1961 REPORT

ANNUAL REPORT

WEST CENTRAL MINNESOTA

FARM MANAGEMENT SERVICE

Institute of Agriculture

and

Vocational Division

MINNESOTA DEPARTMENT OF EDUCATION

Cooperating

UNIVERSITY OF MINNESOTA

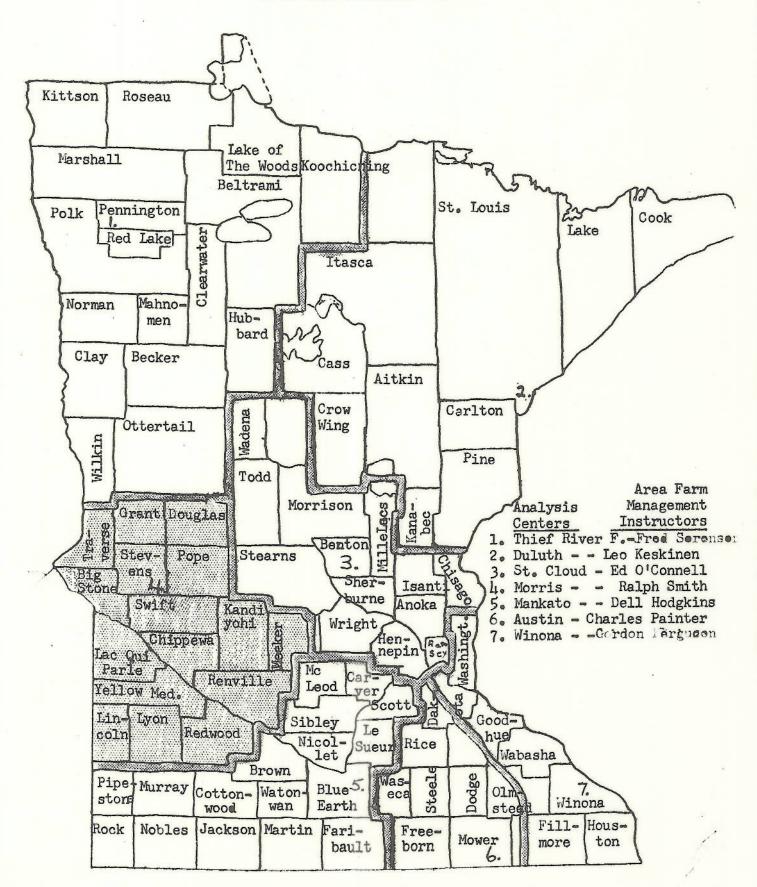
Report No. 263

Department of Agricultural Economics

Institute of Agriculture

St. Paul 1, Minnesota

May, 1962



* Shaded Area Served By The Morris Analysis Center

1961 REPORT OF THE FARM MANAGEMENT SERVICE FOR VOCATIONAL AGRICULTURE IN WEST CENTRAL MINNESOTA

Ralph Smith and T. R. Nodland

INDEX

	Page
ntroduction	. 1
arm Inventories	2
arm Earnings	. 2
amily Living From the Farm	. 6
ousehold and Personal Expenses and Receipts	. 6
et Worth	
ummary of Farm Earnings by Tenure	
eturns to Capital and Family Labor	
ange in Earnings	
umulative Effect of Excelling Factors	
xplanation of "Work Units"	
easures of Farm Organization and Management Efficiency	
hermometer Chart	
istribution of Acres in Farm	
rop Yields	702
ower and Machinery Expenses	Series Series
mount of Livestock	1000 000 0
otal Feed Costs and Returns from Livestock Enterprises	100
airy Cattle	
eef Cattle	
heep	
hickens	
ummary of Miscellaneous Items by Years	
ummary of Farm Earnings by Years	0 47

INTROJUCTION

The Department of Agricultural Economics and Agricultural Education, the West Central School and Station and the Agricultural Extension Service of the University of Minnesota are cooperating with the Vocational Division, Minnesota Department of Education in maintaining a farm management service. The service was initiated during 1952 and is available to farmers who are enrolled in adult or young farmer classes in the public schools.

The purpose of the project as far as the schools are concerned is (1) to give assistance to the instructors in the mechanics of keeping farm records and (2) to aid in the analysis of the farm business through the use of records as a basis for vocational guidance. The enrollment is on a voluntary basis insofar as the number of schools participating and the number of farmers enrolled in the service.

The analysis of the records and the preparation of the reports for West Central Minnesota are handled by Ralph Smith of the West Central School and Experiment Station at Morris. The project is under the general direction of T. R. Nodland of the University of Minnesota Department of Agricultural Economics. The Department of Agricultural Education was represented by M. J. Peterson and the Agricultural Exptension Service by Hal Routhe. The State Department of Education was represented by G. R. Cochran, State Supervisor of Agricultural Education.

Each farmer pays an annual fee which covers a portion of the cost. The balance of the costs were defrayed by the University of Minnesota.

This report deals with farmers enrolled in 8 schools in West Central Minnesota. The following tabulation shows by schools the number of 1961 farm records submitted:

SCHOOL						No	0.	of h	le	COI	rd	3					INSTRUCTOR
Alexandria .		۰	•	۰	•	•		2	•	0	0	ø	۵		•	•	Bernard Sonstegard
Canby	•	•				•		4	•			•	0				Dewain Englund
Danube	•	•		۰	•	۰		3	0		0	•	•	•	•	•	Roger Heller
Hoffman			•					9	•		•	•	•	٥	•	۰	Edgar Persons
Madison					۰			12	•	•		•		•	•	۰	Kermit Christenson
Morris								2				•	۰	۰	•		Ralph Smith
Sacred Heart	9		0	۰		•	•	2	•			•	•				Earl Northouse
Willmar		0	٠		۰	a	0	1	•	٠	4		•	•	•	۵	Mike Cullen

The records kept included farm inventories, cash receipts and expense, feed consumed by the various classes of livestock, family living secured from the farm, household and personal expenses and receipts and the operator's liabilities and assets other then farm capital. All types of tenure arrangements are represented ranging from full owners to partnerships in which the operator furnishes little or no capital.

FARM INVENTORIES

The capital investment per farm varied from \$19,575 to \$218,798. The average investment for all farms included this report and for the one-fourth high and the one-fourth low in operator's labor earnings is shown in Table 1.

Landlords or partners suprlied some capital in 26 out of the 35 cases included in this report. The landlord's investment has been included in Table 1 in order to show the total amount used per farm.

