$1901	$1523	$1109	$1074	$1176
(24) Total of all exp. (20)+(22)+(1)+(2)	2106	2199	1834	1396	1345	1432
Household & pers. cash receipts.						
(25) Grants, rel. old age asst., sol. bonus, surp. com.	$ 84	$ 64	$ 56	$ 89	$ 77	$ 91
Net income from outside investments	0	0	0	7	4	-
Gifts (incl. rec. from sons in CCC cmp)	0	5	1	11	4	5
Misc (sale of old clothes, furn., etc.)	38	4	7	7	2	3
(25a) Money borrowed (to offset cr. pur.)	12	12	14	10	6	13
(26) Tot. h. & Pers. cash receipts	134	85	78	124	93	112
(27) Rental value of house	129			58		
(28) Total cash rec. (26) + (5)	$ 1867	$1788	$1448	$1080	$1022	$1107
(29) Total of all income (26)+(27)+(8)	2441	2398	1917	1460	1424	1489
(30) Net cash rec. (28) minus (1)	590	359	366	362	321	317
(31) Net income (29) minus (4) minus (25a)	1127	937	808	723	718	674
*(32) % Gov. asst. is of net inc. % (25) of (30)	18%	11%	19%	43%	37%	60%
*(33) % food & fuel of H. & P. exp. % (17)+(18) is of (21)	31%	33%	36%	40%	32%	34%

* See footnote on page 22.

* This represents a simple average of the percentage for the individual farms, rather than weighted average.

Summary of Household and Personal Expenses and Receipts (High & Low Profit groups)

	Southern Minnesota						Northern Minnesota					
	Owner Operated		Cash leases		Cash, Crop-share leases		Owner Operated		Cash leases		Cash, Crop-share leases	
	10 mo. prof. farms	10 le. prof. farms	17 mo. prof. farms	17 le. prof. farms	54 mo. prof. farms	54 le. prof. farms	40 mo. prof. farms	40 le. prof. farms	18 mo. prof. farms	18 le. prof. farms	34 mo. prof. farms	34 le. prof. farms
No. of pers. in fam.												
Tot. no. in fam.	3.9	7.0	4.4	4.1	4.1	5.8	5.2	5.4	4.8	4.4	5.0	5.0
Tot. adult equiv.	3.2	5.5	3.2	3.1	3.0	4.3	3.8	4.1	3.6	3.4	3.5	4.0
Tot. other prs.	-	-	.4	.2	.4	.1	.1	.1	-	.1	.2	.2
Tot. other adult equiv.	-	-	.3	.2	.4	.1	.1	.1	-	.1	.2	.2
Cash Expenses												
Food	$ 202	$ 269	$ 242	$ 185	$ 138	$ 215	$ 194	$ 195	$ 192	$ 186	$ 195	$ 197
Operating & sup.	72	33	64	43	46	47	19	20	28	15	36	29
Furn. & equip.	46	35	49	44	42	24	22	18	35	18	35	18
Cloth, & materials	74	82	81	62	85	76	71	66	64	55	70	52
Health	30	39	24	16	25	19	17	26	23	19	24	19
Develop. & rec.	32	22	24	11	32	15	19	11	26	7	25	14
Personal	17	16	39	15	16	12	12	10	20	8	18	12
Pers. sh. auto exp.	41	27	28	22	35	22	21	11	15	7	15	13
Pers. sh. auto, new	14	0	23	2	7	4	9	1	4	3	1	3
Housing exp.	5	1	1	2	5	2	11	3	1	-	1	3
(16) Tot. cash exp.	$ 533	$ 524	$ 575	$ 402	$ 491	$ 436	$ 395	$ 361	$ 408	$ 318	$ 420	$ 360
% actual (16) of bud.	116%	116%	134%	134%	134%	123%	143%	127%	172%	131%	179%	122%
Non-cash exp.												
(17) Food furn. by farm	$ 170	$ 198	$ 209	$ 156	$ 214	$ 198	$ 230	$ 199	$ 195	$ 142	$ 184	$ 162
(18) Fuel furn. by farm	22	30	29	23	25	14	45	43	31	32	22	17
Int. & deprec. on auto	7	9	6	2	5	3	2	1	1	1	1	3
Rental val. of house	122	76	96	59	116	89	42	58	76	65	76	58
(19) Tot. non-cash exp.	$ 321	$ 313	$ 340	$ 240	$ 360	$ 304	$ 319	$ 301	$ 303	$ 240	$ 283	$ 240
(20) Tot. exp. (16)-(19)	854	837	915	642	851	740	714	662	711	558	703	600
(21) Tot. exp-bd. of hd.lab.	786	832	891	626	830	727	702	651	703	539	687	586
Other cash expenditures												
Life ins. & savings	53	36	14	15	17	6	7	5	11	3	7	4
New housing	0	0					11	0				
Pay's on notes & bills	16	9	40	17	22	16	45	30	21	8	17	11
(22) Tot. O. cash expend.	69	45	54	32	39	22	63	35	32	11	24	15
(23) Tot. cash exp.	$2970	$1727	$2590	$1794	$1748	$1650	$1322	$1237	$1371	$ 976	$1356	$1181
(24) Tot. all exp.	3291	2136	2930	2034	2108	$2100	$1641	$1645	$1674	$1216	$1639	$1534
H.H. & pers. cash rec.												
(25) Grants, etc.	$ 17	$ 193	$ 41	$ 84	$ 39	$ 85	$ 63	$ 106	$ 39	$ 89	$ 61	$ 83
Inc. outside inv.	1	0	0	0	1	0	1	25	0	0	0	0
Gifts	0	0	16	6	1	0	17	5	8	0	4	4
Misc.	0	124	14	3	19	4	10	4	7	3	2	4
(25a) Money borrowed	0	20	8	10	23	18	15	7	4	9	16	16
(26) Tot. H. & P. cash rec.	18	337	79	103	83	107	106	147	58	101	83	107
(27) Rent. val. of house	153	77					60	76				
(28) Tot. cash rec.	$3427	$1699	$2575	$1455	$1782	$1424	$1386	$1070	$1283	$ 815	$1325	$1044
(29) Tot. all income	4653	2003	3866	1716	2665	1725	2062	1388	2051	1079	2043	1281
(30) Net cash rec.	1059	541	614	95	564	232	522	229	352	168	413	238
(31) Net income	2217	724	1873	330	1403	356	1171	422	1108	404	1099	332
*(32) % gov. asst.	2%	29%	7%	49%	9%	33%	15%	50%	58%	58%	27%	42%
*(33) % food & fuel.	25%	31%	30%	36%	35%	37%	42%	38%	33%	33%	31%	44%

* This represents a simple average of the percentage for the individual farms, rather than weighted average.

Summary of Inventories & Net Worth Statement (Averages of all Farms)

	Southern Minnesota			Northern Minnesota		
	48	83	271	194	92	171
	Owner-operated farms	Cash leased farms	Cash Crop-share leased farms	Owner-operated farms	Cash leased farms	Cash Crop-share leased farms
Farm Inventories			(Ending Inventory)			
Land	$ 3321	$ 0	$ 0	$1232	$ 0	$ 0
Farm buildings	1356			560		
Machinery and equipment	388	281	346	230	212	278
Tractors	36	42	56	21	23	28
Trucks	12	7	5	11	10	5
Auto (farm share)	68	78	61	43	42	54
Gas engine	10	4	6	4	7	9
Electric equipment	6	4	1	3	1	1
Miscellaneous supplies	3	1	2	14	6	4
Feeds and seeds	257	236	187	83	63	98
Horses	323	314	389	230	236	334
Cows	543	502	415	309	363	389
Other cattle	139	119	121	89	92	109
Hogs	128	117	116	20	25	40
Sheep and wool	18	13	18	34	25	15
Poultry	55	60	49	29	33	32
Accounts and notes receiv.	8	19	5	1	22	5
Other farm assets	38	0	28	21	21	8
(34) Total farm assets	$ 6709	$1803	$ 1805	$ 2934	$1181	$ 1409
Farm Liabilities						
Real estate mortgages	$ 2957	$ 0	$ 0	$ 941	$ 0	$ 0
Chattel mtgs. & crop liens	100	64	145	63	51	93
Rural Rehab. loans	758	820	941	493	568	712
Past due cash rent	-	28	13	-	17	11
Other debts	296	134	144	136	56	86
(35) Total farm liabilities	$ 4111	$1046	$ 1243	$ 1633	$ 692	$ 902
(36) Net farm capital (34) - (35)	$ 2598	$ 757	$ 562	$ 1301	$ 489	$ 507
Personal Assets						
House	$ 1377	$ 0	$ 0	$ 565	$ 0	$ 0
Auto (personal share)	34	35	27	21	14	15
Cash on hand & in bank	9	20	8	36	38	35
Household goods	282	215	168	119	111	109
Cash surrender value of life insurance	30	5	15	16	22	18
Miscellaneous	3	92	8	3	10	8
(37) Total personal assets	$ 1735	$ 367	$ 226	$ 760	$ 195	$ 185
(38) Total personal liabilities	46	74	46	35	33	47
(39) Total assets (34) + (37)	$ 8444	$2170	$ 2031	$ 3694	$1376	$ 1594
(40) Total liabilities (35) + (38)	4157	1120	1289	1668	725	949
Farmer's net worth (39) - (40)	$ 4287	$1050	$ 742	$ 2026	$ 651	$ 645
Change in net worth	$+200	$-276	$ +173	$ + 58	$-171	$ +182
*% R.R. loan is of total liabilities (end inventory)	23%	78%	78%	44%	75%	77%
*% Total liabilities are of total assets	54%	57%	67%	43%	55%	61%
Age of proprietor	42.0	37.8	37.2	42.0	37.0	37.3
Formal schooling of prop., yrs.	8.0	8.1	8.1	8.0	8.0	7.8

* This represents a simple average of the percentage for the individual farms, rather than weighted average.

