

Annual Report

VOCATIONAL AGRICULTURE FARM ANALYSIS

EAST SOUTH CENTRAL MINNESOTA

1966

Austin Area Vocational School

AUSTIN, MINNESOTA

IN COOPERATION WITH

VOCATIONAL DIVISION, MINNESOTA DEPARTMENT OF EDUCATION
AND AGRICULTURAL EDUCATION DEPARTMENT
UNIVERSITY OF MINNESOTA

April 1967

1966 VOCATIONAL AGRICULTURE FARM ANALYSIS REPORT
FOR EAST SOUTH CENTRAL MINNESOTA

Charles M. Painter

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INTRODUCTION

This is the twelfth year that an analysis has been made by the Austin Area Vocational-Technical School. This type of analysis follows the same pattern as that used by the Farm Management Division of the University of Minnesota. These Techniques have been developed through studies made with farm management association members since 1928.

We are indebted to Truman Nodland and his associates in the Farm Management Division for the many years of service rendered to vocational agriculture. The analysis of veteran's agriculture farm account books and those of cooperating vocational agriculture adult farmers has been the principle, but by no means the only, contribution to vocational agriculture by the Farm Management Division.

We would like to express our appreciation to Harlan Koch, Graphic Arts Instructor of the Austin Public Schools, and his class, for preparing our cover and assembling the report.

Some main purposes of the farm analysis services in this area are (1) to assist instructors and cooperating farmers in farm accounting techniques (2) to aid the farmer in the study of his farm business through analysis reports and (3) to provide case study material that can be used by farmers and farm groups to study management problems. The analysis also has research value.

This report and the analysis of records included in the report were done under the direction of Charles M. Painter, Vocational Agriculture Coordinator, Austin Area Vocational-Technical School. Analysis assistants were Madge Anderson, Elaine Harber, Eileen Heimsness, Audrey Anhorn, Donna Qualey, Adeleen Palan, Patricia Francis, and Vivian Ulrich. Betty Smith and Lynda Planz, school secretaries, did the typing and duplicating. Without the excellent help and team effort of instructors and clerical workers, this report would not have been possible.

Directing in a supervisory capacity for this and the other cooperating projects were G. R. Cochran, State Supervisor of Agricultural Education; S. K. Wick, Director of Vocational Education; Morton A. Carney, Director of the Austin Area Vocational-Technical School and Irwin T. Mickelson, Austin Superintendent of Schools. William Knaak, former Assistant Director of Vocational Education, assisted in the early development of the program. Technical assistance was provided by the University of Agricultural Education Department under the direction of Dr. Milo Peterson. The professional assistance of the University Division of Agricultural Economics and the Agricultural Extension Service has done much to bring farm management studies up to date. Financial assistance from the Hill Family Foundation helped to initiate the program from 1954 through 1957.

Farmers pay a fee to cover clerical costs, data processing, paper and stencils.

Final stages of this report were completed while Charles Painter was hospitalized for eye surgery. The absence of his final guidance and editing may be obvious in this report. ("Some obvious improvements"-Painter).

Agricultural Records Cooperative of Madison, Wisconsin did an excellent programming job for the individual farm analysis. As of March 10, reports designated for averages had been processed.

The following schools submitted 1966 farm records for analysis:

<u>School</u>	<u>No. of Books</u>	<u>Instructors</u>
Adams	27 . . .	Dwain Vangsness* LeRoy Swanson
Alden	2 . . .	John Nelson*
Austin	12 . . .	Leland Arneson* Donald Ritland
Blooming Prairie	47 . . .	Gene Francis* Harold Ulrich Truman Tilleraas
Elkton	5 . . .	Lynn Lagerstedt *
Faribault	64 . . .	Ralph Palan* Maynard Hughes Paul Day
Farmington	1 . . .	Lyle Phelps*
Hayfield	16 . . .	Bruce Oxton* Bert Fuller Frank Moon
Kasson-Mantorville	4 . . .	LuVern Bushlack *
Kenyon	13 . . .	Dennis Kluver* Jerome Schwarzbauer John Shelstad
LeRoy	3 . . .	Donald Haugland*
Lyle	1 . . .	Earl Noren* Ross Peterson
New Richland	13 . . .	Russell Schmeising* Lee Mendenhall
Spring Valley	10 . . .	Ed Morine* LeRoy Battcher
Stewartville	5 . . .	Frank Quam*
Wanamingo	1 . . .	Dave Christofferson*
West Concord	4 . . .	Hilbert Hoof*
Zumbrota	2 . . .	Gerald Halvorson*
230 Books		

* Instructor responsible for the adult agriculture program.

TABLE 1 SUMMARY OF FARM INVENTORIES 1966

Items	Average of 186 Farms*	
	Jan. 1	Dec. 31
Size of farm (acres)	287	
Size of business (work units)	526	
Dairy & dual purpose cows	\$ 3924	\$ 3964
Other dairy & dual purpose cattle	2053	2334
Beef cattle (including feeders)	3704	4578
Hogs	4418	4247
Sheep (including feeders)	59	46
Poultry (including turkeys)	121	135
Productive Livestock (total)	<u>\$14279</u>	<u>\$15304</u>
Crop, Seed and Feed	\$ 9153	\$13079
Power machinery (farm share)	4415	5379
Crop and general machinery	5316	6445
Livestock equipment	1737	2170
Machinery & Equipment (total)	<u>\$11468</u>	<u>\$13994</u>
Miscellaneous	-----	-----
Land	\$36812	\$37976
Buildings, fences, etc.	<u>17438</u>	<u>18795</u>
Total Farm Capital	\$89150	\$99148

Items	39 Most Profit. Farms		39 Least Profit. Farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Size of farm (acres)	380		244	
Size of business (work units)**	700		506	
Dairy & dual purpose cows	\$ 3092	\$ 3155	\$ 4890	\$ 4835
Other dairy & dual purpose cows	1533	1644	2848	3052
Beef cattle (including feeders)	6261	8774	4676	5380
Hogs	9324	9298	2575	2370
Sheep (including feeders)	28	26	96	59
Poultry	167	238	62	80
Productive Livestock (total)	<u>\$20405</u>	<u>\$23135</u>	<u>\$15147</u>	<u>\$15776</u>
Crop, seed and feed	14825	21137	6944	9938
Power machinery(farm share)	5935	7931	3785	4727
Crop & general machinery	7414	9568	4455	5222
Livestock equipment	2315	3222	1641	2034
Machinery & equipment(total)	<u>\$15664</u>	<u>\$20721</u>	<u>\$ 9881</u>	<u>\$11983</u>
Land	\$49733	\$51552	\$34451	\$34874
Buildings, fences, etc.	<u>25929</u>	<u>29097</u>	<u>16092</u>	<u>16159</u>
Total Farm Capital	\$126556	\$145642	\$82515	\$88730

* Some books arrived too late to be included in the averages. Other were omitted for various reasons (see page 2). For the purpose of comparison, all the data shown in this report, with the exception of household expenses, are presented on a full-owner basis. The assets, expenses and receipts of the landlord were included in the records from rented farms.