FARM EARNINGS

Operator's earnings is a measure of the relative financial success of a farmer as compared with other farmers and represents the returns above all farm expenses and a charge for the use of farm capital. For purposes of comparison, the earnings are presented on a full-owner basis.

There are two methods of computing operator's earnings. Table 2 shows the earnings statement on a cash basis and Table 3 shows the earnings on an enterprise or accrual basis. The principal difference in the two statements is in the method of handling the net increase or decrease in the value of farm capital. In the cash statement the net increase or decrease in farm capital is entered as one item. In the enterprise statement the net change in the inventory has been included in each enterprise in order to compute "total returns and net increases", or "total expenses and net decreases" by enterprises.

Summary of Farm Inventories, 1961* Table 1.

Items		r Farm L Dec.		Average of Jan. l	35 Farms Dec. 31
Size of farm (acres) Size of business (work units)**				348 554	
Dairy and dual purpose cows Other dairy and & dual purpose Beef cattle (incl. feeders) Hogs Sheep (incl. feeders) Poultry (incl. turkeys) Productive livestock (total) Horses Crop, seed and feed Power mach. (farm share) Crop and general machinery Livestock equipment Machinery and equipment (total) Land Buildings, fences, etc.				\$ 1840 932 4805 1926 856 687 11046 6618 3793 5103 1192 10088 33084 9034	\$ 1776 867 6222 2140 329 718 12052 5961 3544 5312 1406 10262 33084 9984
Total Farm capital				\$69870	\$71343
9	most pro	fitable	farms	9 least	
	Jan. 1	Dec. 3		Jan. 1	profitabl Dec. 3
	Jan. 1 473 628	Dec. 3			
Size of farms (acres) Size of business (work units) ** Dairy and dual purpose cows Other dairy and dual purpose Beef cattle (incl. feeders) Hogs Sheep (incl. feeders) Poultry (incl. turkeys) Productive livestock (total) Horses	473	\$ 1722 784 9778 3004 279 849 16416	1.	Jan. 1 400	\$ 921 465 6881 2482 512

^{*}For the purpose of comparison, all the data shown in this report with the exception of tables 6 and 7 are presented on a full-owner basis. The assets, expenses and receipts of the landlord were included in the records from rented farms.

**See page 11 for an explanation of "work units".

Table 2. Summary of Farm Earnings (cash statement), 1961

	V	Average	9 mos	
T1	Your	of 35	profitable	
Items FARM RECEIPTS	Farm	farms	farms	farms
Dairy and dual-purpose cattle		\$ 970	\$ 1337	\$ 642
Dairy Products		2966	2695	1402
Beef cattle (incl. feeders)	-	5802	11790	4786
Hogs		6551	10998	7447
	-	1020	205	1114
Sheep and wool (incl. feeders) Horses			205	
		146	177	23
Poultry			2727	60
Eggş		2371		
Oprn		3278	5828	1725
Small grain	***	2611	2200	2881
Other crops		2297	3796	1645
Mach. & equip. sold & gas tax		361	732	221
Income from work off the farm	************	572	393	1052
Miscellaneous		526	985	212
(1) Total farm sales		29471	43863	23210
(2) Increase in farm capital		1473	6204	
(3) Family living from the farm		316	343	227
(4) Total farm receipts 1+2+3		\$31260	\$50410	\$23437
DATM HADDING DO				
FARM EXPENSES		-10	200	2.0
Dairy & dual purpose cattle bought		140	322	12
Beef cattle bought (feeders too)		3477	7868	2361
Hogs bought	*********	761	1714	164
Sheep bought (incl. Feeders)		42	31	45
Horses bought			,	
Poultry bought	-	321	205	17
Misc. livestock expense		597	691	594
Feed bought		4623	6447	3154
Fertilizers		933	1467	908
Other crop expenses		855	1003	913
Custom work hired		752	843	645
Gas, oil, grease (farm share)		1123	1475	971
Rep. of mech. power (farm share)		620	696	542
Repair & upkeep of real estate		257	480	182
Rep. & upkeep of crop-gen. mach.		565	873	479
Rep, & upkeep of livestock equip.	***************************************	146	145	93
Wages of hired labor		876	1409	1100
Electricity (farm share)		278	345	236
Real Estate-Per. Prop. Taxes		1169	1457	1174
General farm expense		304	354	383
(5) Total cash operating expense	************	17839	27825	13973
(6) Cap. pur-mech pow. (f. share)		614	750	350
(7) " crop & gen. mach.		1152	1298	1320
(8) " Livestock equip.		424	1025	67
(9) " bldgs. & fencing	-	1566	2828	1088
(10) Total farm purchases 5-9		21595	33726	16798
(11) Decrease in farm capital		41777	33120	
		2420	1.740	1446 2757
(12) Interest farm capital		3530	4760	3757
(13) Unpaid family labor	*************	345	468	244
(14) Board for hired labor		100	211	141
(15) Total farm expense 10-14	-	25570	39165	22386
(16) Labor earnings 4 - 15		\$ 5690	\$11245	\$ 1051

Table 3. Summary of Farm Earnings (Enterpise Statement) 1961*

	Your	Average of 35	9 most profitable	9 least profitable
Items	Farm	farms	farms	farms
RETURNS AND NET INCREASES Dairy & dual purpose cows Other dairy and dual purpose cows Beef breeding herd Feeder cattle Hogs Sheep-farm flock & feeders Chickens All productive livestock Value of feed fed to livestock Return over feed from livestock Crops, seed, and feed Income from labor off farm Agricultural conservation pay Miscellaneous (1) Total Rets and Net Increases	rarm	\$ 2981 957 464 3277 6063 452 2248 16442 10126 6316 11211 268 133 392 \$18320	\$ 2642 1034 200 6895 9854 232 2765 23622 13983 9639 16962 126 409 576	\$ 1473 510 1051 2279 6999 590 51 12953 9262 3691 8959 643 24 188 \$13505
EXPENSES AND NET DECREASES Horses Truck Auto (farm share) Tractor Elec. & gas engine exp. (farm) Hired Power Total Power Crop and general machinery Livestock equipment Buildings, fencing, tiling Misc. productive livestock exp. Labor Real estate taxes Personal property tax Insurance General farm Interest on farm capital (2) Total expenses & net dec.		339 571 1200 269 372 2751 1468 349 870 597 1592 931 238 160 144 3530	322 662 1475 345 450 3254 1865 405 1292 691 2389 1216 241 204 150 4760	326 432 1207 226 303 2494 1476 243 601 594 1732 916 258 205 178 3757
(3) Operator's earnings (1) - (2)		\$ 5690	\$11245	\$ 1051

^{*}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, and total expenses and net decreases. The operator's earnings are the same as those on page 4.