Summary of Inventories & Net Worth Statement (High & Low Profit groups)

	Southern Minnesota						Northern Minnesota					
	Owner Operated		Cash leases		Cash, crop-share leases		Owner Operated		Cash leases		Cash, crop-share leases	
	10 mo. prof. farms	10 le. prof. farms	17 mo. prof. farms	17 le. prof. farms	54 mo. prof. farms	54 le. prof. farms	40 mo. prof. farms	40 le. prof. farms	18 mo. prof. farms	18 le. prof. farms	34 mo. prof. farms	34 le. prof. farms
Farm Inventories					(Ending Inventory)							
Land	$5943	$2922	$ 0	$ 0	$ 0	$ 0	$1235	$1382	$ 0	$ 0	$ 0	$ 0
Farm buildings	2103	1539	0	0	0	0	559	796	0	0	0	0
Mach. & equip.	719	390	340	237	400	323	219	304	238	217	284	374
Tractors	98	47	45	53	83	37	17	38	84	15	37	67
Trucks	20	3	10	10	2	8	8	14	24	27	5	5
Auto (f. share)	68	65	102	64	98	46	50	45	36	49	67	47
Gas engine	1	8	8	3	7	6	4	6	19	3	8	15
Elec. equip.	4	16	0	17	00	2	6	6	1	3	1	5
Misc. supplies	7	5	2	2	2	2	4	9	15	3	6	1
Feeds & seeds	658	163	460	122	308	150	107	67	124	31	168	57
Horses	437	300	346	291	423	433	225	245	235	240	324	373
Cows	1033	389	602	411	484	393	363	316	418	329	423	412
Other cattle	256	134	140	82	145	128	128	75	154	72	129	117
Hogs	354	103	214	78	180	93	19	26	40	20	62	31
Sheep & wool	7	44	4	6	27	17	71	47	62	16	12	28
Poultry	62	47	72	85	62	47	39	24	24	46	38	33
Acc't & notes rec.	16	1	28	27	8	3	0	3	1	1	19	3
Other farm assets	108	19	2	6	39	4	4	2	2	78	2	4
(34) Tot. farm assets	$11894	$6195	$2375	$1494	$2268	$1692	$3058	$3405	$1477	$1150	$1585	$1572
Farm Liabilities												
Real. est. mortg.	$ 3910	$2703	$ 0	$ 0	$ 0	$ 0	$1060	$1105	$ 0	$ 0	$ 0	$ 0
Chattel mortg.	47	430	43	107	105	144	73	45	60	9	158	177
R. Rehab. loans	946	836	863	794	1055	1034	479	604	547	637	798	806
Past due rent	0	0	25	23	12	30	0	0	16	15	12	7
Other debts	224	216	120	130	150	154	110	201	74	21	70	59
(35) Tot. farm liab.	$ 5127	$4215	$1051	$1054	$1322	$1362	$1722	$1955	$ 697	$ 682	$1038	$1049
(36) Net farm cap.	6767	1980	1324	440	946	330	1336	1450	780	468	547	523
Personal assets												
House	1793	1192	0	0	0	0	587	735	0	0	0	0
Auto (pers. share)	51	38	48	24	45	19	28	12	17	9	16	16
Cash on hand	0	4	9	13	17	9	83	1	11	1	41	10
Household goods	389	341	212	223	201	131	117	142	209	96	144	78
Cash sur. val. of life ins.	20	125	0	0	47	1	19	3	0	0	61	0
Misc.	6	2	35	20	24	1	4	0	1	0	11	18
(37) Tot. pers. assets	$ 2259	$1702	$ 304	$ 280	$ 334	$ 161	$ 838	$ 893	$ 238	$ 106	$ 273	$ 122
(38) Tot. pers. liab.	24	107	37	45	57	40	27	34	47	53	43	65
(39) Tot. assets (34)+(37)	$14153	$7897	$2679	$1774	$2602	$1853	$3896	$4298	$1715	$1256	$1858	$1694
(40) Tot. liab. (35)+(38)	5151	4322	1088	1099	1379	1402	1749	1989	744	735	1081	1114
Farmers net worth	$ 9002	$3575	$1591	$ 675	$1223	$ 451	$2147	$2309	$ 971	$ 521	$ 777	$ 580
Change in net worth	$ +870	$-130	$+990	$- 23	$+564	$-103	$+442	$-280	$+430	$- 66	$+443	$-187
*%R.R. loan is of total liabilities	25%	21%	85%	79%	79%	76%	48%	45%	68%	87%	72%	79%
*% Tot. liab are of total assets	44%	58%	43%	62%	46%	82%	41%	43%	43%	61%	56%	70%
Age of prop.	41.6	40.7	37.8	38.5	35.4	41.6	43.0	42.3	36.3	41.0	34.5	43.5
Formal schooling, years.	9.0	5.5	9.2	8.1	8.4	7.8	8.2	7.7	7.3	8.0	8.5	7.4

* This represents a simple average of the percentage for the individual farms, rather than weighted average.

Measures of Farm Organization & Management Efficiency (Averages of all Farms)

	Southern Minnesota			Northern Minnesota		
	48 Owner-operated farms	83 Cash Cash leased farms	271 Cash Crop-share leased farms	194 Owner-operated farms	92 Cash leased farms	171 Cash Crop-share leased farms
Operator's labor earnings	$ 480	$ 649	$ 519	$ 248	$ 214	$ 365
(1) Pounds of butterfat per cow	192	191	169	172	178	171
(2) Ret. per a.u. (pr. l.s. other than cow)*	$ 124	$ 112	$ 105	$ 78	$ 82	$ 77
(3) Pr. l.s. units per 100 acres	15.5	13.0	9.1	9.3	10.5	7.2
(4) Crop yields **	100	100	100	100	100	100
(5) % of tillable land in high ret. crps ***	34.5	28.9	25.9	33.0	19.0	17.0
(6) Sz. of bus. - days of pr. work ****	333	312	338	269	281	350
(7) Days of prod. work per worker	192	222	243	194	207	251
(8) Pow. & eq. exp. per day of prod.wk.*****	$ 1.02	$ .64	$ .65	$ .73	$ .51	$ .52
gross ret. per cow	$ 75.35	$72.12	$61.57	$66.58	$64.36	$62.12
" " " head of other cattle	34.96	24.51	29.18	24.38	28.07	26.71
" " " litter of pigs raised	83.17	87.76	98.61	69.92	74.19	69.76
" " " cwt hogs produced	9.31	11.52	11.01	9.10	9.04	9.08
" " " head of sheep	.29	8.00	5.55	6.22	6.48	5.66
" " " hen	2.21	3.68	2.28	2.57	2.71	2.13
No. of pigs raised per litter	5.3	5.6	6.0	6.3	6.5	6.3
No. of eggs liad per hen	124	107	82	106	88	79
No. of cows per worker	5.2	3.8	5.2	4.2	5.0	5.1
Crop acres per horse	20.2	18.0	31.7	25.7	25.0	34.4
Pow. exp. per day of prod. work	$ .40	$ .37	$ .38	$ .31	$ .30	$ .30
Mach. " " " " " "	.27	.27	.27	.19	.21	.22
Bldg. " " " " " "	.34			.23		
Days of prod. work on crops	92	97	145	72	71	143
" " " " " prod. lvst.	202	186	170	143	164	167
" " other productive work.	39	29	23	54	46	40
No. of workers, total	1.7	1.1	1.4	1.5	1.4	1.4
" " " , family	1.6	1.0	1.3	1.4	1.4	1.3
" " " , hired	.1	.1	.1	.1	-	.1

* Returns are calculated by subtracting beginning inventory and purcheses from the sum of end inventory, sales of animals and their products, and value of home-used animals and animal products. Animal unit represents one cow, one bull, two head of young cattle, seven sheep, fourteen lambs, five hogs, ten pigs or one hundred hens.

** Given as a percentage of the average of the farms included in each report.

*** For Southern Minnesota,
Crops are marked on page 16 as (A), (B), (C), (D). All of acres in (A) crop, half of acres in (B) crops, andone-fourth of acres in (C) crops are used in calculating per cent of tillable land in high return crops. For Northern Minnesota the high return crops include legumes (hay, seed and pasture), potatoes and truck 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: Southern Minnesota: cows, 16.6; other cattle, 7.6; sheep, 2.7; hens, 20.1; per 100 lbs. hogs produced, .55; per acre of crops: alfalfa, 1.5; other hay, .6; small grain, 1.0; canning peas, 2.5; corn husked, 2.1; corn silage, 2.6; corn fodder, 1.8; sweet corn, 3.0; potatoes, 6.4; sugar beets, 4.0; (Northern Minnesota) cows, 18.5; other cattle, 7.2; sheep, 3.0; hens, 30.0; per 100 lbs. hogs produced, .9; per acre of crops: alfalfa, 1.75; other hay and seed crops, 1.0; small grain, 1.3; corn husked, 2.6; corn silage, 3.1; corn fodder, 2.3; potatoes, 6.0; 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, purcheses, repairs, fuel, and interest charge.