** See explanation of WORK UNIT on page 10.

TABLE 2 SUMMARY OF FARM EARNINGS (CASH STATEMENT) 1966

Items	Average of 186 Farms	39 most profitable Farms	39 least profitable Farms
<u>FARM RECEIPTS</u>			
Dairy & dual purpose cattle	\$ 2068	\$ 1532	\$ 3082
Dairy products	7342	6323	8450
Beef cattle(including feeders)	5414	11326	6892
Hogs	11688	25754	6367
Sheep & wool (including feeders)	78	22	106
Poultry	100	73	-39
Eggs	590	1509	278
Corn	2418	3652	1409
Small grain	376	309	143
Diverted acre income	1606	2530	785
Other crops	3483	5524	2092
Mach.& equip.sold, gas tax refund	509	335	225
Income from work off the farm	358	486	265
Misc. farm income	395	664	246
(1) Total farm sales	\$36425	\$60039	\$30379
(2) Increase in farm capital	9998	19086	6215
(3) Family living from the farm	371	394	406
(4) Total farm receipts (1+2+3)	\$46794	\$79519	\$37000
<u>FARM EXPENSES</u>			
Dairy & dual purpose cattle bought	\$ 529	\$ 217	\$ 624
Beef cattle bought (inc. feeders)	3141	7765	3941
Hogs bought	1738	1831	2820
Sheep bought (inc. feeders)	2	-	-
Poultry bought	119	235	111
Misc. livestock expense	767	1097	731
Feed bought	5464	9744	4911
Fertilizers	1949	3209	1692
Other crop expenses	1645	2419	1238
Custom work hired	983	1138	893
Gas,oil,grease bought (f. share)	1216	1593	1028
Rep. mech. power(f. share)	733	846	682
Rep. & upkeep of real estate	441	697	430
Rep. & upkeep of crop & gen. mach.	586	777	589
Rep. & upkeep of livestock equip.	207	299	223
Wages of hired labor	589	886	495
Electricity expense (f. share)	351	462	345
Real estate & pers. prop. tax	1488	1908	1264
General farm expense	468	614	438
(5) Total cash operating expense	\$22416	\$35737	\$22455
(6) Cap. purc. mech. pow.(f.share)	1911	3105	1807
(7) Cap. purc. crop & gen. mach.	2320	3809	1641
(8) Cap. purc. livestock equip.	830	1561	744
(9) Cap. purc. land,bldgs,fences	3888	6571	1498
(10) Total farm purchases (5-9)	\$31365	\$50783	\$28145
(11) Decrease in farm capital	----	----	----
(12) Interest on farm capital	4707	6805	4281
(13) Unpaid family labor	842	1167	785
(14) Board furnished hired labor	92	148	117
(15) Total farm expenses (10-14)	\$37006	\$58903	\$33328
(16) Labor earnings (4 minus 15)	\$ 9788	\$20616	\$ 3672

See footnote on page 5

TABLE 3 SUMMARY OF FARM EARNINGS (ENTERPRISE STATEMENT) 1966

Items	Average of 186 Farms	39 most profitable Farms	39 least profitable Farms
<u>RETURNS & NET INCREASES</u>			
Dairy & dual purpose cows	\$ 7392	\$ 6387	\$ 8446
Other dairy & dual purpose cattle	2253	1886	3071
Beef breeding herd	346	609	393
Feeder cattle	2731	5310	3281
Hogs	9844	23994	3390
Sheep (farm flock)	63	21	70
Sheep (feeders)	--	--	--
Turkeys	2	--	11
Chickens	598	1439	226
All Productive Livestock	<u>\$23229</u>	<u>\$39646</u>	<u>\$18888</u>
Value of feed fed to livestock	-14597	-23070	-13826
Return over feed from livestock	<u>\$ 8632</u>	<u>\$16576</u>	<u>\$ 5062</u>
Crops, seed & feed	17264	25999	13273
Income from labor off farm	184	252	144
Agriculture conservation payments	46	92	38
Miscellaneous	348	572	208
(1) Total Returns & Net Increases	<u>\$26474</u>	<u>\$43491</u>	<u>\$18725</u>
<u>EXPENSES & NET DECREASES</u>			
Truck	\$ 363	\$ 525	\$ 339
Auto (farm share)	515	499	503
Tractor	1651	2100	1401
Elec. & gas engine exp.(f. share)	367	462	398
Hired power	469	546	455
Total Power	<u>\$ 3365</u>	<u>\$ 4132</u>	<u>\$ 3096</u>
Crop & general machinery	<u>\$ 1853</u>	<u>\$ 2510</u>	<u>\$ 1518</u>
Livestock equipment	587	924	572
Buildings, fences & tiling	1581	2287	1437
Bare land (minus)	-	-	-1
Misc. prod. livestock expense	767	1097	731
Labor	1869	2596	1718
Real estate taxes	1278	1653	1071
Personal property taxes	211	256	193
Insurance	231	305	198
General farm expense	237	310	239
Interest on farm capital	<u>4707</u>	<u>6805</u>	<u>4281</u>
(2) Total Expenses & Net Decreases	<u>\$16686</u>	<u>\$22875</u>	<u>\$15053</u>
(3) Labor Earnings (1) minus (2)	<u>\$ 9788</u>	<u>\$20616</u>	<u>\$ 3672</u>

* Cash receipts and expenses are adjusted for changes in inventory for each enterprise and for each item of expense in order to show total receipts and net increases; total expenses and net decreases.