FAMILY LIVING FROM THE FARM

The family living from the farm is the estimated value of the farm produce used in the house furnished the farmer and his family by the farm. It is a part of the income of the farm and a part of the expenses of operating the household even though cash transactions are not involved. The omission of the farm produce used in the home results in an incomplete record of both farm income and personal income.

The value of the family living as shown in Table 4 amounts to .6 percent of the total farm receipts on these farms. The values assigned are a conservative market price on the farm. If these products had been purchased, the amount paid out would have been considerably higher.

Table 4. Family Living From the Farm, 1961

Items	Your Farm	Average of 35 Farms	Your Farm	Average of 35 Farms
Adult equiv family - others		3.5 .3		
Whole milk Cream Beef Hogs Lamb and mutton Poultry Eggs		851 qts. 4 pts. 650 lbs. 356 lbs. 3 lbs. 29 lbs. 20 lbs.		\$ 85 1 139 59 11 12
Potatoes Vegetables & fruit Farm fuel Total		end and the total and the tota		9 \$316

HOUSEHOLD AND PERSONAL EXPENSES AND RECEIPTS

Household and personal accounts are important if the family is to manage its financial affairs wisely. The household and personal expenses and receipts are presented in Table 5. These farmers spent an average of \$329 per month for family living in addition to the food, fuel and housing furnished by the farm.

Table 5. Household and Personal Expenses for Those Farms Which Kept Complete Accounts of These Expenses, 1961

Those Farms Which Kept Complete Accounts of Items	Your Farm	Average of 19 Farms
Number of persons - family	o Standymounted	4.1
Number of adult equiv family - other*		3.1 .2
Food and meals bought Operating and supplies Furnishings and equipment Clothing and clothing materials Personal care, personal spending Education, recreation and devel. Gifts and special events Medical care & health ins. Church, welfare Personal share auto expense Operator's share of upkeep dwelling Household share of electric expense Total cash living expense H. H. & pers. share of new auto		\$ 980 294 317 361 96 186 151 387 139 167 415 109 \$3602
New dwelling Taxes and other deductions Life insurance Other savings & investments Total Household & personal cash expense		7 81 201 57 \$3948
Total family living from the farm Total cash exp. & prequis.		281 \$4229
Receipts: Return to capital & family labor Miscellaneous income Income from investments		5571 344 6

*Hired help or others boarded.

NET WORTH

A net worth statement includes a listing of all the assets and liabilities as of a given date. The difference between the farmer's total assets and his liabilities is his net worth. A net worth statement for owners, part owners and renters is presented in Table 6. Both the farm and personal assets and liabilities are included.

The difference between the operator's net worth at the beginning and at the end of the year shows the gain in net worth. It represents the financial progress that has been made during the year.

Table 6. Net Worth Statement for Those Farmers Who Kept a Complete Record of all Assets and Liabilities, 1961 (Operator's Share)

T1		Farm		wners
Items	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm			275	
Owned			275	
Rented				
Total farm capital			\$76993	\$79671
Stocks & bonds			5207	5628
Life insurance		Charles and the second	2402	2549
Accounts receivable	***************************************	-	52	423
Outside real estate	-	***************************************	m	
Other outside investments			779	492
Total outside investments	-		8440	9092
Dwelling	-	**************************************	3577	3482
Cash on hand and in bank			1179	455
Other household & pers. assets	-		1991	1888
Total cash, h.h. & pers. assets	-	-	15187	14917
TOTAL ASSETS	******	***************	\$92180	\$94588
Federal Lank Bank Mortgage	-		79 67	
Other mortgage on land operated			19415	7558
Mortgage on other real estate			17417	17501
FHA chattel mortgages		******	4880	
Production Credit Association	-	***************************************	4000	2190
Crop loans				1500
Other chattel mortgages	-	-	77100	
Notes payable	-	-	11482	9075
Accounts payable	-		70/0	2243
TOTAL LIABILITIES	-		1869	1889
Farmer's net worth		*******	\$45613	\$41956
Gain in net WORTH	***************************************		46567	52632
				\$ 6065
-	16 part	owners	6 ren	ters
Items	Jan. 1	Dec. 31	Jan. 1	Dec. 31
Total acres in farm	398		265	
Owned	206	11 116		
Rented	192		265	
Total farm capital	\$42547	\$45321	\$24033	\$24063
Stocks & bonds	667	726	67	63
Life insurance	2144	2225	131	150
Accounts receivable	37	50	17	17
Other outside investments	597	651	260	260
Total outside investments	3445	3652	475	490
Dwelling	5069	6094	417	490
Cash on hand & in bank	895	1368	505	. 983
Other h.h. & pers. assets	2695	2786	3446	3481
Total cash, h.h. & pers. assets	8659	10248	3951	4464
TOTAL ASSETS	\$54651	\$59221	\$28459	\$29017
Federal Land Bank Mortgage	3721	4590	\$20437	かるとのエレ
Other mortgages on land oper.	5069	6292		
Mortgages on other real estate	7007	0292		
FHA Chattel Mortgage		00 00 10	~~~	
froduction Credit Association	4090	4491	1094	1186
CLOD Togus	18	12	683	1100
Other chattel mortgages Notes payable	3652	3880		584
Accounts payable	2372	2327	3840	3433
	1359	1455	412	439
OTAL LIARTITATES		+477		437
OTAL LIABILITIES	20261	23047	6029	5642
OTAL LIABILITIES Farmer's net worth Gain in net WORTH		At	The second secon	

RETURNS TO CAPITAL AND FAMILY LABOR

The return to capital and family labor represents the amount available to the operator for living expenses, payment on indebtedness, and savings. The landlord's expenses and receipts are not included.

The average return to capital and family labor for 6 owners, 6 part owners, and 16 renters is shown in Table 7. The statement includes only the operator's share of the earnings of the partnership. The earnings as shown in Table 7 are on an actual basis as compared to the full-owner basis in Table 2 and 3.