Measures of Farm Organization & Management Efficiency (High & Low Profit groups)

	Southern Minnesota						Northern Minnesota					
	Owner Operated		Cash leases		Cash, crop-share leases		Owner operated		Cash leases		Cash, crop-share leases	
	10 mo. prof. farms	10 le. prof. farms	17 mo. prof. farms	17 le. prof. farms	54 mo. prof. farms	54 le. prof. farms	40 mo. prof. farms	40 le. prof. farms	18 mo. prof. farms	18 le. prof. farms	34 mo. prof. farms	34 le. prof. farms
Oper's lab. earn.	$ 1528	$-314	$1630	$ -91	$1154	$-151	$ 831	$-380	$ 864	$ -56	$ 876	$-181
Lbs. B.F. per cow	211	157	225	196	188	147	188	160	182	162	184	152
Ret. pr L.S. other then c's	$ 152	$ 89	$ 158	$ 134	$ 121	$ 77	$ 82	$ 76	$ 72	$ 83	$ 89	$ 64
L.S. per 100 A.	18.6	14.7	12.1	12.8	10.7	8.1	8.9	9.9	11.2	10.9	6.9	6.0
Crop yields	129	71	142	83	129	74	121	88	109	73	127	75
% high ret. crops	40	27	27	26	29	24	37	31	22	18	20	13
Size of business	534	298	402	259	397	359	314	282	353	245	397	395
Days work per worker	244	140	278	169	289	217	245	160	262	152	290	215
Exp. per day prod. work	$ 1.01	$1.21	$ .57	$ .96	$ .58	$ .92	$ .55	$ .91	$ .59	$ .57	$ .41	$ .61
Ret. per cow	$87.71	$58.34	$93.23	$57.26	$76.07	$50.82	$71.27	$58.10	$68.11	$56.01	$69.56	$53.35
" " head. O. cattle	37.96	34.29	32.14	26.40	35.19	21.32	24.43	24.39	23.88	22.71	27.30	24.40
" " litter pigs	115.77	41.63	137.87	54.68	125.71	78.77	78.31	80.18	99.66	71.07	96.51	57.81
" " cwt hogs	13.33	8.41	13.10	8.41	13.97	7.65	9.44	9.15	9.79	8.90	9.42	9.03
" " head of sheep	3.56	-2.54	4.90	6.86	5.40	4.10	6.94	6.43	5.53	4.87	3.85	6.34
" " hen	3.26	1.64	6.53	4.32	2.31	1.50	2.28	2.34	2.62	2.37	2.39	1.64
Pigs per litter	6.2	4.0	5.2	5.5	5.7	5.8	7.0	6.4	6.7	5.9	7.0	5.8
Eggs per hen	105	114	121	102	90	82	104	90	95	73	75	81
Cows per worker	7.9	3.7	5.8	4.3	6.5	4.3	5.0	3.4	6.0	3.8	5.6	4.0
Crop A. per horse	23.5	21.5	29.0	21.0	36.8	32.2	30.1	29.2	30.6	22.4	39.4	38.6
Row. exp. per day of work	$ .31	$ .52	$ .32	$ .59	$ .32	$ .59	$ .20	$ .37	$ .35	$ .40	$ .21	$ .36
Mach " " " " "	.28	.32	.25	.37	.26	.33	.15	.26	.24	.17	.20	.25
Bldg. " " " " "	.41	.37	0	0	0	0	.20	.28	0	0	0	0
Days of pr. wk on crops	154	83	124	76	184	160	76	95	78	71	157	195
" " " " " l.s.	357	173	240	156	200	170	161	149	206	149	182	169
" " other pr. work.	23	42	38	27	13	29	77	38	69	25	58	31
No. of worker, total	1.8	2.2	1.6	1.6	1.4	1.8	1.3	1.9	1.4	1.7	1.4	1.9
" " " , family	1.5	2.2	1.5	1.5	1.3	1.7	1.2	1.9	1.4	1.7	1.3	1.8
" " " , hired	.3	.0	.1	.1	.1	.1	.1	.0	-	-	.1	.1

Distribution of Acres in Farm (Averages of all Farms)

Crop	Classification of crops for So. Minn	Southern Minnesota: 48 Owner-operated farms	Southern Minnesota: 83 Cash leased farms	Southern Minnesota: 271 Cash Crop-share leased farms	Northern Minnesota: 194 Owner-operated farms	Northern Minnesota: 92 Cash leased farms	Northern Minnesota: 171 Cash Crop-share leased farms
Winter Wheat	(B)	1.5	1.2	1.0	0	0	3.0
Spring Wheat	(C)	.5	1.8	6.0	2.9	1.7	8.2
Oats	(C)	11.3	14.9	27.9	5.8	7.6	18.0
Barley	(B)	5.4	7.5	13.0	3.6	2.7	9.7
Rye	(D)	.7	.8	2.7	.4	.8	2.3
Flax, flax and wheat	(B)	.6	1.5	4.9	1.9	1.4	3.9
Wheat and oats	(C)	1.3	2.6	1.3	.1	0	.9
Oats and barley	(C)	1.6	1.1	.9	.1	0	.3
Canning peas	(A)	.3	0	0	0	0	0
Miscellaneous	(C)	.2	.2	.5	.1	.3	.1
Total grain and peas		23.4	31.6	58.2	14.9	14.5	46.4
Corn, grain	(B)	10.8	13.1	23.5	1.0	2.3	2.8
Corn, silage	(C)	3.0	2.3	2.8	.4	.1	1.2
Corn, fodder	(D)	2.4	5.1	6.6	2.2	3.7	6.8
Sweet corn	(B)	1.8	.5	.1	0	0	0
Sugar beets	(A)	0	.2	0	0	0	0
Potatoes	(A)	1.0	.5	.3	1.3	1.0	1.6
Miscellaneous	(A)	.6	.5	.2	.4	.4	.4
Total cultivated crop		19.6	22.2	33.5	5.3	7.5	12.8
Alfalfa	(A)	5.5	2.7	2.9	3.6	2.0	4.1
Red Clover	(B)	1.2	1.7	1.7	.6	2.3	1.0
Other legumes and mix.	(C)	2.2	2.1	2.9	4.9	1.9	3.0
Timothy	(D)	.1	.7	1.2	7.0	3.2	3.0
Annual hay	(D)	3.7	3.3	3.9	4.9	7.6	12.0
Misc. hay & seed crop	(C)	.1	.5	1.1	2.5	1.1	1.4
Phalaris (non-tillable land)		0	.2	0	0	.1	.2
Wild hay (" " ")		5.9	8.3	8.3	14.9	16.8	27.7
Total hay		18.7	19.5	22.0	38.4	35.0	52.4
Total crop acreage		61.7	73.3	113.7	58.6	57.0	111.6
Sweet clover pasture	(B)	1.8	.3	.8	.3	0	.6
Alfalfa pasture	(A)	.1	0	0	0	0	0
Red clov. or rape past. (hogs)	(B)	.1	.1	0	0	0	0
Misc. legume pasture	(C)	.4	0	0	0	0	0
Other tillable pasture	(D)	1.3	1.2	1.1	1.4	1.4	1.8
Non-tillable pasture		24.9	32.7	24.9	44.3	40.4	44.9
Total pasture		28.6	34.3	26.8	46.0	41.8	47.3
Tillable land not cropped		1.7	3.8	6.1	1.5	.9	4.3
Timber (not pastured)		3.4	3.4	1.9	17.6	12.0	10.7
Roads and waste		3.2	3.3	5.8	7.3	4.8	9.5
Farmstead		3.3	3.2	4.9	2.3	2.9	3.8
Total acres in farm		101.9	121.3	159.2	133.3	119.4	187.2
% tillable land in high ret. crops		34.5	28.9	25.9	33.0	19.0	17.0

Distribution of Acres in Farm (High & Low Profit groups)

Crop	Southern Minnesota						Northern Minnesota					
	Owner-operated		Cash leases		Cash, crop-share leases		Owner-operated		Cash leases		Cash, crop-share leases	
	10 mo. prof. farms	10 le. prof. farms	17 mo. prof. farms	17 le. prof. farms	54 mo. prof. farms	54 le. prof. farms	40 mo. prof. farms	40 le. prof. farms	18 mo. prof. farms	18 le. prof. farms	34 mo. prof. farms	34 le. prof. farms
Winter wheat	0	1.5	.1	.7	1.2	.3	0	0	0	0	3.7	3.3
Spring wheat	0	2.5	1.7	1.5	5.2	6.6	2.2	4.4	4.3	.7	10.8	10.5
Oats	13.0	13.2	19.0	12.4	32.5	34.2	5.7	10.0	6.9	9.6	18.1	28.8
Barley	8.5	2.6	10.1	4.5	15.5	13.1	3.1	6.3	3.5	2.5	14.4	10.5
Rye	0	2.2	.3	0	1.3	2.1	.4	.8	.7	.7	.7	1.5
Flax, flax & wheat	0	1.3	1.2	.7	7.5	5.5	1.2	2.5	5.3	.6	6.8	5.3
Wheat & oats	2.9	1.2	4.2	.6	.4	.7	.4	.2	0	0	0	2.7
Oats & barley	4.3	0	.5	1.0	2.0	.5	0	0	0	0	0	0
Canning peas	1.5	0	0	0	0	0	0	0	0	0	0	0
Misc.	0	.1	.2	0	.8	.7	.4	0	0	1.1	0	.1
Total grain	30.2	24.6	37.3	21.4	66.4	63.7	13.4	24.2	20.7	15.2	54.5	62.7
Corn, grain	21.6	6.1	20.4	9.8	37.3	22.4	.9	1.3	1.9	1.6	2.9	4.9
Corn, silage	7.8	2.7	1.7	1.8	4.3	4.2	.1	1.6	0	.4	2.7	1.0
Corn, fodder	1.3	1.8	8.7	5.1	4.7	9.4	1.9	2.7	2.0	5.1	5.0	6.9
Sweet corn	4.6	.1	.3	.2	0	.1	0	0	0	0	0	0
Sugar beets	0	0	.9	0	0	0	0	0	0	0	0	0
Potatoes	1.7	1.1	.3	.5	.2	.6	1.3	1.2	1.2	.7	1.7	1.1
Misc.	.4	.7	.1	.4	.3	.2	.4	.6	.3	.2	1.3	.2
Total cult. crops	37.4	12.5	32.4	17.8	46.8	36.9	4.6	7.4	5.4	8.0	13.6	14.1
Alfalfa	13.3	1.7	1.5	2.8	4.0	3.7	5.0	4.9	3.7	.9	6.7	5.3
Red clover	2.0	2.8	1.3	2.3	2.2	.9	1.8	.1	1.3	.9	0	.9
Other leg. & mix.	3.0	0	1.6	1.7	3.1	2.8	6.9	4.2	3.6	3.4	2.6	2.3
Timothy	.3	0	1.2	2.9	1.1	1.5	9.3	5.0	2.0	2.4	2.3	3.9
Annual hay	3.9	8.3	3.3	5.5	2.3	5.5	5.0	3.3	6.8	12.0	10.5	10.2
Misc. hay & seed	.6	0	0	.1	1.0	.9	3.1	2.0	2.1	0	3.8	.6
Phalaris	0	0	.2	0	.8	.1	0	0	0	.5	0	0
Wild hay	.6	4.7	15.9	4.8	4.9	11.2	15.6	20.4	18.0	14.4	23.4	39.0
Total hay	23.7	17.5	25.0	20.1	19.4	26.6	46.7	39.9	37.5	34.5	49.3	62.2
Total crop A	91.3	54.6	94.7	59.3	132.6	127.2	64.7	71.5	63.6	57.7	117.4	139.0
Sw. clov. past.	6.3	2.2	.4	1.2	1.4	1.2	.1	.6	0	0	.9	1.6
Alfalfa past.	0	0	0	0	0	0	0	0	0	0	0	0
Red clov. or rape	.3	0	0	0	0	0	0	0	0	0	0	0
Misc. leg. past.	2.0	0	0	0	0	0	0	0	0	0	0	0
Other tillagle past.	2.2	.6	0	1.9	1.6	.5	.2	2.0	.6	1.9	3.1	3.2
Non-tillable past.	18.9	41.2	25.0	30.1	19.7	22.2	53.6	37.3	49.2	36.7	40.6	57.3
Total pasture	29.7	44.0	25.4	33.2	22.7	23.9	53.9	39.9	49.8	38.6	44.6	62.1
Til. land not cropped	4.1	2.8	3.3	1.2	5.9	7.5	.8	1.8	.8	1.3	4.4	10.5
Timber	4.0	3.4	3.5	.7	2.0	.4	22.4	9.8	9.6	11.6	12.9	15.2
Roads & waste	2.6	5.5	2.4	2.8	5.0	6.9	5.6	5.9	6.5	1.8	9.0	8.8
Farmstead	4.2	2.9	3.1	2.8	5.4	5.4	2.7	2.5	3.8	2.0	3.9	4.1
Total A. in farm	135.9	113.2	132.4	100.0	173.6	171.3	150.1	131.4	134.1	113.0	192.2	239.7
% in high ret. crops	39.5	27.4	27.0	26.3	29.2	24.2	37.0	31.0	22.0	18.0	20.0	13.0