TABLE 4 CASH HOUSEHOLD AND PERSONAL EXPENSES FOR
THOSE FARMS WHICH KEPT COMPLETE ACCOUNTS OF THESE EXPENSES 1966

Items	Average of 114 Farms
Number of persons - family	5.3
Number of adult equivalent - family	4.0
Food and meals bought	\$1279
Operating and supplies	392
Furnishings and equipment	437
Clothing and clothing materials	453
Personal care - personal spending	173
Education - recreation - development	305
Gifts and special events	187
Medical care and health insurance	538
Church and welfare	251
Personal share truck and auto expense	216
Operator's share of upkeep on dwelling	101
Personal share telephone & electric expense	<u>126</u>
Total cash living expense	\$4458
Personal share new auto and truck	227
New dwelling bought	175
Taxes and other deductions	409
Life insurance	313
Other savings and investments	<u>510</u>
Total household & personal cash expense	\$6092
Total family living from the farm	<u>343</u>
Total cash expense and perquisites	\$6435
Income: Operator's labor earnings	\$8847
Return to capital and labor	\$11059
Total non-farm income	1175
Total money borrowed	\$14668
Paid on debts - principal	\$11365

TABLE 5 NET WORTH STATEMENT FOR THOSE FARMERS WHO KEPT
A COMPLETE RECORD OF ALL ASSETS AND LIABILITIES 1966 (OPERATOR'S SHARE)

	Owners 117 Farms		Renters 30 Farms	
	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total farm capital	\$76040	\$87168	\$23921	\$31221
Auto (personal share)	628	660	448	516
Dwelling	4641	5059	203	119
Other personal assets	7612	8487	4566	5258
Total assets	<u>\$88921</u>	<u>\$101374</u>	<u>\$29138</u>	<u>\$37114</u>
Real estate mortgages	\$25566	\$27600	\$ -	\$ -
Chattel mortgages	8755	11039	7094	9540
Notes	3204	4000	2258	2357
Accounts payable	1399	1221	1699	1430
Total liabilities	<u>\$38924</u>	<u>\$43860</u>	<u>\$11051</u>	<u>\$13327</u>
Farmer's net worth	\$49997	\$57514	\$18087	\$23787
Gain in net worth*		\$ 7517		\$ 5700

One of the best measures of financial progress is the change in net worth during the year. A gain in net worth represents the savings of the family after personal financial needs, such as items shown in Table 4, have been met. The gain in net worth represents additional resource for business expansion, debt retirement, or personal needs.

The financial reliability of your record can be checked by adding together "return to capital and labor" (Table 6) and "non farm income" (Table 4). This total should be equal to the sum of "Total cash expense and perquisites" (Table 4) and "gain in net worth" (Table 5), adjusted for the end of the year value of items such as auto, new dwelling, life insurance or other savings and investments which have been included in personal cash expense (Table 4).

* Non farm income of the family will be reflected in the gain in net worth.

TABLE 6 SUMMARY OF FARM EARNINGS BY TENURE 1966 (OPERATOR'S SHARE)

Items	148 Owners & Part Owners	38 Renters
FARM RECEIPTS		
Dairy & dual purpose cattle	\$ 1831	\$ 1671
Dairy products	6880	5502
Beef cattle (including feeders)	5207	4027
Hogs	11320	8747
Sheep and wool (including feeders)	75	22
Poultry (including turkeys)	120	7
Eggs	705	39
Corn	2072	725
Small Grain	314	241
Diverted acre income	1725	372
Other crops	3238	1252
Machinery and equipment sold	252	248
Income from work off farm	382	235
Miscellaneous	424	199
(1) Total farm sales	<u>\$34545</u>	<u>\$23287</u>
(2) Increase in farm capital	10903	7338
(3) Family living from farm	361	283
(4) Total farm receipts (1) + (2) + (3)	<u>\$45809</u>	<u>\$30908</u>
FARM EXPENSES		
Dairy and dual purpose cattle bought	\$ 502	\$ 493
Beef cattle bought (including feeders)	3088	2065
Hogs bought	1430	2532
Sheep bought (including feeders)	2	-
Poultry	144	6
Miscellaneous livestock expense	727	610
Feed	5196	4715
Fertilizers	1945	1054
Other crop expense	1640	884
Custom work hired	962	688
Gas, oil and grease	1209	923
Repair tractor, truck & auto (farm share)	737	576
Repair & upkeep of real estate	451	87
Repair & upkeep of crop & general machinery	593	450
Repair & upkeep of livestock equipment	203	164
Wages of hired labor	618	240
Electricity expense (farm share)	346	248
R.E. & personal property taxes	1116	166
Cash rent	635	1396
General farm expenses	482	285
Interest paid	1940	554
Total cash operating expenses	<u>\$23966</u>	<u>\$18136</u>
Mechanical power bought (farm share)	1730	2242
Crop & general machinery bought	2383	1850
Livestock & equipment bought	920	446
New real estate improvements	4519	540
(5) Total farm purchases	<u>\$33518</u>	<u>\$23214</u>
(6) Decrease in farm capital	-----	-----
(7) Interest on farm capital	2157	846
(8) Unpaid family labor	791	1056
(9) Board furnished hired labor	85	120
(10) Total farm expenses (5) + (6) + (7) + (8) + (9)	<u>\$36551</u>	<u>\$25236</u>
(11) Labor earnings (4) minus (10)	9258	5672
(12) Ret. to Cap. & Family Labor (7) + (8) + (11)	<u>\$12206</u>	<u>\$ 7574</u>