RANGE IN EARNINGS

Every study of farm earnings shows a wide variation in earnings among farmers in a given year (figure 1). The average operator's earnings of those farmers ranking in the upper 25 percent of the range according to earnings was \$11,245 and of those in the lower 25 percent was \$1051. This is a range of \$10,194 between the average earnings of these two groups. Some of these causes for these differences in earnings, such as weather, may be beyond the control of the individual farmer. Other factors are within his control. The more important management factors affecting earnings are as follows: (These factors vary from year to year in their relative influence on earnings)*

- l. Crop yields
- 2. Choice of Crops
- 3. Return from Livestock
- 4. Amount of Livestock
- 5. Size of business
- 6. Work Units per worker
- 7. Control over Expense

Operator's Earnings

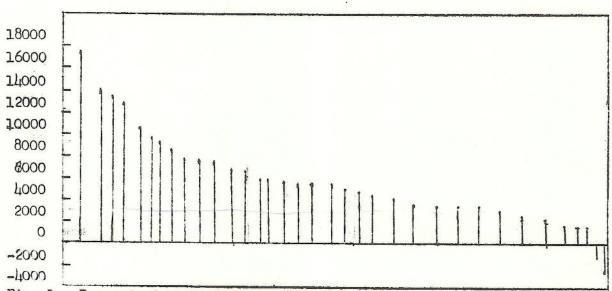


Fig. 1. Range in Operator's Earnings. Each line represents the earning of one farmer.

* See Pond, G. A. "Why Farm Earnings Vary". Minn. Agric. Expt. Sta. Bul. 386, June, 1945

Nodland, T. R. and Pond, G. A. "Some Factors Affecting the Earnings of Farmers in Southwestern Minnesota". Univ. of Minn., Dept. Ag. Econ., Report No. 219, November. 1954.

Cumulative Effect of Excelling with Number of Management Factors

Studies of earnings of farmers in this area show that there are seven major management factors causing variations in earnings among farmers within a given year. These seven factors are (1) crop yields, (2) choice of crops, (3) return from livestock, (4) amount of livestock, (5) size of business, (6) work accomplishments per worker, and (7) control over expenses. The combined or cumulative influence of these seven management factors on earning is shown in Figure 2.

No. of Factors in Which Farmers Excelled	No. of Farms		
0 - 1	5		\$2243
2 - 3	17	1	\$4674
4 - 5	7		\$7284
6 - 7	6		∌ 9586

Figure 2, Relation of labor earnings to the number of factors in which the farmer excel, indicates that it will be well worth while for each cooperator to study carefully his ranking on pages 10 and 11 and learn his standing in respect to each of the above factors and the elements of strength and weakness in his farm business.

EXPLANATION OF "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, working on crops and productive livestock at an average efficiency of ten hours of work off the farm for pay. The number of work units for each class of livestock and each acre of crop are presented in Table 8.

Table 8. Number of Work Units for Each Class of Livestock and Each Acre of Crop

	No. of		No. c	of
Item	work units	Item	work un	its
Dairy & dual purpose cows	10.0 per cow	Small Grain	.5 per	acre
Other dairy & du. pur. cattle	3.5 per an. unit	* Sugar Beets	1.5 per	acre
Beef breeding herd	3.5 per an. unit		.7 per	
Feeder Cattle	.25 per 100 lbs		.7 per	acre
Sheep farm flock	1.5 per an. unit	* Corn hogged	.4 per	acre
Sheep feeders	.3 per 100 lbs.	Corn, (shredded	1)1.5 per	acre
Hogs	.2 per 100 lbs.	Corn silage	1.0 per	acre
Turkeys	.5 per 100 lbs.	Corn fodder	1.0 per	acre
Hens	20.0 per 100 hens	Alfalfa hay	.6 per	acre
Canning peas	.5 per acre	Soybean hay	.8 per	
Soybeans for grain	.5 per acre	Other hay crop	.4 per	

^{*}Animal-unit represents one dairy cow or bull, two other dairy cattle, $1\frac{1}{4}$ beef cows or bull, 1 feeder steer or heifer, 3 1/3 other beef cattle, 7 sheep, 14 lambs, $2\frac{1}{2}$ hogs, 5 rigs 50 hens or 1,100 pounds of turkeys produced.

Table 9. Measure of Farm Organization and Management Efficiency, 1961

Measures used in chart on page 13	Your Farm	Average of 35 farms	9 most profitable farms	9 least profitable farms
Operator's earnings	\$	\$5690	\$11245	\$1051
(1) Crop Yields	*****	100	114	85
(2) Percent tillable land in high ret. crops*	Contraction of the Contraction o	58.7	63.4	57.5
(3) Ret. for \$100 feed to prod. livestock **	-	100	166	80
(4) Prod. livestock units per 100 A.***		27.8	36.2	24.6
(5) Size of business - work units	Company of Contractions	554	628	540
(6) Work units per worker		346	336	338
(7) Pow. Mach., Equip., Bldg. Expense per work unit	•	10.97	10.53	بلبا .10
(3) Index of return for \$100 Fee fro Dairy cattle (see pgs 18 & 19) Beef brd. herd- Page 20 Beef cattle feeders- Page 20 Hogs-Page 17 Sheep-farm flock -Page 21		100 100 100 100	112 229 109 98 151	90 46 109 100 46
Chickens (4) Number of animal units		100 80.5	98 101	40 88.7
5) Work units on crops Work units on prod. lvstk Other work units		161. 336 57	194 395 39	169 266 105
6) Number of family workers Number of hired workers Total number of workers		1.3 .3 1.6	1.3 .6 1.9	1.2 .4 1.6
7) Power expense per work unit Crop mach. exp. per work unit Lxstk equip. exp. per wk. unit Bldgs-fenc. exp. per wk. unit		5.58 2.94 .64 1.81	4.91 2.89 .70 2.03	5.29 3.15 .51 1.49

^{*}Crops are maked in Table 10 as (A), (B), (C), and (D). All of acres in (A) crops, one-half of acres in (B) crops, and one-fourth of acres in (C) crops are used in calculating percent of tillable land in high return crops.

crops.

**An index weighted by the animal units of livestock.

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

THERMOMETER CHART

Using your figures from page 12, locate your standing with respect to the warious measures of farm organization and mangement efficiency. The average from the 35 farms included in this summary are located between the dotted lines across the center of this page.