Crop Yields (Averages of All Farms)

Yields of Crops per Acre	Southern Minnesota 48 Owner-operated farms	83 Cash leased farms	271 Cash Crop-share leased farms	Northern Minnesota 194 Owner-operated farms	92 Cash leased farms	171 Cash Crop-share leased farms
Winter wheat, bu.	6.9	10.1	10.6	-	-	5.3
Spring wheat, bu.	5.1	9.1	7.2	6.3	6.7	5.1
Oats, bu.	16.9	17.9	17.6	10.6	8.5	7.1
Barley, bu.	12.2	10.9	10.8	7.0	7.1	4.6
Rye, bu.	1.5	10.3	8.1	7.4	4.5	4.4
Flax, bu.	.6	2.9	3.0	4.8	2.5	1.9
Wheat and oats, bu.	13.0	14.4	9.2	17.0	-	7.2
Oats and barley, bu.	30.4	21.2	17.8	9.9	-	3.3
Corn, grain, bu.	14.7	19.0	13.2	22.5	13.7	6.3
Corn, silage, tons	4.0	3.7	3.4	1.7	1.0	2.3
Corn, fodder, tons	1.7	2.0	1.6	1.8	1.4	1.7
Potatoes, bu.	48.6	44.4	33.2	39.9	34.1	30.0
Alfalfa, tons	1.5	1.7	1.2	1.2	1.5	.9
Red clover, tons	1.7	1.1	1.0	1.2	.9	1.3
Clover and timothy, tons	1.0	.9	1.5	1.0	1.3	1.1
Timothy, tons	1.0	.8	.9	.9	1.4	.9
Wild hay, tons	Not computed because cases were so few.			1.2	1.0	.9
Annual hay, tons				1.3	.7	.6
Alfalfa seed, lbs				60.9	83.9	105.3
Clover seed, lbs.				124.7	-	127.5

Summary of Livestock

Number of horses	3.1	2.8	3.5	2.2	2.3	3.2
Number of colts	.3	.2	.3	.2	.2	.2
Number of cows	8.8	7.9	7.1	5.9	6.7	7.0
Head of other cattle	5.2	4.5	5.0	4.1	4.4	4.7
Litters of pigs raised	3.2	3.1	3.2	.5	.8	1.2
Pounds of hogs produced	3645	3917	3278	519	922	1012
Head of sheep (2 lambs equal 1head)	2.5	1.5	2.5	4.5	3.9	1.8
Number of hens	74.5	68.2	63.2	37.7	40.0	33.0
Total a. u. of productive livestock	13.5	13.0	12.6	9.5	10.7	10.8
% of total that are cows	61.3%	62.7%	57.8%	63.2%	64.0%	65.7%
% " " " " other cattle	18.4%	17.9%	19.8%	23.2%	21.7%	22.3%
% " " " " hogs	11.6%	12.0%	14.8%	4.0%	5.4%	6.7%
% " " " " sheep	1.7%	1.5%	2.3%	5.2%	4.0%	2.1%
% " " " " hens	7.0%	5.9%	5.3%	4.4%	4.9%	3.2%

Crop Yields (High & Low Profit Groups)

	Southern Minnesota						Northern Minnesota					
	Owner-operated		Cash leases		Cash, crop-share leases		Owner-operated		Cash leases		Cash, crop-share leases	
	10 mo. prof. farms	10 le. prof. farms	17 mo. prof. farms	17 le. prof. farms	54 mo. prof. farms	54 le. prof. farms	40 mo. prof. farms	40 le. prof. farms	18 mo. prof. farms	18 le. prof. farmsf	34 mo. prof. fams	34 le. prof. farms
Winter wheat, bu	-	7.2	23.3	1.6	13.1	14.0	-	-	-	-	3.7	9.1
Spring wheat, bu	-	3.8	10.1	9.8	11.3	5.9	10.0	7.3	8.5	7.9	6.2	4.4
Oats, bu	22.7	11.4	26.5	14.9	21.8	12.7	13.6	7.6	7.4	7.5	9.6	5.3
Barley, bu	14.1	12.7	14.8	6.9	14.6	8.4	8.2	5.1	11.6	5.2	6.4	4.1
Rye, bu	-	4.5	12.3	2.5	5.9	6.9	10.6	5.7	-	5.3	4.6	7.1
Flax, bu.	-	.4	5.3	4.2	4.4	1.2	2.3	9.2	2.0	6.0	2.3	1.6
Rye & oats, bu	12.2	2.7	9.0	24.2	12.0	4.6	28.1	15.0	-	-	-	9.5
Oats & barley, bu	38.7	-	13.0	-	17.0	27.6	-	-	-	-	-	-
Corn, grain, bu.	21.0	8.7	24.5	18.4	13.7	8.6	25.3	19.0	7.2	13.6	5.8	3.8
Corn, sil., bu.	4.6	3.0	4.3	2.5	3.2	1.2	5.0	1.0	-	.4	2.5	2.2
Corn fod., bu.	1.6	.6	1.8	1.1	1.6	.8	3.6	.8	1.1	.6	1.6	1.6
Potatoes, bu.	73.3	37.8	48.7	31.6	58.3	17.7	49.2	31.3	32.2	34.0	28.4	19.1
Alfalfa, tons	1.1	1.9	2.0	1.5	1.0	.8	1.1	1.0	1.5	1.2	1.1	.6
Red clov., tons	1.1	1.9	1.6	1.5	1.0	1.2	.9	2.0	.8	.5	-	1.6
Clov. & tim., tons	.7	-	.9	1.0	2.0	.5	1.8	.8	1.9	.8	.4	.3
Timothy, tons	1.0	-	1.0	.8	1.4	.2	.9	.8	1.2	.8	.6	.7
Wild hay, tons	Not computed because the cases were so few.						2.0	.7	1.1	.7	.9	.7
Annual hay, tons							2.5	.6	.9	.6	.4	.6
Alf. seed, lbs.							110.0	29.4	82.4	-	81.6	84.5
Clov. seed, lbs.							140.9	121.6	-	-	98.9	231.7

Summary of Livestock

No. of horses	3.8	3.2	3.3	2.7	3.9	3.8	2.1	2.3	2.4	2.5	3.1	3.9
No. of colts	.6	.2	.1	.2	.3	0	.2	.1	.4	.1	.2	.3
No. of cows	15.2	7.3	9.0	6.9	7.8	7.2	6.5	6.0	7.9	6.1	7.5	7.1
Hd. of o. cattle	9.2	4.7	4.7	4.1	5.8	5.7	5.5	3.9	5.9	3.8	5.3	5.1
Litters of pigs	6.7	3.6	4.8	2.8	4.5	3.0	.3	.7	1.1	.7	1.2	1.2
Lbs. of hogs prod.	9433	2700	9778	2361	4979	2479	496	637	1711	747	1304	846
Head of sheep	1.2	5.8	.3	.4	4.1	2.7	8.3	7.0	9.6	2.6	1.5	2.8
No. of hens	73.8	57.3	87.4	54.7	73.9	65.2	38.0	46.0	37.0	42.7	33.0	31.0
Tot. a. u. lvst.	20.6	12.1	15.2	11.1	14.9	13.2	11.0	10.1	13.8	9.6	11.8	11.2
% cows	63.6%	59.6%	60.9%	62.9%	54.2%	56.5%	58.6%	61.5%	59.2%	64.6%	65.3%	65.0%
% o. cattle	18.1%	18.4%	16.0%	18.9%	19.2%	21.8%	26.0%	20.5%	25.3%	21.3%	23.3%	22.3%
% hogs	14.1%	12.6%	17.1%	11.7%	18.0%	14.2%	3.3%	4.7%	5.5%	5.8%	7.0%	6.5%
% sheep	.4%	4.7%	.6%	.8%	3.3%	2.1%	8.4%	7.8%	7.1%	3.7%	1.6%	2.9%
% hens	3.8%	4.7%	5.4%	5.7%	5.3%	5.4%	3.7%	5.5%	2.9%	4.6%	2.8%	3.3%

An Analysis of Factors Related to Variations in Financial Progress among the Farmers

The Farm Security Administration intended that their farmer borrowers should gradually liquidate their debts. The first payments on the principal of the Rural Rehabilitation 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. Moreover, due to the drouth, some of the payments on the principal were carried as delinquent and a few were deferred by reamortization. In order to show financial progress or change in 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 of these ways is shown in Table 1.