RANGE IN EARNINGS

\$30000

\$25000

\$19000

\$16000

\$13000

\$10000

\$ 8500

\$ 7000

\$ 5500

\$ 4000

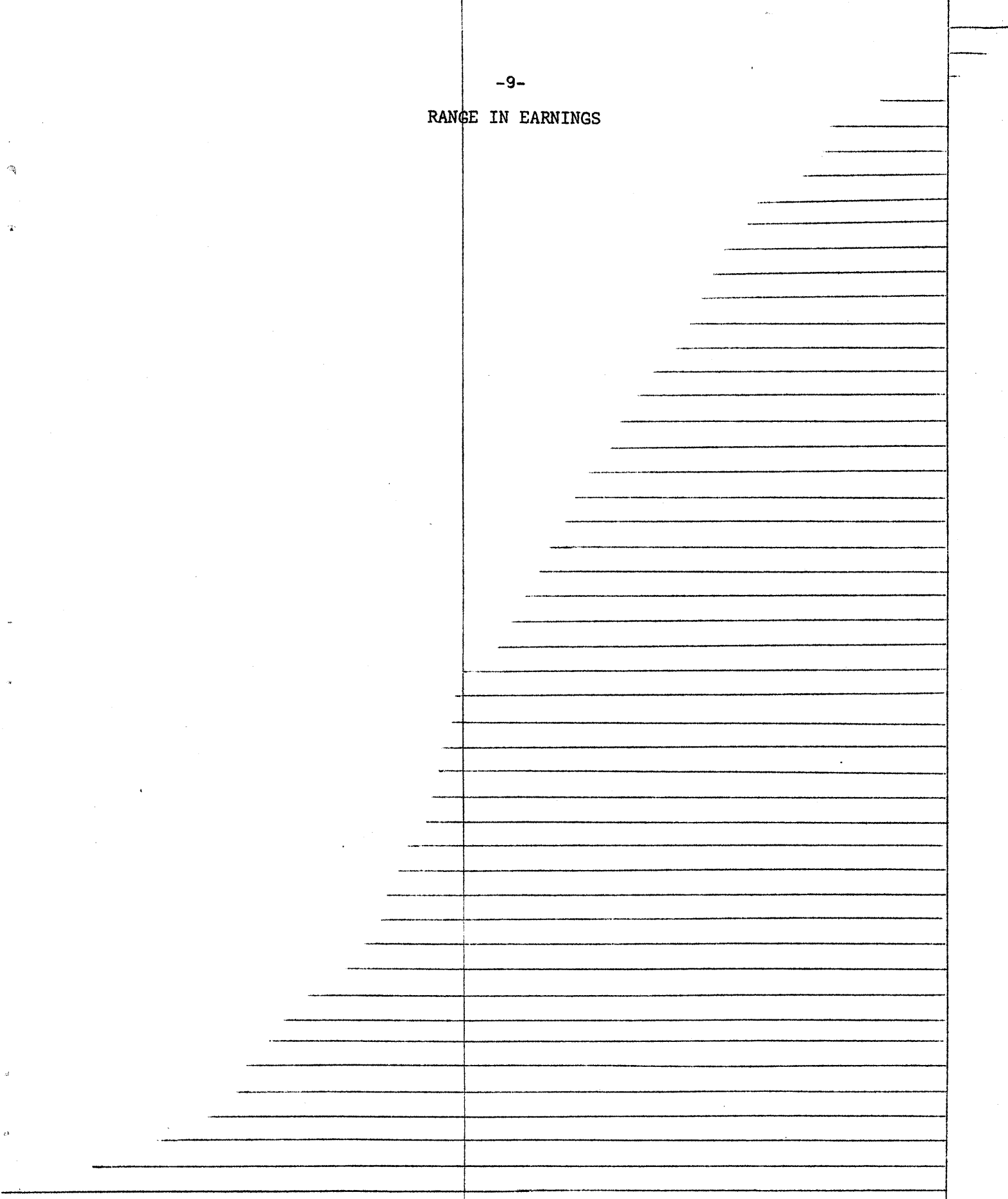
\$ 2500

\$ 1000

0

-1000

-4000



WORK UNITS

The total work units for any one farm is a measure of the size of that farm business. A work unit as used in this report is the average accomplishment of a farm worker in a ten hour day. The number of work units per farm or per worker may be interpreted differently for different farm situations. They may measure the degree of efficiency of labor due to mechanization or careful planning. They may also measure quality or quantity of work. Occasionally, high work units per worker indicate an excessive work load. The number of work units for each class of livestock and each acre of crop are presented in Table 7.

TABLE 7 Number of Work Units for Each Class of Livestock and Each Acre of Crop

Item	No. of Work Units	Item	No. of Work Units
Dairy & dual purpose cows	10.0 per cow	Small grain	.5 per acre
Other dairy & dual pur cattle	3.5 per an.unit*	Sugar beets	3.0 per acre
Beef breeding herd	3.5 per an.unit*	Sweet corn	.7 per acre
Feeder cattle	.25 per 100#	Corn, husked	.7 per acre
Sheep - farm flock	1.5 per an.unit*	Corn, hogged	.4 per acre
Sheep - feeders	.3 per 100#	Corn, shredded	1.5 per acre
Hogs	.2 per 100#	Corn, silage	1.0 per acre
Turkeys	.2 per 100#	Corn, fodder	1.0 per acre
Hens	20.0 per 100 hens	Alfalfa hay	.6 per acre
Canning peas	.5 per acre	Soybean hay	.5 per acre
Soybeans for grain	.5 per acre	Other hay crops	.4 per acre
Turkey hens	40.0 per 100 hens		

* Animal unit represents one dairy cow or bull, two other dairy cattle, one and one-fourth beef cows or bulls, one feeder steer or heifer, three and one-third other beef cattle, seven sheep, fourteen lambs, two and one-half hogs, five pigs, fifty laying hens, twenty-five turkey hens, eleven hundred pounds of turkey produced.

TABLE 8 MEASURES OF FARM ORGANIZATION AND MANAGEMENT EFFICIENCY 1966

Measures used in Chart on Page 12	Average of 186 farms	39 most profitable farms	39 least profitable farms
Labor earnings	\$9788.00	\$20616.00	\$3672.00
(1) Crop yields *	100	107	94
(2) Per cent tillable land in high return crops	67.3	71.5	64.4
Gross return per acre	\$ 83.87	\$ 91.86	\$ 79.99
(3) Return for \$100 feed to produce livestock *	100	108	94
(4) Productive livestock units per 100 acres **	31.3	37.2	35.9
(5) Size of business - work units ***	526	699	506
(6) Work units per worker	338	392	342
(7) Power, machinery, equipment & building expense per work unit	\$ 14.03	\$ 14.03	\$ 13.09

Items Related to Some of the Above Measures

(3) Index of return for \$100 feed from:			
Dairy cattle (see pp. 17)	100	111	99
Beef cattle - breeding herd (see p.19)	100	99	119
Beef cattle - feeders (see p.19)	100	109	94
Hogs (see pp. 15)	100	107	82
Sheep - farm flock (see p.20)	100	---	60
Chickens (see p. 21)	100	120	60
Number of workers	1.6	1.8	1.5
(4) Number of animal units	82.6	131.4	80.0
(5) Work units on crop	141	187	123
Work units on productive livestock	373	495	374
Other productive work units	12	17	9
(7) Power expense per work unit	\$6.40	\$5.92	\$6.12
Crop machinery exp.per work unit	\$3.52	\$3.59	\$3.00
Livestock equip.exp.per work unit	\$1.12	\$1.32	\$1.13
Building & fence exp.per work unit	\$2.99	\$3.20	\$2.84
Tractor exp. per crop acre	\$8.47	\$8.01	\$8.50
Crop-gen.mach.exp. per crop acre	\$8.73	\$8.73	\$8.48

* Given as a percentage of the average.

** Acres in timber not pastured, roads, waste and farmstead were not included.

*** Includes work units on crops, work units on livestock and "other productive work units".

THERMOMETER CHART

Using your figures from page 11, locate your standing with respect to the various measures of farm organization and management efficiency. The averages for the 186 farms included in this summary are located between the dotted lines across the center of this page.