Oper.	,			Retu	ırn	Pr.	L. S.	**************************************	Worl	c Po	w. Mach
labor		Hi	gh	from p			nits		Units		-bldgs
earn-			urn	ducti	.ve			Work	per	e	xp. per
ings	yield	s cr	ops	livest	ock	1	.00 A.	Unit	s worker	· wo	rk unit
(F)	= 1	=		1=		E		=		E	
13000 =	- 140 -	75	1 1	40 =	44	=	750	E	420 -	3=	
		1 -			1		1,00	_	420	1 7 -	4
12000 E	725	72	: ,	~ E	10	=	200	=	E	1 , =	
12000	135	73	4	35	42		725	=	170 E	1 4=	↓ i
- E1	El	E	-	=		F		F	F	I F	
11000	130	71	1	30 E	40	E	700	E	400 =	5 =	,
E 1	E1	E				E		E		E	T
10000 =	125	69	- 1	25 =	38	=	675	=	390 -	6=	
巨	E	- E	=				- 12		. // =	" =	†
9000	120	42	- ,	on F	26	F	100	F	-	_ _	
3000	120	67		20	36		650		380	7 -	+
- -	E	E				E		E			
8000	115	65	1	15	34	-	625	-	370	8 -	,
<u> - </u>	El	E		E					-		Ť
7000 =	110 =	63	1	10 =	32		600	=	360 =	9=	
ET	E	E	-		-					1 -	f .
6000	105	61	- 7/	05 E	20	-	494	F	250		
0000	TO E	01 	4 1	ッロ	30		575		350 -	10 -	Ŀ
-======	-=====			=-		=					
5000	100	59 =	1 10	00 =	28		550	E	340 =	11=	
		E	1	. E.J		=		E	=		
4000 -	95 -	57		95 -	26	1-1	525	7-7	330 -	12	
	ET	E				-		-	=		
3000	90 =	555	1 ,	90 E	24	E	500	FI	320 =	13 =	
			7				200		320	- -	H
2000 =	85 E	FA	1 .	$_{c}$ $=$ 1	00	=	100	EI	-	_, [=	
2000	"El	53	- '	35	22		475		310 =	14=	_
E		. F				FI		=1			
1000	80 =	51		30 F	20	=	450	=1	300	15=	
(E)								-			7
o =	75 E	49	1	75 =	18	=	425	EI	290 =	16=	
E		7' =	۱ '				4-2			10=	
-1000 E	70	47 =		70 E	16	E	1.00	EI	200 = 1	7.0	
	1	- 41	-		10		400		280	17	7
-2000	(5.	12 =		<u> -</u>	- 1				E	E	
-2000	65	45	- 6	55 E	14		350	口	270	18	
	E	E		E				E	=	210	
-3000 -	60	43	1 6	0 F I	12	-	325	-	260 -	19	
	1		-1.	-		J	ردر	<u></u>		1	-

-14-

Table 10.

	Crop ratings*	Your Farm	Average of 35 farms
Flax	С		19
Barley	C		9
Wheat	C		16
Oats & oat mixtures	D		34
Rye	D	-	74
Oat Silage	C		3 2
Buckwheat	D		
Total small grain and peas			83
Corn grain	Α		100
Soybeans for grain	В		34
Sweet corn	Ā	***************************************	1
Corn or sorghum silage	В		11
Total cultivated crops	D		146
Alfalfa hay	В		26
Other legume & mixtures	C		
Timothy & brome hay & seed	D		2
Annual Hay	D		2
Total tillable land in hay	Б		31
Alfalfa pasture	В		8
Other legume & mixtures	Č		1
Sudan and/or rape	Č	-	1
Other tillable pasture	D.	-	
Total tillable land in pasture	D.		- 9
Soil Bank	A		25
Tillable land not cropped	D		1
Total tillable land	Ď		295
Wild hay			3
Non-tillable pasture		-	3
Fimber (not pastured)		-	2)
Roads and waste		-	23 2 16
Farmstead			9
Total acres in farm			348
Percent land tillable		200	81.2
Percent tillable land in high return crops		-	58.6

^{*}The crops are classified as A, B, C, or D crops on the basis of their average net returns per acre.

		No. of Farm	s Average of
	Your	growing	farms growing
	Farm	each crop	each crop
Flax, Bu.		15	11.2
Barley, Bu.	· · · · · · · · · · · · · · · · · · ·	8	39.5
Wheat, Bu.	* Contract C	28	27.0
Oats, Bu.	- Company of the Comp	29	56.6
Rye, Bu.		3	38.4
Oat silage, Tons		3	8.6
Corn grain, Bu.		*****	
Soybeans, Bu.		35	55.0
Corn silage, Tons		21	20.3
Alfalfa hay, Tons	-	21	10.5
Other legumes & mixtures, Tons		30	2.0
Timothy or brome hay, Tons			2.0
Wild hay, Tons		3 2	1.5

POWER AND MACHINERY EXPENSES

Power and machinery expense per crop acre is an indication of the economy with which capital is invested in these items. The crop acres per farm ranged from 97 to 948 with an average of 261 (Table 12). The expenses are high on the farms with a small acreage. In some cases, low expenses for labor might be offset by high power and equipment costs. The farmer is interested in operating at the lowest cost for power, machinery and labor combined.

Table 12. Power and Machinery Expenses Per Crop Acre. 1961

Table 12.	Lower.	and	Machinery	exbenses ter.	orop Acre, 19)T
				Average	9 most	9 least
			Your	of 35	profitable	profitable
			Farm	farms	farms	farms
Crop acres per farm				261	313	261
Tractor and Horse exp. crop A.	B			5.03	4.99	5.38
Crop & gen mach. exp.	per		***************************************	5.77	6.13	5.42

AMOUNT OF LIVESTOCK

A large proportion of the farmers maintained some dairy cattle, hogs, and beef (Table 13). Twenty six percent of the farmers kept poultry.

Table 13. Amount of Livestock, 1961

	Your	Average of 35 p		9 least profitable
	Farm	Farms	Farms	Farms
Number of milk cows		8.7	8.3	4.3
Number of other dairy cattle		9.2	8.4	5.9
Number of beef cattle (incl. feeder)		33.6	40.4	47.1
Number of sheep*		25.9	16.7	71
Number of hens	-	317	440	25.
Litters of pigs raised	-	19.3	22.2	27.0
Pounds of hogs produced		40612	65360	50798
Pounds of feeder cattle produced		13624	24317	13568

TOTAL FEED COSTS AND RETURNS FROM YOUR LIVESTOCK ENTERPRISES

The total "return over feed costs" for each class of livestock is shown in Table 14. 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 total return is the same as the returns and net increases shown on page 5. The value of milk consumed by calves is included in the total returns from dairy or dual purpose cows and in the total feed cost for other dairy or other dual porpose 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.