Table 1

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.	1	(6) Increase in total liabilities; total assets remaining the same	0
(2) Increase in total assets; total liabilities remaining the same	6	(7) Decrease in total assets; total liabilities remaining the same	8
(3) Decrease in total liabilities and an increase in total assets	253	(8) Increase in total liabilities and a decrease in total assets	90
(4) Increase in total assets greater than increase in total liabilities	204	(9) Decrease in total assets greater than decrease in total liabilities	105
(5) Decrease in total liabilities greater than decrease in total assets	85	(10) Increase in total liabilities greater than increase in total assets	88

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 2. It is quite evident that both lower household and personal expenses and higher incomes are responsible for improvements in net worth among these farmers. However, much wider variations in changes in net worth are due to differences among farmers in net income than to variations among farmers in household and personal expenses.

* Net income is given as item 31 on pages 10 and 11. 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 (see Table 2).

** Household and personal expenses are given as item 21 on pages 10 and 11. 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 or payments on debts.

Table 2

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

Household and personal expense groups	Southern Minnesota						Northern Minnesota					
	Net Income Groups						Net Income Groups					
	$599 & less		$600 to $899		$900 & above		$599 & less		$600 to $899		$900 & above	
	No. of farms	Change in net worth	No. of farms	Change in net worth	No. of farms	Change in net worth	No. of farms	Change in net worth	No. of farms	Change in net worth	No. of farms	Change in net worth
$599 & less	54	$+ 5	36	$+268	35	$+14	59	$- 40	19	$+253	4	$+890
$600 to 699	38	-102	53	+ 68	56	488	87	-108	90	+137	31	+552
$700 & above	22	-141	27	- 35	80	384	27	-352	64	- 14	74	+331

Next, it is important to analyze possible relationships to the variations among farms in net income and in household and personal expenses. That the differences among farms in operator's labor earnings account for the greater part of the variations in changes in net worth is shown in Table 3. Some of the differences are accounted for by variations in the estimated total wages allowed for the unpaid family labor, other than the operator. These wages are figured at a conservative rate approximately equivalent to hired man's wages.

Table 3

Distribution of Net Income into Various Constituent Elements

Net income groups	Southern Minnesota						Northern Minnesota					
		Averages						Averages				
	No. of farms	Net income	Oper. labor earnings	Unpaid family lab. & int. on equity	House-hold & pers. rec.	Grants and relief	No. of farms	Net income	Oper. labor earnings	Unpaid family lab. & int. on equity	House-hold & pers. rec.	Grants and relief
$599 & less	113	$328	$126	$136	$ 7	$ 59	176	$ 383	$ 44	$261	$ 18	$ 60
$600 to 899	116	748	438	237	29	44	173	737	371	248	34	84
$900 & above	171	1361	899	352	63	47	107	1231	694	376	95	66

Household and personal receipts such as income from outside investments, sales of old furniture and clothes, soldiers' bonuses, old age pensions, and widows' and mothers' pensions accounted for a minor part of the variations in net income. Total grants and relief was approximately the same for the different net income groups. Less relief should be needed in families with the higher net incomes; but, on the other hand, there were more persons in the families in these higher "net income" groups, as shown in Table 4. In fact, the data in this table show that grants and relief per adult equivalent tended slightly downward as net income increased, which is a creditable showing in view of the fact that it is difficult to determine what the actual net incomes would be until account books are closed at the end of the year. It is also to be noted in Table 5, in which the farms are sorted on the basis of operator's labor earnings, that the grants and relief show a decided downward trend as the operator's labor earnings go up.

Table 4

Relationship of Net Income to Size of Families and Amount of Grants and Relief

Net income groups	Southern Minnesota				Northern Minnesota			
	No. of adult equivalents* in family	Net income per adult equiv.	Grants and relief per adult equiv.	Household & pers. exp. per adult equiv.	No. of adult equivalents in family	Net income per adult equiv.	Grants & relief per adult equiv.	Household & pers. exp. per adult equiv.
[illegible]19 & less	3.1	$106	$ 19	$204	3.0	$128	$ 20	$176
[illegible]0 to 899	3.6	208	12	191	3.5	211	24	181
[illegible]0 & above	3.7	368	13	221	4.2	293	16	183

* Adult equivalents based on food requirements are figured as follows:

	Adult equivalents per person
Men	1.0
Women	.8
Boys, 13 to 18 years of age	.9
Girls, 13 to 18 years of age	.8
Children, 7 to 12 years of age	.6
Children, under 7 years of age	.4

Table 5

Relationship of Operator's Labor Earnings to Changes in Net Worth, Net Income, Household and Personal Expenses, Amount of Grants and Relief, and Size of Family

Operator's labor earnings groups	No. of farms	Averages: Operator's labor earnings	Change in net worth	Net income	Int. on net farm capital	Unpaid family labor	Household & pers. rec.	Grants and relief	Household pers. exp.	No. of adult equiv. in fam.
Southern Minnesota										
$-1 & less	50	$-310	$-188	$ 372	$ 42	$499	$ 87	$ 54	$560	4.0
0 to 499	141	286	61	588	33	179	30	60	527	2.9
500 to 999	145	714	410	971	30	158	31	38	561	3.1
1000 to 1499	50	1191	807	1433	50	105	54	33	626	2.4
1500 & above	15	2234	1905	2632	187	181	25	5	727	2.8
Northern Minnesota										
$-501 & less	16	$-820	$-580	$ 20	$63	$677	$ 1	$ 99	$600	4.5
- 1 to -500	71	-175	-132	482	60	453	62	82	614	3.7
0 to 499	216	273	+ 26	593	38	164	46	72	567	3.1
500 to 999	130	661	+245	890	32	108	28	61	645	3.2
1000 & above	22	1279	+905	1596	43	152	60	62	691	3.8

The significance of the residual returns to the operator as an indication of increasing ability to pay on debts is brought out again when the farms are sorted on the basis of operator's labor earnings (Table 5). There is a very high correlation between these earnings and net income, in spite of the fact that the contributions of other members of the family to net income was higher as the residual allowance to the operator decreased. As will be discussed later, one of the factors contributing to low earnings is a lack of sufficient productive work for the laber available in the farmer's family. In Table 5 is shown an inverse relationship between number of adult equivalents in the family and operator's labor earnings.

Although the household and personal expense increases some with higher earnings, it would show a more pronounced increase if shown on the per-adult-equivalent basis, on account of the smaller families in the upper brackets of earnings. But net income shows a much greater increase than the living expense. Hence, there remains a very high correlation between operator's labor earnings and change in net worth. This fact prompts the next section, which is an analysis of the reasons for the wide variations in operator's labor earnings among the farms.

An Analysis of Factors Related to Variations in Operator's Labor Earnings among Farms

For many years farm accounts kept by farmers in various parts of Minnesota have shown that certain factors of organization and efficiency have been closely related to operator's labor earnings. In the following analysis, the farms are located in wide areas of quite diverse characteristics; yet it is significant that most of the factors used in this analysis show quite marked relationships to earnings. Inasmuch as some of the factors are somewhat interrelated, all of the relationship with earnings may not be due to the particular factor in question. However, in other studies, these factors have shown some independent relationships when subgrouped. The eight factors used in this analysis are as follows:

Table 6

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

Southern Minnesota				Northern Minnesota			
Pounds B.F. per cow		No. of farms	Average operator's labor earnings	Pounds B.F. per cow		No. of farms	Average operator's labor earnings
Group	Average			Group	Average		
124 and less	100	83	$ 355	124 and less	103	85	$ 125
125 to 199	161	201	527	125 to 199	163	241	355
200 and above	243	117	705	200 and above	240	128	400

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 7

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

Southern Minnesota				Northern Minnesota			
Returns per animal unit of prod. livestock other than cows		No. of farms	Average operator's labor earnings	Returns per animal unit of prod. livestock other than cows		No. of farms	Average operator's labor earnings
Group	Average			Group	Average		
$69 and less	$ 48	105	$ 309	$49 and less	$ 35	125	$ 234
70 to 139	103	197	576	50 to 109	74	230	352
140 and above	195	99	727	110 and above	163	100	373

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 accompanies greater profits from the livestock. This means another addition to the farmer's earnings.

Table 8

Relation of Amount of Productive Livestock to Operator's Labor Earnings

Southern Minnesota				Northern Minnesota			
Productive livestock animal units per 100 acres		No. of farms	Average operator's labor earnings	Productive livestock animal units per 100 acres		No. of farms	Average operator's labor earnings
Group	Average			Group	Average		
6.9 and less	5.3	106	$ 523	5.9 and less	4.0	128	$ 299
7.0 to 12.9	9.7	196	526	6.0 to 9.9	7.7	180	312
13.0 and above	17.6	99	599	10.0 and above	14.0	147	362

An increased amount of livestock adds to size of business and the opportunity to increase the farm earnings. It helps to provide productive employment throughout the year; it produces manure and aids in keeping up the fertility of the land; and it utilizes waste products on the farm. Any method that aids in utilizing the available resources to full and efficient capacity should add to the farm income. On some farms, the returns from livestock are so low that they do not cover feed and other costs. Such livestock is unprofitable, especially if there is more than enough to utilize what would otherwise be waste feed. The losses are even more serious when there is so much of this low producing livestock that it is necessary to buy considerable feed at high retail prices. On the other hand, if the livestock is yielding a net return, an increased amount of such livestock should add to the farm earnings.