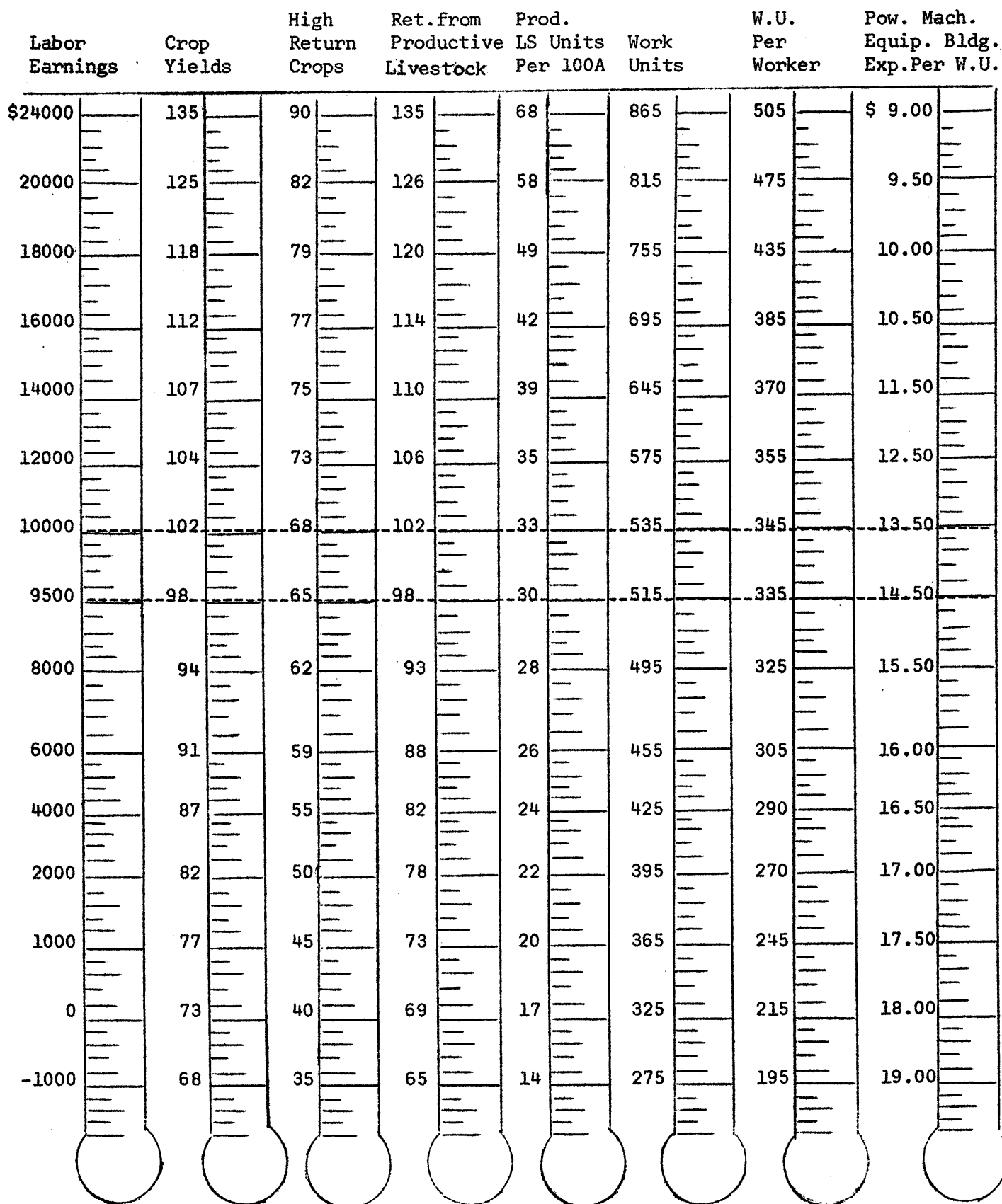


TABLE 9 DISTRIBUTION OF ACRES AND YIELD 1966

Crop	Crop rating	Average acres of 186 Farms	Average yield of 186 Farms	Most profit-able yields 39 Farms	Least Profit-able yields 39 Farms
Canning peas	B	1.3	\$56.01	\$54.96	\$50.00
Wheat	C	1.3	27.5	28.0	27.4
Barley	D	.3	35.9	-	-
Oat Silage	C	2.4	6.2	5.8	5.3
Oats for grain	D	23.5	59.0	59.3	55.4
Sugar beets	A	1.4	16.8	-	15.1
Corn grain	A	87.8	92.5	98.4	86.1
Canning corn	B	2.5	\$67.56	\$66.01	\$67.47
Soybeans	B	53.3	27.0	29.3	25.7
Corn silage	B	10.1	14.9	16.1	13.0
Other crops	B	-	-	-	-
Total cultivated crops		155.1			
Alfalfa	B	25.0	3.1	3.4	2.9
Other legume & legume mixture	C	2.8	2.6	3.3	3.0
Annual Hay	D	.7	2.2	1.3	2.7
Legume and/or grass seed-lbs.	D	.1	137.4		
Total tillable land in hay		28.6			
Alfalfa pasture	B	5.4			
Other legume pasture	C or B	.9			
Other tillable pasture	D	1.9			
		8.2			
Government program	A	28.5	\$55.40	\$58.85	\$52.76
Tillable land not cropped	D	.2	.5		
Total tillable land		249.4			
Wild hay		.6			
Non-tillable pasture		14.4			
Timber		2.6			
Roads and waste		11.2			
Farmstead		8.9			
Total acres in farm		287.1			
% land tillable		86.9			
% in high return crops		67.2			

TOTAL FEED COSTS AND RETURNS FROM YOUR LIVESTOCK ENTERPRISES

The total "return over feed costs" for each class of livestock is shown in Table 10. This differs from the "return over feed" shown in the enterprise statement in that it is the total for each class of livestock instead of a return "per head," "per unit" or "per 100 pounds." These data indicate the relative importance of different classes of livestock as a source of income and as a market for feed. The value of milk consumed by calves is included in the total returns from dairy or dual purpose cattle. The value of milk consumed by calves is not included in either the total returns or the feed cost of "all dairy" or "all dual purpose" cattle. The return over feed is not a net return, but rather the amount available from the gross income after paying the feed bill, to cover the outlay for hired labor, power, equipment, taxes, insurance, interest, and veterinary bills, and to provide a return for the use of family labor and capital.

Feed is the largest single item of cost for all classes of livestock. The proportion of the total cost represented by feed varies between classes of livestock. Feed makes up approximately 45 per cent of the total costs of maintaining dairy cattle and poultry, 50 per cent in the case of a farm flock of sheep and 65 to 75 per cent for hogs, feeder cattle and feeder lambs. It is necessary to secure a relatively higher return over feed from dairy cattle and poultry than from the other livestock enterprises to cover costs other than feed.

When feed prices are low, the per cent of total cost represented by feed is lower. An example is corn at \$1.25 per bushel as compared to \$1.00 per bushel corn of a few years ago. Even when feed prices are low, this is the area of greatest concern for livestock production economies.