Table	14.	Total	Feed	Costs	and Retu	rns From	Your	Livestock	Enterprise, 1961
									Beef breeding
					Cows	Ot	her	All	Herd
Total :	returns				***************************************	******		Company participants and the company of the company	#HEDDANIERHOOM-COMP
Total :	feed co	st			-	-		entrelle constité	
Total 1	return d	over f	eed			******			Productive day to the
					Feeder Cattle		logs	Farm floc	
Total 1	returns				described in the constants.	_			
Total i	feed co	зt			-	-		*******	majoristi monde di maglicale
Total 1	return (over f	eed		-Ministration and the	-			Challed AntiQuadrone

Feed is the largest single item of cost for all classes of livestock. However, the proportion of the total cost represented by feed varies considerably between classes of livestock. Feed makes up approximately 45 percent of the total costs of maintaining dairy cattle and poultry, 50 percent in the case of a farm flock of sheep; and 75 to 90 percent for hogs, feeder cattle and feeder lambs. Consequently, it is necessary to secure a relatively higher return over feed from dairy cattle and poultry than from the other livestock, enterprises in order to be able to cover all the costs other than feed.

HOGS

The return over feed cost per 100 pounds of hogs produced varied from \$8.51 for those farmers ranking in the upper one quarter in feeding efficiency to a return of \$1.41 for those in the lower one quarter with an average return over feed of \$5.34. Some of the important factors that affected return over feed were:

- 1. Quantity of feed required to produce 100 pounds of hogs.
- 2. Price received.
- 3. Number of pigs born per litter.
- 4. Number of pigs weaned per litter.

Table 15. Feed Costs and Returns from Hogs, 1961

Items	Your Farm	Av era ge of 27 Farms	7 farms highest in returns abova feed	returns
Feed per cwt. hogs produced, lbs.: Corn Small grain Commercial feeds 60% alfalfa Total concentrates Skim milk and buttermilk Feed cost per cwt. hogs produced Concentrates Skim milk and buttermilk Pasture TOTAL FEED COSTS		290 75 65 2 432 \$ 9.82 .01 9.83	242 76 73 1 392 \$ 9.26 -04 9.30	369 63 58 1 1,91 \$10.82
Net increase in val. per cwt hogs produced		\$15.17	\$17.81	\$12.23
RETURNS ABOVE FEED COST PER CWT HOGS PRODUCED RETURNS FOR \$100 OF FEED		5.34	8.51	1.41
Price received per cwt. hogs sold		16.24	15.02	16.81
No. of spring litters raised No. of fall litters raised Total no. of litters raised		14.4 10.6 25.0	12.9 8.7 21.6	3.0 2.3 5.3
No. of pigs born per litter No. of pigs weaned per litter Hogs purchased Pounds of hogs produced		8.2 6.6 2858 52377	7.6 6.2 803 33830	7.8 6.5 7813 43506

DAIRY AND DUAL FURPOSE CATTLE

The quantity of feed consumed, value of feeds and returns from dairy cattle are presented in Tables 16, 17, and 18.

The return over feed cost per cow varied from -\$94.55 to \$294.70 among the 14 herds covered by this study. Some of the important factors that affected the return over feed were:

- 1. Rate of production (pounds butterfat per cow)
- 2. Price received for butterfat.

- Feeding efficiency
 Quality of ration
 Economy of ration (feed cost per pound butterfat)

Table 16. Factors of Cost and Returns from Dairy Cows, 1961

Items	Your Farm	Average of 14 farms	butterf	in lowest in at butterfat
Pounds of butterfat per cow Pounds of milk per cow Price rec. per lb. B. F. sold (cents) Price rec. per lb. B. Fwhole milk Price rec. per lb. B. F cream		364 10431 86.6 88.8 69.5	204 11031 92.6 97.0 69.5	324 7830 80.6 80.6
Feeds per cow, lbs.: Corn Small grain Commercial feeds		2275 1077 685	2035 1257 508	2514 896 863
Legume hay Other hay Fodder and stover		4664 803	3970 1032	5358 574
Total concentrates Total dry roughage Silage		4037 5267. 8350	3800 5002 8893	4273 59 32 7808
Feed cost per cow: Concentrates Roughages Pasture TOTAL FEED COSTS		\$ 83.53 83.18 7.80 \$174.51	\$ 80.76 76.15 10.24 \$167.15	\$ 86.30 90.21 5.37 \$181.88
Balue of produce per cow: B. F. sales Dairy produce used in house Milk to liwestock Net increase in value of cows TOTAL VALUE PRODUCED		\$336.97 6.85 4.83 -2.99 \$345.66	\$375.70 5.87 3.79 -15.28 \$370.08	\$298.22 7.84 5.88 9.30 \$321.24
RETURNS ABOVE FEED COST PER COW		\$171.15	\$202,93	\$139.36
RETURNS FOR \$100 of Feed		210	226	193
Feed cost per 1b. B. F. (cents)	-	48.6	42.4	55.8
Number of cows*		21.2	27.9	14.5

^{*}All dairy cows which have at some time in the past freshened are included in the dairy herd, and affect the average number of cows used in computing this table. There is some variation in the number of months of dry period per cow; however, this variation is small for the majority of farms.

Table 17. Feed Costs and Returns from Other Dairy and Dual Purpose Cattle, 1961

Items	Your Farm	Average of 14 farms	7 farms highest in butterfat per cow	7 farms lowest in butterfat per cow
Feeds per head, lbs.: Concentrates Hay and fodder Silage Skim milk Whole milk		976 2573 3225 198	771 1878 3513 210	1181 3268 2937 186
Feed cost per head: Concentrates Roughages Milk Pasture		\$ 22.97 31.00 5.28 3.15	\$ 16.23 27.24 4.82 3.65	\$ 29.71 34.78 5.74 2.64
TOTAL FEED COSTS PER HEAD		62.40	51.94	72.87
Net inc. in value of other cattle	-	108.86	104.41	113.31
RETURNS ABOVE FEED COST PER HEAD		46.46	52.47	40.44
RETURNS FOR \$100 OF FEED		189	220	159
Number of head of other cattle		22.2	29.9	14.5

Table 18. Feed Costs and Returns from all Dairy and Dual Purpose Cattle, 1961

Items	Your farm	Average of 14 farms		7 farms lowest in butterfat per cow
Feeds per animal units, lbs.: Concentrates		3349	3061	3637
Hay and fodder	-	5706	4562	6851
Silage		7853	8274	7433
OTAL FEED COSTS PER ANIMAL UNIT	-	\$155.80	\$144.30	\$167.31
alue of produce per animal unit:				
Dairy products Net increase in val. dairy		227.90	248.19	207.62
cattle		70.38	61.27	79.48
TOTAL VALUE PRODUCED		\$298.28	\$309.46	\$287.10
ETURNS ABOVE FEED PER ANIMAL UNIT	tono consumo a	\$142.48	\$165.16	\$119.79
ETURNS PER \$100 OF FEED	-	201	222	180
nimal units of cattle		32.3	43.0	21.7