Table 9

Relation of Crop Yields to Operator's Labor Earnings

Southern Minnesota				Northern Minnesota			
Per cent crop yields were of the average of all the 401 farms		No. of farms	Average operator's labor earnings	Per cent crop yields were of the average of all the 455 farms		No. of farms	Average operator's labor earnings
Group	Average			Group	Average		
44% and less	28	74	$ 241	49% and less	24	106	$ 289
45% to 139%	91	239	499	50% to 149%	93	253	331
140% and above	185	88	917	150% and above	251	96	412

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 10

Relation of Choice of Crops to Operator's Labor Earnings

Southern Minnesota				Northern Minnesota			
Per cent tillable land in high return crops (see pages 14 and 16)		No. of farms	Average operator's labor earnings	Per cent tillable land in high return crops (see page 14)		No. of farms	Average operator's labor earnings
Group	Average			Group	Average		
19.9% and less	14.8	107	$ 438	0	0	138	$ 291
20.0% to 39.9%	29.3	236	578	1% to 39%	18	191	337
40.0% and above	47.9	58	647	40% and above	61	125	343

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 in Table 10 - ~~Page 25~~.

Table 11

Relation of Size of Business to Operator's Labor Earnings

Southern Minnesota				Northern Minnesota			
Days of productive work		No. of farms	Average operator's labor earnings	Days of productive work		No. of farms	Average operator's labor earnings
Group	Average			Group	Average		
249 and less	203	93	$ 444	229 and less	185	121	$ 233
250 to 399	320	220	508	230 to 349	287	213	326
400 and above	502	88	738	350 and above	463	121	413

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 12

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

Southern Minnesota				Northern Minnesota			
Days of productive work per worker		No. of farms	Average operator's labor earnings	Days of productive work per worker		No. of farms	Average operator's labor earnings
Group	Average			Group	Average		
179 and less	126	111	$ 140	169 and less	131	128	$ 73
180 to 279	242	186	630	170 to 269	219	210	377
280 and above	339	104	818	270 and above	334	117	505

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 13

Relation of Power and Equipment Expense to Operator's Labor Earnings

Southern Minnesota				Northern Minnesota			
Power and equipment expense per day of productive work		No. of farms	Average operator's labor earnings	Power and equipment expense per day of productive work		No. of farms	Average operator's labor earnings
Group	Average			Group	Average		
$.80 and above	$1.32	120	$ 477	$1.00 and above	$1.29	72	$ 142
.40 to $.79	.60	155	557	.40 to $.99	.66	278	336
.39 and less	.25	126	591	.39 and less	.26	103	418

It can not be said that all farmers would earn more by cutting power and equipment 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 extra help. 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 14

Relation of Farmer's Standing in Eight Factors Discussed in Tables 6 to 13 to Operator's Labor Earnings

Southern Minnesota			Northern Minnesota		
No. of factors in which farmer is above the average for the farms of this section	No. of farms	Average operator's labor earnings	No. of factors in which farmer is above the average for the farms of this section	No. of farms	Average operator's labor earnings
1 or none	32	$117	1 or none	41	$112
2	62	265	2	82	172
3	100	461	3	106	210
4	108	527	4	98	357
5	65	764	5	78	490
6	24	958	6	44	649
7 or 8	10	2201	7 or 8	6	805

The data in Table 14 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.

Differences in Earnings and Financial Progress
Miscellaneous Groupings

Table 15

Relationship of Type-of-Farming Areas to Operator's Labor Earnings, Change in Net Worth, and Related Factors (See Page 12)

Type-of-farming area (see map 1)	No. of farms	Averages										
		Oper. labor earnings	Change in net worth	Lbs. B.F. per cow	Returns per ani. unit of other prod. livest.	Ani.u. of prod. livest. per 100 A.	Index of crop yield*	Index of choice of crops	Size of business**	Days of prod. work per worker	Power & eq. exp. per bus. unit	No. of adult equiv. in family
1	131	$620	$+306	178	$119	10.5	97	22	312	215	$.64	3.1
2	113	556	+159	175	95	12.0	97	25	295	213	.65	3.2
3	58	573	+266	153	112	8.0	104	27	396	269	.58	3.2
4	93	409	+106	164	99	7.2	82	19	351	253	.72	2.8
9	7	451	+118	210	81	24.7	81	43	246	160	.81	2.7
5	69	374	+109	175	90	11.0	126	22	291	212	.64	3.1
6	146	287	+ 83	165	88	8.1	88	17	332	232	.59	3.5
7	48	216	- 10	160	66	5.1	83	9	409	297	.64	3.4
8	193	363	+108	180	72	8.0	108	34	255	190	.62	3.3

* Indexes for areas 1, 2, 3, 4 and 9 are shown as percentages of the average yields for southern Minnesota; indexes for areas 5, 6, 7 and 8 are shown as percentages of the average yields for northern Minnesota. A comparison of the average yields of these two parts of the state is shown on page 16.

** Given as days of productive work.

That there are some variations in operator's labor earnings and in the farmer's financial progress among the type-of-farming areas in the state is shown in Table 15. Differences in Physical and economical characteristics among these areas account for the variations. Moreover, in 1936, most of areas 1 and 2 in the southeastern part of the state did not suffer as severely from the drouth as the remainder of the state.

None of the type-of-farming areas rank outstandingly high or low in all of the eight factors of size, quality and organization mentioned in Tables 6 to 13. Each area is high in one or two, approximately average in others, and low in at least one. The net result of these differences is that while some areas have higher earnings than others, there is not as much difference in earnings between areas as there is variation among farms within each area. The southern part of the state appeared to have an advantage over the northern part.

Table 16

Relationship of Form of Tenure to Operator's Labor Earnings, Change in Net Worth, and Some Related Factors

Type-of-farming area*	form of tenure**	No. of farms	Averages: Oper. labor earnings	Chg. in net worth	Lbs. B.F. per cow	Ret. per A.U. of other prod. lvst.	An.u. prod. lvst. per 100 A.	Index of crop ylds.	Index of choice of crops	Size of bus.	Days of prod. work per worker	No. of adult equiv. in fam.	Household & per. exp.	Age of operator	Oper. years in school
	(O.)	14	$752	$+410	200	$166	14.4	99	29	369	196	3.7	$671	36	7.7
	(C.)	46	519	+369	195	111	11.8	74	22	308	213	2.7	521	33	7.9
	(C.S.)	71	644	+244	170	116	8.9	86	20	304	220	3.3	529	33	8.0
2	(O.)	21	372	+ 67	155	109	14.7	80	29	295	201	4.0	662	40	7.2
	(C.)	28	890	+380	200	110	13.6	116	26	303	210	3.1	555	33	7.6
	(C.S.)	64	424	+102	170	83	10.3	69	23	292	218	2.9	513	31	7.3
5	(O.)	23	317	+129	170	97	8.9	116	29	266	196	2.9	583	36	7.2
	(C.)	21	398	+102	185	80	13.9	122	19	288	214	3.0	648	38	8.0
	(C.S.)	25	406	+ 98	165	92	10.6	138	18	316	226	3.3	620	36	7.6
6	(O.)	42	44	- 75	150	86	7.9	81	23	314	207	3.6	593	33	6.8
	(C.)	32	387	+156	170	93	9.6	108	16	275	212	3.3	559	32	5.9
	(C.S.)	72	384	+144	170	87	7.5	84	14	367	256	3.5	585	34	6.8
8	(O.)	119	322	+ 94	190	74	8.2	106	39	239	177	3.2	617	37	6.8
	(C.)	35	435	+110	180	71	9.4	88	23	278	201	3.3	626	39	6.5
	(C.S.)	39	424	+148	170	65	6.3	129	33	282	219	3.4	569	41	6.9

* Areas 3, 4, 7 and 9 did not have sufficient farms in some of the groups to warrant classification.

** (O.) includes owned and part owned farms; (C.) includes rented farms with cash leases; (C.S.) includes rented farms with crop share and cash leases.

Owner operated farms tended to be grouped more heavily in certain type-of-farming areas and rented farms in others. Hence, to study the effect of form of tenure on earnings and financial progress the form of tenure groups are shown in Table 16 as subgroups of the type of farming areas. In the southern part of the state, there appears to be a slight tendency for the owner operators to be older men, with less schooling, larger families, and larger total household and personal expenditures. But there does not seem to be any such relationship in northern Minnesota. Nor is there any consistent correlation between form of tenure and earnings or financial progress in the type of farming areas shown in Table 16. Choice of high return crops is highest on the owner farms in each of these areas, but no one tenure group has a monopoly on high standing in any of the other factors of size, organization and management efficiency.

Table 17

Relationship of Age of Operator to Operator's Labor Earnings, Change in Net Worth and Related Factors

Range in age of oper.	Southern Minnesota								Northern Minnesota							
		Averages								Averages						
	No. of farms	Age of prop.	Oper. labor earnings	Net income	Chg. in net worth	No. in family persons	No. in family adult equiv.	Oper. years in school	No. of farms	Age of prop.	Oper. labor earnings	Net income	Chg. in net worth	No. in family Persons	No. in family adult equiv.	Oper. years in school
30-39	91	25	$738	$912	$+332	3.4	1.9	8.0	27	25	$427	$690	$178	3.4	2.4	7.0
40-49	149	35	546	748	+177	4.7	2.8	7.6	173	35	343	641	51	4.4	2.9	7.5
50-59	100	45	432	912	+184	5.4	4.0	7.6	133	45	418	803	187	5.2	3.6	7.1
60 & above	61	56	429	912	+196	5.2	3.8	7.5	103	53	189	737	46	5.0	4.0	6.6

The data in Table 17 show that the older operators had lower earnings, particularly in southern Minnesota. They had larger families for which they did not have sufficient productive labor. The net income was as large in those groups in which the children were old enough to help with the little productive work that was available as it was for the youngest operators. However, this contribution to net income was needed to support these members of the family and was not available for additions to net worth. The second group, with ages of operators averaging about 35, had the greatest disadvantage. The children were not as old and contributed less to net income.