TABLE 11 FEED COSTS AND RETURNS FROM HOGS 1966

Items	Average of 108 Farms	53 Farms high in return a- bove feed	55 Farms low in return a- bove feed
Feed per cwt. hogs produced (lbs.)			
Corn	299	289	312
Small grain	38	38	38
Commercial feeds	71	67	76
Total Concentrates	408	394	426
Forage and miscellaneous	3	4	2
Feed cost per cwt. hogs produced:			
Concentrates(plus forage & misc.)	\$ 12.84	\$ 11.79	\$ 14.15
Pasture	.01	.01	.01
Total feed costs	\$ 12.85	\$ 11.80	\$ 14.16
Net increase in value per cwt. of hogs produced	\$ 21.63	\$ 22.71	\$ 20.28
Return above feed cost per cwt. of hogs produced	\$ 8.78	\$ 10.91	\$ 6.12
Return for \$100 feed	\$168.33	\$192.46	\$143.22
Price received per cwt. hogs sold	\$ 23.68	\$ 23.98	\$ 23.32
Number of litters farrowed	43	49	38
Number of pigs born per litter	9.4	9.7	9.1
Number of pigs weaned per litter	7.4	7.8	6.8
Lbs. of hogs produced	73,264	82,645	64,225

Operators producing less than 10,000 pounds of pork are omitted from hog averages. Questionable records were omitted, including those who produced hogs for only a portion of the year. Feeder pig operations are shown in Table 11A.

TABLE 11A FEED COSTS AND RETURNS FROM FEEDER PIGS 1966

	Your Farm	Average of 17 Farms
Concentrates per cwt. hogs produced		438#
Total feed cost		\$ 12.71
Net increase in value per cwt. produced		\$ 16.08
Return over feed cost per cwt. produced		\$ 3.37
Return per \$100 feed		\$131.
Average price received		\$ 22.99
Pounds pork produced		64466#
Average reported weight of pigs bought		41.4#
Average price paid per pig		\$ 18.83
Average weight of hogs sold		227#
Per cent of death loss		5.0

AVERAGE PRICES USED FOR FEED 1966

		(Pasture per head per month)
Beans	\$ 2.75	
Ear corn	1.25	Dairy & beef cows-bulls \$3.00
Oats per bushel	.65	Young cattle 1.50
Alfalfa hay per ton	\$20.00 - \$22.00	Hogs .16
Red or Alsike clover hay per ton	18.00	Pigs .08
Non-legume per ton	14.00	Ewes .40
Corn silage per ton	7.00 - 8.00	Lambs .20

TABLE 12 FACTORS OF COST AND RETURNS FROM DAIRY COWS 1966

Items	Average of 119 Farms	28 Farms highest ret. over feed cost	28 Farms lowest ret. over feed cost
Pounds of butterfat per cow	383	463	293
Pounds of milk per cow	10565	12531	8081
Per cent of butterfat in milk	3.6	3.7	3.6
Price rec'd. per lb. BF sold (¢)	110.4	110.2	108.9
Price rec'd. per cwt. milk sold	4.00	4.07	3.95
Feed per cow (lbs.):			
Corn	3402	3864	2770
Small grain	659	812	591
Commercial feeds	625	681	478
Legume hay	4800	5393	4735
Other hay	180	46	398
Total Concentrates	4686	5357	3839
Total Dry Roughage	4980	5439	5133
Silage	9615	8923	9692
Feed cost per cow:			
Concentrates	\$124.16	\$142.17	\$100.48
Roughages	84.17	86.97	84.81
Pasture	8.12	8.07	8.80
Total Feed Costs	\$216.45	\$237.21	\$194.09
Value of produce per cow:			
Butterfat sales	\$412.23	\$499.41	\$306.95
Dairy products used in home	4.41	4.60	4.63
Milk to livestock	5.46	5.47	6.52
Net increases in value of cows	-7.76	-7.13	-8.68
Total value produced	\$414.34	\$502.35	\$309.42
Return above feed per cow	\$197.89	\$265.14	\$115.33
Return for \$100 of feed	\$191.40	\$211.70	\$159.40
Feed cost per lb. FF (¢)	56.5	51.3	66.1
Number of cows	29.1	32.4	25.5

NOTE: Only those herds with a full year of production of 5 or more cows have been included in the averages.

TABLE 13 FEED COSTS AND RETURNS FROM OTHER DAIRY & DUAL PURPOSE CATTLE 1966

Items	Average of 119 Farms	28 Farms highest ret. over feed cost	28 Farms lowest ret. over feed cost
Feeds per head (lbs.):			
Concentrates	1098	1176	910
Hay and fodder	1644	1805	1496
Silage	3415	3929	2548
Whole milk	122	119	144
Feed cost per head:			
Concentrates	\$30.88	\$35.73	\$24.53
Roughages	27.82	31.27	22.76
Milk	4.46	4.56	4.92
Pasture	3.74	4.18	3.46
Total feed costs per head	\$66.90	\$75.74	\$55.67
Net increase in value of other cattle	\$102.48	\$113.35	\$87.05
Return above feed cost per head	\$35.58	\$37.61	\$31.38
Returns for \$100 feed	\$153.18	\$149.66	\$156.37
No. of head of other cattle	35.1	38.8	32.6

TABLE 14 FEED COSTS & RETURNS FROM ALL DAIRY & DUAL PURPOSE CATTLE 1966

Items	Average of 119 Farms	28 Farms highest Ret. over feed cost	28 Farms lowest ret. over feed cost
Feed per animal unit (lbs.):			
Concentrates	6014	6766	5003
Hay and fodder	6970	7602	7045
Silage	13744	13630	12947
Total feed costs per cow	\$297.41	\$327.93	\$265.24
Value of produce per cow:			
Dairy products	\$422.10	\$509.48	\$318.10
Net increase in value of dairy cattle	116.25	128.63	102.55
Total value produced	\$538.35	\$638.11	\$420.65
Returns above feed per cow	\$240.94	\$310.18	\$155.41
Returns per \$100 feed	\$181.01	\$194.59	\$158.59
Animal units of cattle	46.3	51.7	41.9

TABLE 15 FEED COST AND RETURNS FROM BEEF CATTLE 1966

Items	Average of 8 Farms
<u>Beef Breeding Herd</u>	
Feeds per animal unit (lbs.):	
Concentrates	415
Legume hay	1771
Silage	5550
Other hay	819
Feed cost per animal unit:	
Concentrates	\$ 11.64
Roughages	44.72
Pasture	18.15
Total feed costs	\$ 74.51
Total value produced	\$113.10
Returns above feed cost per cow	\$ 38.59
Returns for \$100 feed	\$151.85
Number of cows and herd bulls	34.1
Number of animal units in the herd	33.8
Lbs. of beef produced	16056