Table 19. Feed Costs and Returns from Beef Cattle, 1961

	Your	Average of all
Items	Farm	Farms
Beef breeding herd: No. of farms:		7
Feeds per animal unit, lbs.:		
Concentrates	-	797
Legumes		1568
Other hay		89
Fodder and stover		1352
Silage		4675
Feed cost per animal unit:		
Concentrates		da C 00
Roughages		\$15.93
Pasture		41.93
TOTAL FEED COSTS		15.68
Value of porduce per animal unit:	***************************************	\$73.54
Dairy products		70
Net increase in value of animals	***************************************	.78
TOTAL VALUE PRODUCED	-	76.99
20 THE VIEW TROUGHE		\$77.77
RETURNS ABOVE FEED COST PER ANIMAL UNIT		4.23
RETURNS FOR \$100 OF FEED		132
Number of cows and her bulls		19 1
Number of animal units in the herd		41.4
Lbs. beef produced		40.0
Production of the contract of		12243
Feeding Cattle: No. of farms		15 ·
Corn		520
Small grain	-	18
Commercial feeds		38
Legume hay		
Other hay	-	242
Coner may		13
Total concentrates		126
Total hay and fodder		576 077
Silage		255
eed cost per cwt. beef produced:		1376
Concentrates		\$11.17
		Ф11.11 ii.22
Roughages Pasture		
Roughages Pasture		.17
Roughages Pasture TOTAL FEED COSTS		\$15.56
Roughages Pasture TOTAL FEED COSTS et increase in value of feeders		\$15.56 20.97
Roughages Pasture TOTAL FEED COSTS et increase in value of feeders		\$15.56
Roughages Pasture		\$15.56 20.97
Roughages Pasture TOTAL FEED COSTS Let increase in value of feeders EETURNS ABOVE FEED COST PER CWT. BEEF PROD. LETURNS FOR \$100 OF FEED		.17 \$15.56 20.97 5.41
Roughages Pasture TOTAL FEED COSTS et increase in value of feeders ETURNS ABOVE FEED COST PER CWT. BEEF PROD. ETURNS FOR \$100 OF FEED rice paid per cwt. beef bought		.17 \$15.56 20.97 5.41 148 24.67
Roughages Pasture TOTAL FEED COSTS et increase in value of feeders ETURNS ABOVE FEED COST PER CWT. BEEF PROD. ETURNS FOR \$100 OF FEED rice paid per cwt. beef bought rice rec'd. for feeder cattle sold		17 \$15.56 20.97 5.41 148 24.67 22.36
Roughages Pasture TOTAL FRED COSTS et increase in value of feeders ETURNS ABOVE FEED COST PER CWT. BEEF PROD.		.17 \$15.56 20.97 5.41 148 24.67

Table 20. Feed Costs and Returns from a Farm Flock of Sheep, 1961

Items	Your	Average of 10
Toolita	Farm	Farms
Feeds per head, * lbs.:		
Concentrates		203
Legume hay	-	419
Other hay	Marine Street	98
Silage	***************************************	66
Feed cost per head:		
Concentrates		\$ 3.78
Roughages		4.76
Pasture	-	.85
TOTAL FEED COSTS	************	\$ 9.39
Value of produce per head:	China Company of the	" 7037
Wool		\$ 3.67
Net increase in value of sheep		9.42
TOTAL VALUE PRODUCED		\$13.09
DEMILIDADE ADOME DELIZA COGA DELIZACIO	\(\text{\tint{\text{\tint{\text{\tin}\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\tex{\tex	
RETURNS ABOVE FEED COST PER HEAD		3.70
Returns for \$100 OF FEED		\$156
	********	\$\psi_{\psi}
Price per cwt. of lambs sold		\$14.26
Price per 1b. wool sold (cents)		50.0
Pounds of wool per sheep sheared		8.9
2. 25.		
Number of ewes kept for lambing		75
Per cent of lamb crop**	desprintly representation	103
Per cent death loss**	-	10.5
	- Completende	
Pounds of sheep produced		4445
No of head of shows		
No. of head of sheep*	-	99

^{*}Two lambs under six months of age considered as one head.

**Lambs which die during month of birth are not included.

CHICKENS

The average return over feed from the 9 flocks included in this report was \$1.64 cents per hen (Table 21).

Some of the important factors that affected the return over feed were:

- 1. Quantity of feed required per hen
- 2. Price received per dozen eggs sold

3. Eggs laid per hen

4. Per cent of hens that are pullets

5. Percentage death loss of hens

Table 21. Feed Costs and Returns from Chickens, 1961*

Items	Your Farm	Average of 9 Farms
Feed per hen, 1bs.:		· · · · · · · · · · · · · · · · · · ·
Grain		20
Commercial feeds		75 46 121
Total concentrates		7 27
Skim milk and buttermilk	-	151
TOTAL FEED COST PER HEN		\$3.54
Value of produce per hen:		#2024
Eggs sold and used in house	-	\$5.32
Net increase in value of chickens		14
TOTAL VALUE PRODUCED	-	\$5.18
RETURNS ABOVE FEED COST PER HEN		dia (1.
OSOT I SIC IIIAV		\$1.64
RETURNS FOR \$100 OF FEED		\$146
Price rec'd. per doz. eggs sold (cts)		. 29.5
Eggs laid per hen		215
A		-
Ave. no. hens on farm during year		1567
Per cent of hens that are pullets Per cent death loss of hens		98
Number of chicks started:		9
Lbs. chickens produced	-	2612
ourogoup broddead		3641

^{*}Includes feeds and returns from laying flock and rearing flock.