Table 18

Relationship of Years Operator in School to Operator's Labor Earnings, Change in Net Worth, and Related Factors

Range in years operator in school	Southern Minnesota								Northern Minnesota							
		Averages								Averages						
	No. of farms	Operator years in school	Labor earnings	Net income	Chg. in net worth	No. in family persons	No. in family Adult equiv.	Age of operator	No. of farms	Operator years in school	Labor earnings	Net income	Chg. in net worth	No. in family persons	No. in family adult equiv.	Age of operator
3 & 4	10	3.6	$201	$625	$-133	5.6	3.5	35	35	2.9	$74	$665	$-47	5.5	4.1	38
5 & 6	29	4.6	279	783	0	5.7	3.9	38	44	5.7	375	803	+113	5.3	3.7	38
7 & 8	292	7.7	575	870	+256	4.7	3.[illegible]	[illegible]	275	7.[illegible]	326	713	- 92	4.6	3.5	34
9 & above	70	9.0	564	870	+173	4.3	2.7	31	73	9.[illegible]	438	713	$153	4.4	3.[illegible]	35

As shown in Table 18, there is some correlation of years operator in school earnings and financial progress. The relationship is more pronounced in southern Minnesota. It is, at least, partly due to the fact that those operators with less years in school were older, had larger families, and did not have enough productive work for these larger families. There may be, however, a slight net relationship between years in school and earnings.

Classification of Household and Personal Expenses

Higher net incomes permit greater outlays for household and personal purposes; larger families tend to necessitate larger outlays. There is also another difference in these relationships. The data in Table 19 show that

Table 19

Relation of Net Income and Size of Family to Total Household and Personal Expense per Family and per Adult Equivalent

	Net Income								
	$599 and less			$600 to $899			$900 and above		
No. of adult equivalent members of family	No. of farms	Average household and pers. expense: Per family	Average household and pers. expense: Per adult equiv.	No. of farms	Average household and pers. expense: Per family	Average household and pers. expense: Per adult equiv.	No. of farms	Average household and pers. expense: Per family	Average household and pers. expense: Per adult equiv.
Southern Minnesota									
2.9 & less	60	$422	$248	45	$440	$259	77	$540	$318
3.0 to 4.9	42	521	158	47	566	166	53	671	197
5.0 & above	12	633	117	24	717	118	41	751	125
Northern Minnesota									
2.9 & less	79	471	262	48	546	303	24	638	336
3.0 to 4.9	75	529	160	109	616	187	33	721	190
5.0 & above	19	632	115	30	763	129	38	800	138

household and personal expenses per adult equivalent tend upward as net incomes increase, but they tend downward as the size of family increases. Certain overhead items of shelter and operation are utilized more fully by the larger families. It is quite evident, however, that the expenditures for household and personal purposes per adult equivalent tends to decline as the size of families increase. With the increase in size of family, the opportunities for increased revenue from productive employment does not tend to increase as rapidly as the cost of living. This is demonstrated again in Table 21, in which the household and personal expenses and receipts and various miscellaneous items are classified on the basis of net income and the following types of family membership:

Type I Husband and wife only (two in family).

Type II Husband, wife, one or two children under 16 and no others (three or four in family).

Type III Husband, wife, one child over 16, one child under 16, and two or less other persons regardless of ages (four to six in family).

Type IV All other classes.

The number of families falling into the various type of family and net income groups is shown in Table 20. The number of cases is too small in the type III and in one of the type I groups to show significant averages; hence, the averages for these groups are omitted from Table 21.

Table 20

Number of Cases in Each Family Group and Net Income Group

Type of family group	Southern Minnesota					Northern Minnesota					Entire state
	I	II	III	IV	Totals	I	II	III	IV	Totals	
$599 and less	20	40	6	47	113	21	64	11	80	176	289
$600 to 899	12	34	7	63	116	19	47	5	102	173	289
$900 and above	22	46	13	90	171	5	23	5	74	107	278
Totals	54	120	26	200	400	45	134	21	256	456	856
Totals, entire state	99	254	47	456							

Table 21

Household and Personal Expenses and Receipts and Miscellaneous Items classified on the Basis of Type of family and Net Income groups.

Southern Minnesota

	Net Income Groups								
	$359 & less			$600 to $899			$900 & Above		
Type of Family Group	I	II	IV	I	II	IV	I	II	IV
No. of persons in family	2.0	3.5	6.1	2.0	3.4	6.5	2.0	3.4	6.8
Ad. equiv. per. in fam.	1.8	2.5	4.3	1.8	2.5	4.6	1.8	2.5	4.9
No. of other per. in fam.	.1	.2	.1	0	.2	.2	.2	.2	.3
Ad. eq. other per. in fam.	.1	.2	.1	0	.2	.2	.2	.2	.3
Food	$ 114	$ 161	$212	$ 148	$ 179	$ 213	$ 170	$ 182	$ 250
Operating & supplies	29	45	35	27	34	41	50	46	46
Furnishings & equip.	19	22	19	20	28	25	65	36	36
Clothing & materials	32	54	74	40	49	76	45	61	97
Health	14	20	27	8	17	20	19	20	32
Devel. & recreation	13	13	14	17	12	14	22	19	28
Personal	8	14	11	9	14	14	22	13	21
Per. share of auto exp.	19	25	21	32	22	19	29	29	32
Per. share of auto new	8	2	3	3	3	2	9	15	8
Housing expense	1	1	2	3	3	2	9	2	2
(16) Tot. house & pers. cash exp.	$ 257	$ 357	$418	$ 307	$ 361	$ 426	$ 440	$ 423	$ 552
Food fur. by farm (also an income)	119	154	190	120	161	225	134	190	235
Fuel fur. by farm (also an income)	14	19	20	28	22	25	17	32	24
Int. & deprec. on auto (pers. sh.)	8	9	2	5	3	4	4	3	4
Int. & deprec. on house or rent. val.	85	82	74	100	78	87	138	115	107
(17) T. house & per. non-cash exp.	$ 226	$ 264	$286	$ 253	$ 264	$ 341	$ 293	$ 340	$ 370
(18) Tot. house & per. exp. (16)+(17)	$ 483	$ 621	$704	$ 560	$ 625	$ 767	$ 733	$ 763	$ 922
(26) T.h. & p. exp. minus board h. lab.	472	601	692	559	604	758	702	739	901
Life insur. & savings	11	11	5	6	7	10	28	12	17
New Housing	0	0	0	0	0	0	0	0	0
Pay. on notes & bills	7	21	11	15	10	15	25	19	25
(19) Tot. other house & per. cash exp.	18	32	16	21	17	25	53	31	42
Grand tot. cash exp.	$1512	$1415	$1370	$1222	$1418	$1542	$2259	$1724	$1963
Grand tot. all exp.	1822	1870	1865	1534	1698	1978	2549	2084	2377
Grants, relief, sur. commod.	16	50	63	27	29	56	18	30	64
Soln. bonus, old age assist., pensions	0	14	20	0	8	12	34	23	44
Misc. income, sales, gifts	9	1	5	9	10	4	24	16	32
Money borrowed	13	13	10	14	12	18	25	12	26
Tot. house & per. cash rec.	$ 38	$ 78	$ 98	$ 50	$ 59	$ 90	$ 101	$ 81	$ 166
Grand total cash rec.	$1298	$1215	$1213	$1228	$1347	$1469	$2310	$1756	$1994
Grand total all income	1695	1569	1543	1697	1812	1960	3304	2617	2802
Net cash receipts	$ 69	$ 185	$ 272	$ 335	$ 307	$ 377	$ 540	$ 529	$ 619
Net income	206	299	381	723	730	733	1476	1294	1344
Age of operator (yrs.)	31	29	37	31	30	37	30	27	38
Years operator in school	7.9	8.0	7.3	7.8	7.7	7.5	8.0	7.9	7.6
Purchased food per adult equiv.	$ 60	$ 60	$ 48	$ 82	$ 66	$ 44	$ 85	$ 67	$ 48
Farm raised food per ad. eq.	63	57	43	67	60	47	67	70	45
Total food per ad. eq.	123	117	91	149	126	91	152	138	93
H. & pers. cash exp. per ad. eq. in fam.)	143	143	97	171	144	93	244	169	113

Table 21 (Continued) Northern Minnesota.

Type of family groups:	Net Income groups: $[illegible] & less I	II	IV	[illegible] to [illegible] II	III	IV	$900 & above II	IV
No. of persons in family	2.0	3.0	5.0	2.0	3.0	6.0	3.0	7.0
Ad. equiv. per. in fam.	1.8	2.4	3.9	1.8	2.5	4.4	2.5	5.0
No. of other per. in fam.	0	0	.1	.1	0	.1	.1	.2
Ad. eq. other per. in fam.	0	0	.1	.1	0	.1	.1	.2
Food	$ 120	$ 152	$ 179	$ 144	$ 166	$ 208	$ 170	$ 230
Operating & supplies	21	20	18	25	24	19	30	29
Furnishings & equip	20	19	17	26	22	21	40	27
Clothing & materials	33	44	54	43	51	66	52	89
Health	7	21	20	23	23	16	27	19
Devel. & recreation	13	12	8	15	16	15	23	25
Personal	9	15	10	17	17	14	14	17
Per. share of auto exp.	21	14	12	15	20	16	16	22
Per. share of auto new	3	3	1	3	3	3	2	6
Housing exp.	1	2	1	1	2	3	4	9
(16) Tot. house. & per. cash exp.	$ 248	$ 302	$ 320	$ 312	$ 344	$ 381	$ 378	$ 473
Food fur. by farm (also an income)	$ 118	$ 134	$ 180	$ 146	$ 165	$ 211	$ 164	$ 253
Fuel fur. by farm (also an income)	28	28	31	32	28	32	38	37
Int. & deprec. on auto (pers. sh.)	1	1	1	2	2	1	2	2
Int. & deprec. on house or rents. val.)	48	51	50	72	57	47	68	62
(17) T. house & pers. non-cash exp.	$ 195	$ 214	$ 262	$ 252	$ 252	$ 291	$ 272	$ 354
(18) Tot. house & per. exp. (16)+(17)	$ 443	$ 516	$ 582	$ 564	$ 596	$ 672	$ 650	$ 827
(26) T. h. & p. exp. minus bd h. labor	439	504	572	546	586	669	640	818
Life insur. & savings	3	5	3	8	5	3	13	7
New Housing	0	0	0	25	0	1	0	6
Pay. on notes & bills	20	14	24	12	17	14	47	36
(19) Tot. other house. & per. cash exp.	23	19	27	45	22	18	60	49
Grand tot. cash exp.	$ 991	$ 997	$ 978	$1116	$1068	$1038	$1578	$1444
Grand tot. all exp.	1253	1330	1390	1414	1350	1375	1850	1823
Grants, relief, sur. commod.	37	52	74	79	61	96	36	78
Sol. bonus, old age assist, pensions	0	3	3	21	13	15	48	30
Misc. income, sales, gifts	6	10	10	3	15	16	45	21
Money borrowed	5	3	9	7	4	8	26	19
Tot. house & per. cash rec.	$ 48	$ 68	$ 96	$ 110	$ 93	$ 135	$ 155	$ 148
Grand total cash rec.	$ 837	$ 879	$ 867	$1159	$1050	$1016	$1515	$1461
Grand total all income	1190	1158	1185	1564	1471	1430	2345	2193
Net cash receipts	$ 116	$ 204	$ 236	$ 401	$ 347	$ 377	$ 375	$ 539
Net income	394	363	379	734	725	734	1170	1232
Age of operator	334	31	38	37	29	38	33	42
Yrs. operator in school	6.8	7.3	6.6	5.7	7.3	6.6	8.3	6.9
Purchased food per adult equiv.	$ 67	$ 63	$ 45	$ 76	$ 66	$ 46	$ 65	$ 44
Farm raised food per ad. eq.	66	56	45	77	66	47	63	49
Total food per ad. eq.	133	119	90	153	132	93	176	93
H. & per. cash exp. per ad. eq. in fam.)	$ 138	126	80	173	138	87	151	95