Feeding cattle - 33 Farms

Feeds per cwt. beef produced (lbs.):	
Corn	559
Small grain	11
Commercial feeds	49
Legume hay	176
Other hay and fodder	11
Total concentrates	619
Total hay and fodder	187
Silage	948
Feed cost per cwt. beef produced:	
Concentrates	\$ 15.11
Roughages	5.14
Pasture	.04
Total feed costs	\$ 20.29
Net increase in value of feeders	\$ 23.87
Return above feed cost per cwt. beef produced	\$ 3.58
Return for \$100 feed	\$117.64
Price paid cwt. beef bought	\$ 20.71
Price received for feeder cattle sold	\$ 23.84
Number of animal units	99.8
Lbs. of beef produced	62014

Several cooperators had beef breeding animals and also feeders, but sometimes failed to make a distinction. These were not included in the averages. In some cases club calves & project animals represented the only beef produced.

SHEEP

Farm flocks in this area are small and the feed consumption is often impossible to determine. Flocks were carefully screened for reliability. Only three of the twenty reporting sheep were used. Costs and returns are determined on a per ewe basis.

TABLE 16 FEED COSTS AND RETURNS FROM A FARM FLOCK OF SHEEP 1966

Items	Average of 6 Farms
Feeds per ewe (lbs.):	
Concentrates	275
Legume hay	584
Other hay	---
Silage	256
Feed cost per ewe:	
Concentrates	\$ 8.46
Roughages	6.82
Pasture	2.79
Total feed costs	\$ 18.07
Value of produce per head:	
Wool*	\$ 7.71
Net increase in value of sheep	20.07
Total value produced	\$ 27.78
Returns above feed cost per head	\$ 9.71
Returns for \$100 feed	\$153.79
Price per cwt. of lambs sold	\$ 22.63
Price per lb. wool sold (¢)	.66
Lbs. of wool per sheep sheared	11.7
Number of ewes kept for lambing	45.3
Per cent lamb crop (awaiting correction)	----
Per cent death loss	25.7
Average number of ewes	56.3

* Wool return including incentive payment.

CHICKENS

Flocks from 19 farms are included in this report. Only those flocks averaging 250 or more hens and having a full year's production are included in the averages.

TABLE 17 FEED COSTS AND RETURNS FROM CHICKENS 1966

Items	Average of 19 Farms	13 Farms highest in return above feed	6 Farms lowest in return above feed
Feed per hen (lbs.): *			
Grain	70	63	99
Commercial feeds	39	40	33
Total concentrates	109	103	132
Total feed cost per hen	\$ 3.69	\$ 3.53	\$ 4.34
Value of produce per hen:			
Eggs sold and used in the home	\$ 6.66	\$ 7.09	\$ 4.95
Net increase in value of chickens	-.56	-.54	-.61
Total value produced	\$ 6.10	\$ 6.55	\$ 4.34
Returns above feed cost per hen	\$ 2.41	\$ 3.02	-
Returns for \$100 feed	\$165.31	\$185.55	\$100.00
Price rec'd. per doz. eggs sold (¢)	36.0	36.9	31.6
Eggs laid per hen	223	231	188
Average number hens on farm during year	796	930	506
Per cent death loss of hens **	9.0	7.7	14.2

* Includes feeds and returns from laying flock and chicks raised.

** Basis used by Agricultural Records Cooperative gives a considerably higher percentage of death loss than would be true if previous basis was used.

LABOR EARNINGS CORRELATED WITH EXCELLED FACTORS

Studies of earnings of farmers in this report were measured by eight management factors causing variations in earnings among farmers within a given year. These eight factors are crop yields; choice of crops; gross returns per acre; returns from livestock; amount of livestock; size of business; accomplishments per worker and control over expenses. The combined or cumulative influence of these eight management factors on earnings is shown in Table 18. Comparisons of how individuals were related to income levels is shown in Table 8.

TABLE 18 - 186 FARMS

Number of factors in which Farmers excelled	Number of Farms	Average Labor Earnings		
		\$4000	\$8000	\$12000
0 or 1	25	XXXXX		\$ 5066
2 or 3	62	XXXXXXXXXXXXXXX		7915
4 or 5	68	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		12339
6	15	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		12662
7 or 8	16	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		14377

EARNINGS OF 35 OPERATORS NOT INCLUDED IN THE AVERAGES: A few print-outs had not been received at the time of publication. All but 8 of the cases omitted arrived too late for the various summary tables.

Labor earnings from all farms averaged \$8439. The top ten farms had labor earnings averaging \$17201. The ten lowest income farms averaged \$1736 labor earnings.

A few books came in after the report was prepared. The exact number will be reported in the newsletter following this summary.

CORRECTIONS

Some changes were missed due to confusion in the handling of copy books. Every fourth case is represented on the "range of earnings", Page 9. Our Thermo-meter Chart shows only seven factors. Next year we will show eight. Crop data page 13 shows yields for high and low income farms - not high and low yield farms.