Table 21. Summary of Miscellaneous Items by Years

	1953-	57 1950	3 305	0 7060	70/7
Acres in Farm	エクノラー	21 1720	195	9 1960	1961
Small grains	75.8	53.6	34.	3 64.5	5 83
Cultivated crops	84.9	108.2			
Tillable land in hay	32.3	30.1		C	
Tillable land in pasture	12.3				■
Soil Bank		10.9		STATE OF THE PARTY OF	
Tillable land not cropped	.8	5.1			25
Total tillable land	2.0	1.8		1.9	
	208.1	210.0			
Wild hay & non-tillable pasture Other non-tillable land		22.8	AL STATISTICAL STATISTICS		
Total name in farm	32.9	28.7			
Total acres in farm	271.1	261.5	303.0	318.7	348
Yields per acre					
Flax, bu.	9.9	13.8	8.9	ר כד (370 0
Barley, bu.	29.3	46.9			
Wheat, bu.	18.9				
Oats, bu.	38.5	31.0			
Oat silage, ton		55.8			N-100 (100 (100 (100 (100 (100 (100 (100
Corn grain, bu.	1.9.0	5.1			
Soybeans, bu.	48.9	50.0			
Corn silage, tons	19.6	18.7			
Alfalfa hay, tons	8.6	10.1			
Alialia hay, tons	2.6	2.5	2.6	2.8	2.0
Measures of fm. org. & management:					
Percent of land in high ret.					
crops	51.3	רז מ	15.0	50.5	
Prod. L. S. units per 100 A	18.6	53.2			
Size of business, work units		22.6	#50000 F 000		
Work units per worker	345	362	519	469	540
Exp. per work unit	231	256	325	312	338
Trys ber work duit	\$10.84	\$13.36	\$11.64	\$10.64	\$10.44
Return above feed cost per:					
Dairy cow	\$77.11	\$732.24	\$715.92	\$119.44	#171 1E
An. unit in beef breeding herd	12.86	87.02	76.52	55359	出土(なっ土)
100 lbs. feeder cattle produced	2.10	9.95	2.30		
100 lbs. hogs produced		9 02	1.07		5.41
Head native sheep	5.58	7.02	1.01		5.34
Hen	1.22			• 97	3.79
	1044	1.13	14	. 78	1.64
'eed cost per:					
Dairy cow	\$133.55	142-28	\$136.18	\$11.7.80	9771. ET
An. unit in beef breeding herd	81.14	67.20	57.94	51.84	
100 lbs. feed catte produced	20.22	14.19	17.92		73.54
100 lbs. hogs produced	12.17	10.02		16.22	15.56
Head native sheep	9.49	10.02	9.91	10.05	9.83
Hen		2 00	2 00	10.83	9-39
200300767	3.85	3.28	3.95	2.98	3.54

Summary of Miscellaneous Items by Years (continued)

	1953-5	7 1958	1959	1960	1961
Misc. livestock information:					
No. dairy & dual purpose cows Lbs. beef produced Litter of pigs Lbs. hogs produced No. of hens Lbs. butterfat per milk cow No. of pigs weaned per litter Percent lamb crop	12.8 6884 9.2 16841 218 275 6.5	21.8 36378 10.0 24982 391 305 6.3	17 30424 33173 291 311 7.3	10.4 12899 19.9 27936 276 324 6.5	13624 19.3 40612 317 364.6
Eggs per hen	183	164	199	161	215
Price received per: Lb. butterfat sold as cream Lb. butterfat sold as milk 100 lbs. fat cattle 100 lbs. hogs 100 lbs. lambs Lbs. of wool Doz. eggs	\$.653 1866 18.52 17.92 18.76 .403	24.86 20.15	.887 25.10 14.05	22.89 15.37 17.84 .443	.888 22.36 16.24 14.26
Corn, bu. Corn, bu. Oats Barley, bu. Alfalfa hay, ton Timothy hay, ton Corn silage, ton Soybean meal, cwt.	\$ 1.24 .65 .98 17.40 10.21 5.88 3.91	\$.98 .535 .90 17.75 10.25 6.00 3.50	\$.98 .58 .92 22.00 14.15 6.60 3.85		\$.94 .60 .93 19.50 13.90 6.75 4.35

	1953-	nings by		1060	7075
No. of farms	40			-	
	ЦC	32	16	38	35
Farm receipts:					
Dairy and dual purpose cattle	di en i	å 50 <i>e</i>			
Dairy products	\$ 714				
Party products	2263				
Beef cattle	2172		15373	6033	5802
Hogs	2742	2736	5908		
Sheep and wool	143	69			
Horses	7				2000
Poultry	DOCAL			112	
Eggs	822				
Corn	1548	(2)			
Small grain			100000000000000000000000000000000000000	A STATE OF THE PARTY OF THE PAR	3278
Other crops	1337		1		
	861		777. 7707.00		2297
Machinery and equipment sold	198	Marine Control		256	361
Income from work off farm	326	406	319	347	572
Miscellaneous	181	208	217	180	526
Total farm sales	\$13414	\$19625		\$22801	\$29471
ncrease in farm capital	1267	3339		4044	1473
amily living from the farm	251	237	244		
Total farm receipts	\$14932	\$23201		286	316
arm Expenses:	WITCH 205	あるうちの T	\$32407	\$27131	\$31260
	A 07.1	d -00			
Dairy and dual purpose cattle	\$ 214	\$ 288	\$	\$ 236	\$ 140
Beef cattle bought	1061	4475	5250	3549	3477
Hogs bought	251	589	4165	745	761
Sheep bought	27	93	591	345	L42
Horses bought	5		====		
Poultry bought	101	101	253	118	321
Misc. livestock expense	239	339	530	482	
Feed bought	1669	2440			597
Fertilizers	333	382	6489	3877	4623
Other crop expenses:			901	714	933
Custom work hired	524	552	874	790	855
	459	575	674	588	752
Gas, oil and grease bought	792	970	1127	1130	1123
Repairs for mechanical power	347	441	555	562	620
Repair & upkeep of real estate	154	224	141	166	257
Rep. & upkeep of crop machinery	279	380	498	388	565
Rep. & upkeep of livestock	85	87	156	92	
Wages of hired labor	421	499	896		146
Electricity expense	144	171	246	431	876
Real estate & per. Prop. taxes	538	666		238	278
General farm expense			943	966	1169
	167	211	321	270	304
Total cash operating expense	\$ 7810	\$13488	\$24610	\$15657	17839
Capital purchases-mech. power	646	770	804	487	614
-crop and gen. mach.	897	878	1400	1214	1152
-livestock equipment	216	210	688	369	424
bldg. and fencing	546	605	603	602	1566
Total farm purchases	\$10115	\$15946	\$28105		
Decrease in farm capital				\$18329	\$21595
Interest on farm capital		01.04	2600		
Unpaid family labor	2045	2486	3609	3570	3530
Board funnished him to	328	288	263	381	345
Board furnished hired labor	96	101	135	40	100
Total farm expense	\$12584	\$18821	\$32112	\$21990	\$25570
-					ゲーンン
Labor Earnings	\$ 2348	\$ 4380	\$ 295	\$ 5141	# E600
Net Cash Income		445	1000		\$ 5680
	*** TENENO	第 3679	\$ 3138	\$ 4472	\$ 7876