Summary

It has been shown in this report that variations in financial progress among the farmer-borrowers of the Rural Rehabilitation Division of the Farm Security Administration are due primarily to variations in net incomes; and secondarily to differences in household and personal expenses. Furthermore, the data show that differences in net income among the farmers is a result of variations in its constituent elements: (1) operator's labor earnings, (2) charges for the farmer's unpaid family labor and of his net farm capital, (3) household and personal receipts. Variations in operator's labor earnings are the outstanding cause of the differences in financial progress, because there is a wide dispersion of these earnings, and hence of net income and financial progress. As shown in Table 22, a range of $1,000 in household and personal expenses, centering approximately at the mode, includes 99 per cent of the farms, while a similar range in operator's labor earnings includes only 82 per cent of the farms, respectively. In respect to household and personal expenses, 28 per cent of the farms fall outside of the four-hundred-dollar range, while 55 per cent of the farms fall outside this range in respect to operator's labor earnings. For the six-hundred-dollar range, the figures are 10 per cent and 40 per cent, respectively. Moreover, the dispersion of the 18 per cent of the earnings outside of the one-thousand-dollar range is very wide.

Table 22

Dispersion of Change in Net Worth, Net Income, Earnings, and Household and Personal Expenses among Farms

Extent of range centering approximately on mode*	Per cent of total farms in each group (whole state)			
	Change in net worth	Net income	Operator's labor earnings	Household and personal expense
$200	35.8%	29.4%	22.9%	43.7%
400	60.2	51.1	45.1	72.0
600	74.5	67.2	59.9	89.6
800	84.1	78.0	72.2	96.7
1000	89.2	86.4	81.7	98.7

* The mode is the point of greatest frequency.

Another striking point brought out in the analysis is that the variations in operator's labor earnings are due largely to factors somewhat under the operator's control. There are some variations between areas in the state in crop yields, kind of crops grown, amount of livestock, feeding efficiency, labor efficiency, etc. But these differences between areas are much smaller than the wide variations among farms within each type of farming area.

Table 23

Some Comparisons between Several Groups of Farms Included in this Report and a Group of Well Managed Farms in the Same Section of the State

	Averages for farmer-borrowers of Farm Security Administration (owner-operated farms), 1936				Averages for farms in south-eastern Minnesota obtaining farm management service from the Univ. of Minn., 1936*		
	Type-of-farming areas nos. 1&2, 35 farms	Southern Minnesota 48 farms	Southern Minnesota 10 high earnings farms	Southern Minnesota 10 low earnings farms	152 farms	30 high earnings farms	30 low earnings farms
Cash farm receipts less cash farm expenses	$510	$431	$1041	$204	$2716	$4815	$989
Unpaid family labor	259	263	202	537	247	349	212
Operator's labor earnings	524	480	1528	-314	2914	5500	1042
No. of persons in family	5.0	5.3	3.9	7.0	4.2	4.1	4.2
Adult equivalent menbers in family**	3.9	4.1	3.2	5.5	3.3	3.5	3.2
Adult equivalent other persons in house**	-	-	--	-	.8	1.3	.4
Potatoes, vegetables and fruit furnished by farm	(Not computed)	$ 48	$ 50	$ 41	$ 51	$ 70	$ 37
All food and fuel furnished by the farm	$234	224	192	226	299	374	237
Total house. & personal cash expenses** (other than savings)	390	454	533	524	905	1290	624
Returns per a.u. (pr. lvst. other than cows)	$132	$124	$152	$ 89	(not computed on same basis		
Pounds butterfat per cow	173	192	211	157	243	253	223
Prod. livest. units per 100 A.	14.6	15.5	18.6	14.7	20.1	20.3	20.6
Yield of corn, bu.	11.6	10.8	21.6	6.1	34.4	38.4	30.8
Index of choice of crops	29.0	34.5	39.5	27.4	41.7	44.4	41.5
Days of productive work	325	333	534	298	763	1137	531
Days of prod. work per worker	199	192	244	140	341	368	291
Power and equip. exp. per day of work	$1.00	$1.02	$1.01	$1.21	(not computed on same basis)		

* The data are taken from Mimeographed Report No. 83, Division of Agricultural Economics, University Farm, St. Paul, Minnesota. The farmers receiving this service pay for part of the cost of the service. Some of these farmers have been getting the service for ten years (1928 to 1937, inclusive). The 152 farms are located in nine counties in type-of-farming areas No. 1 and No. 2.

** Only two-thirds of the farm-management-service farms kept household and personal records.

Moreover, it should be mentioned here that there are wide variations between the average earnings and related farm management factors for this group of farms and the corresponding averages for other farms in the same areas (see Table 23). A group of farmers in nine counties in type-of-farming areas No. 1 and No. 2, southeastern Minnesota, have been paying part of the cost of obtaining a farm management service offered by the University of Minnesota. As a rule, only the farm operators who are above the average in ability to manage farms are willing to keep farm accounts and pay for the service. The data from these farms are computed on the vasis of owner-operation. Hence, for comparison in Table 23 the owner-operated farms of southern Minnesota securing loans from the Farm Security Administration were chosen. Seventy-three per cent of these 48 farms were located in type-of-farming areas No. 1 and No. 2.

The averages for the seventy-three per cent (35 farms) in areas No. 1 and No. 2 are also presented in the table in order to show averages as nearly comparable as possible to those of the "farm management service" group. High and low profit group averages were not computed for these 35 farms. However, the table shows that there were not wide differences between the averages for the 35 farms in areas No. 1 and No. 2 and those for all of the 48 farms in southern Minnesota. Six farms in area No. 9 about the Twin Cities made the average butterfat production per cow and index of choice of crops higher for the 48 farms in southern Minnesota than for the portion of these farms lying only in areas No. 1 and No. 2. The returns to livestock other than cows were higher on the farms in areas No. 1 and No. 2 than for the other three areas in southern Minnesota. Earnings were only slightly higher for the areas No. 1 and No. 2 than for all of the 48 farms in southern Minnesota; hence, the latter can be used for comparison with the farm-management-service group.

The comparisons shown in Table 23 are not made for the purpose of emphasizing particularly the lower earnings and poorer management of the farmers getting loans from the Farm Security Administration, but rather to indicate the possibilities for improvement. They serve to emphasize at least three important facts.

1. There is not much opportunity for the low-earning farmers to make more of their income available for paying off debts and increasing net worth by cutting cash outlays for household and personal purposes. Their expenditures are already far below those for groups with higher earnings in the same areas. Although the total cash expense per family was practically as high for the ten low-earning borrowers as for the ten high-earning borrowers, the former had larger families and hence had much less to spend per person. It is doubtful if their expenses could be lowered to any great extent; certainly, it would be more desirable if these families had larger incomes and therefore more available for household and personal expenditures.

2. The higher earning groups used considerably more farm raised food and fuel per adult equivalent than the low earning groups. However, if the latter groups consumed more livestock and livestock products rather than selling them, there would be less income for purchasing other items of expense in the family budget. The extent to which home produced and processed food is more or less economical than purchased food or can take the place of the latter can not be shown in the present analysis. On the other hand in Table 23 it is shown that the high earning groups consumed slightly more farm raised fruit, potatoes and

other vegetables per family. It appears that there is opportunity to increase the family income by enlarging the farm gardens, especially in view of the fact that there is a shortage of productive work available on these low earning farms.

3. The outstanding lesson to be gained from Table 23 and this whole report in general is the fact that there are wide differences in earnings and the related farm management factors among the farms borrowing from the Farm Security Administration, and between this group and the better managed farms in the same area. THE MOST HOPEFUL PROSPECT OF ADDITIONAL INCOME AVAILABLE FOR HOUSEHOLD AND PERSONAL PURPOSES AND FOR DEBT RETIREMENT LIES IN THE POSSIBILITIES FOR INCREASED FARM EARNINGS. Many farmers in the low earning brackets have plenty of such possibilities for increased earnings through more efficient management and through the addition to the size of business by renting more land or intensifying on the present acreage. These possibilities include bigger gardens, choice of higher return crops, improved varieties, weed control, more livestock, better livestock, feeding balanced rations, proper care of livestock and many other good management practices.