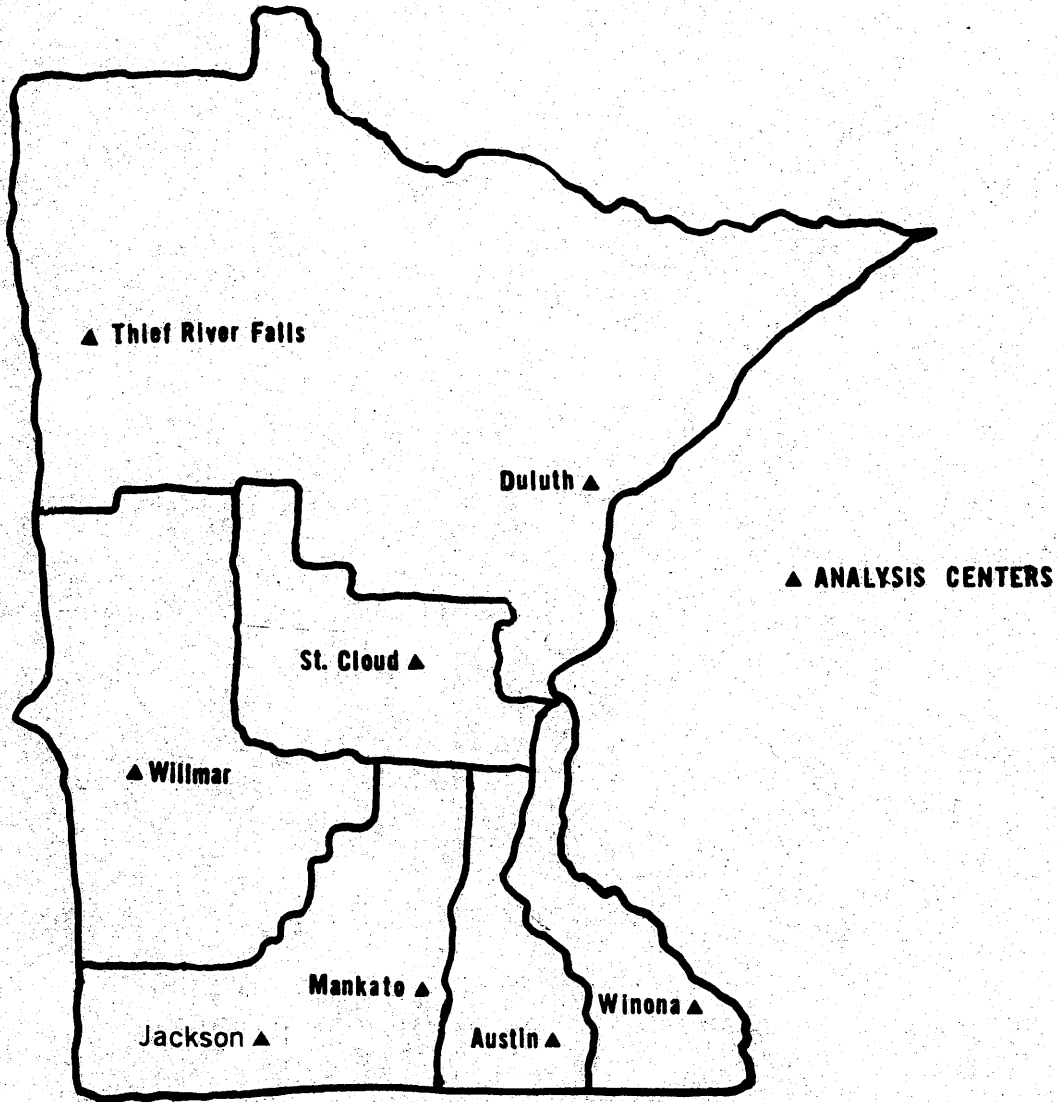
SUMMARY OF FARM EARNINGS BY YEARS

Items	1961	1962	1963	1964	1965	1966
FARM RECEIPTS						
Dairy cattle	\$ 1602	\$ 1402	\$ 1348	\$ 1570	\$ 1722	\$ 2068
Dairy Products	4776	5050	5073	6237	6154	7342
Beef cattle(inc. feeders)	5585	4645	3813	3781	4781	5414
Hogs	8751	8346	7860	8196	10413	11688
Sheep and wool	147	155	234	82	76	78
Diverted acre income(shown separately after 1964)					1552	1606
Poultry	78	49	25	37	53	100
Eggs	989	676	546	712	452	590
Corn	883	1601	2137	2220	1981	2418
Small grain	505	507	726	431	235	376
Other crops	1179	1491	2472	2894	2775	3483
Mach.equip.sold & gas tax ref.	208	266	281	302	343	509
Income from work off farm	174	228	327	299	395	358
Miscellaneous *	875	983	1478	1530	440	395
(1) Total farm sales	\$25752	\$25399	\$26320	\$28291	\$31372	\$36425
(2) Increase in farm capital	3180	669	2554	-	7170	9998
(3) Family living from the farm	341	368	330	317	363	371
(4) Total farm receipts(1+2+3)	\$29273	\$26436	\$29204	\$28608	\$38905	\$46794
FARM EXPENSE						
Dairy cattle bought	\$ 333	\$ 250	\$ 221	\$ 273	\$ 482	\$ 529
Beef cattle bought(inc.feeders)	3949	2386	2829	1635	2402	3141
Hogs bought	537	669	590	724	928	1738
Sheep bought (inc. feeders)	17	5	36	6	2	2
Poultry bought	117	92	57	138	88	119
Miscellaneous livestock	568	570	582	601	629	767
Feed bought	4604	4238	4341	4611	5246	5464
Fertilizers	1000	1065	1327	1522	1612	1949
Other crop expenses	699	716	973	1153	1325	1645
Custom work hired	592	629	722	840	831	983
Gas-oil-grease bought(f.share)	951	1010	1083	1028	1088	1216
Repair of mech.power(f.share)	522	534	595	580	664	733
Repair & upkeep of real estate	332	375	336	323	386	441
Repair & upkeep of crop & gen.mach.	347	357	440	410	518	586
Repair & upkeep of livestock equip.	168	158	172	193	167	207
Wages of hired labor	459	348	538	470	531	589
Electricity expense(f.share)	292	300	299	319	320	351
Real estate & personal prop. tax	934	1066	1206	1277	1382	1488
General farm expense	293	310	333	389	387	468
(5) Total cash operating expense	\$16714	\$15078	\$16680	\$16492	\$18988	\$22416
(6) Cap.purch.mech.power bought	560	992	696	1126	1596	1911
(7) Crop & general mach. bought	995	1090	923	1037	1827	2320
(8) Livestock equipment bought	216	320	423	380	498	830
(9) New R.E.improve.& land(1965)	1010	1036	1095	1072	2383	3888
(10) Total farm purchases(5)-(9)	\$19495	\$18516	\$19814	\$20107	\$25292	\$31365
(11) Decrease in farm capital				143		
(12) Interest on farm capital	3077	3138	3528	3764	4122	4707
(13) Unpaid family labor	550	638	634	658	633	842
(14) Board furnished hired labor	68	67	66	78	82	92
(15) Total farm expense(10)-(14)	\$23190	\$22359	\$24042	\$24750	\$30129	\$37006
(16) Labor earnings(4)minus(15)	\$ 6083	\$ 4077	\$ 5162	\$ 3858	\$ 8776	\$ 9788

* Government program payments included prior to 1965.

Area Coordinators

Thief River Falls	- Ed Sisler
Duluth - - -	Robert Anderson
St. Cloud - - -	- Ed O'Connell
Mankato - - -	- Del Hodgkins
Austin - - -	Charles Painter
Winona - - -	- Lloyd Hyatt
Staples - - -	William Guelker
Willmar - - -	- Ed Hartog
Jackson - - -	Wm. Hohenhasus



COOPERATING VOC. AG. DEPARTMENTS in Austin Area

Faribault	Lyle
Wanamingo	Owatonna
Zumbrota	LeRoy
Kenyon	West Concord
Blooming Prairie	New Richland
Austin	Alden
Hayfield	Stewartville
Spring Valley	Farmington
Adams	Kasson
Elkton	Mantorville