Seventh annual report of the Coon Creek farm account work: Coon Valley, Wisconsin. Part 1--small farms (January 1940 to January 1941). Part 1 January 1940 to January 1941

Wisconsin Agricultural Experiment Station in cooperation with soil conservation service and bureau of agricultural economics, United States Department of Agriculture
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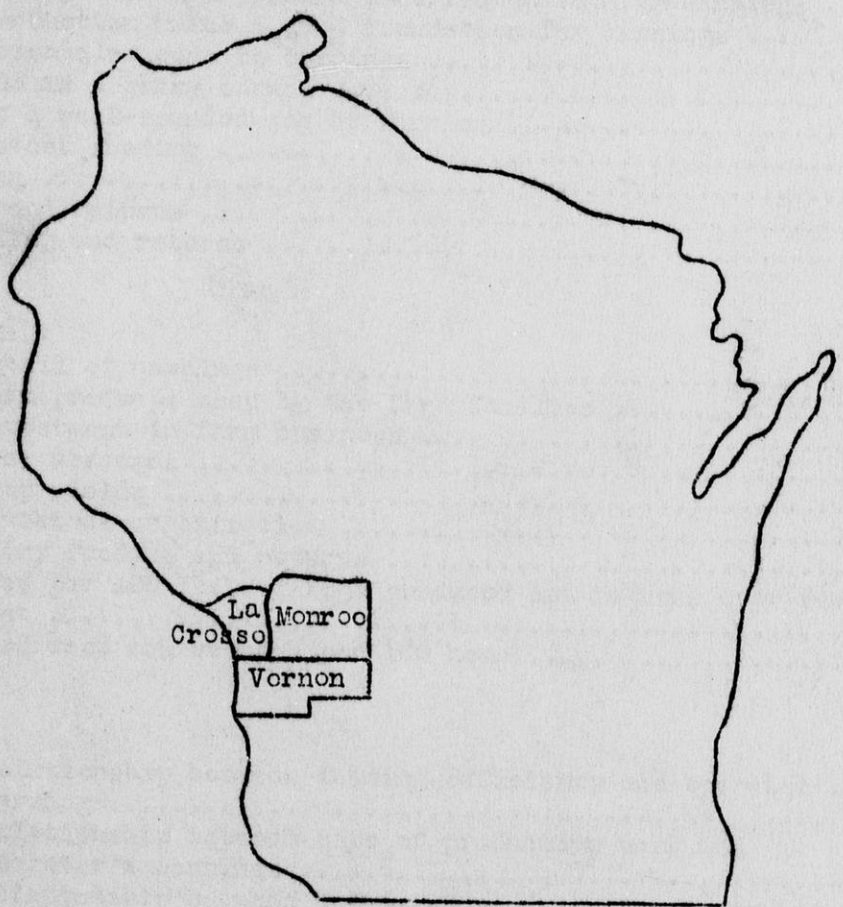
VERNON, MONROE, AND LA CROSSE COUNTIES

SEVENTH ANNUAL REPORT OF THE COON CREEK FARM ACCOUNT WORK COON VALLEY, WISCONSIN

Part 1 - Small Farms

(January 1940 to January 1941)



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Wisconsin Agricultural Experiment Station
in cooperation with
Soil Conservation Service and
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United States Department of Agriculture

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SEVENTH ANNUAL REPORT OF THE COON CREEK FARM ACCOUNT WORK COON VALLEY, WISCONSIN

Part 1 - Small Farms[1]

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Let us look at the farm records to see what can be done to increase earnings on your farm. As we read this report, comparisons can be made between your farm and the average of similar farms in your neighborhood. Comparisons can also be made with farmers who do a better than average job on some parts of the farm business.

Summary of Earnings

The net returns for labor and management of the operators (table 1) of the 24 small farms included in this report was $911 or an average of over $20 per crop acre as compared with $15 per crop acre for the group of small farms in 1939. These amounts were left after paying all farm expenses and allowing for changes in inventorial value, unpaid family labor and interest on investment. Operator's earnings on these farms ranged from $257 to $1507, three farms being under $600 and 7 farms above $1200. Some of the reasons for these differences are discussed in this report.

Income and Expenses

As usual, gross income was greater on the highest net earnings farms than on those yielding lower earnings, table 1. While this advantage was due chiefly to greater gross receipts from dairy and tobacco production, receipts from all other sources were also about average. The highest net earning farms had slightly higher farm expense than the low earning farms.

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[1]The summary of Coon Valley farm records for 1940 has been prepared in two sections, Part 1 for farms with less than 65 acres of crops and Part 2 for farms above this size.

[2]Associate Soil Conservationist, Cooperative Agent, Division of Research, Soil Conservation Service; and Professor of Agricultural Economics, University of Wisconsin, respectively.

Table 1.--Detail of earnings, 24 small farms, Coon Creek, 1940

	Your farm	Av.24 farms	7 highest profit farms	7 lowest profit farms
Cash receipts				
Butterfat sales	____	$955	$976	$812
Cattle sales	____	257	266	236
Poultry and egg sales	____	111	54	100
Other livestock sales	____	160	235	106
AAA payment	____	62	55	57
Tobacco sales	____	274	380	198
Other crop sales	____	31	25	25
Miscellaneous income	____	172	70	81
Cash farm receipts	____	$2022	$2061	$1615
Produce used in the home	____	211	252	211
Inventory increases	____	578	1045	248
Gross receipts	____	$2811	$3358	$2074
Cash expenses				
Feed purchased	____	139	107	147
Farm share of auto expense ..	____	82	83	65
Equipment expense	____	50	53	43
Livestock expense	____	45	37	35
Crop expense	____	117	129	99
Labor hired	____	102	160	89
Real estate expense	____	20	17	11
Taxes	____	123	146	108
Insurance	____	17	19	13
Miscellaneous expense	____	25	28	25
Cash operating expense	____	$720	$779	$635
Livestock bought	____	68	111	51
Real estate improvement	____	180	239	62
Equipment bought	____	254	170	252
Inventory decreases	____	57	--	62
Unpaid family labor	____	137	144	149
Farm expense	____	$1416	$1443	$1211
Net farm income	____	$1395	$1915	$ 863
Interest on investment	____	484	492	466
Operator's earnings	____	$911	$1423	$397

Operator's earnings:	
Large farms (Part 2-summary)	$1590
Large and small farms	1220

Farm Produce Used in the Home

Table 2.--Farm products used by the farm families, 24 small farms, Coon Creek, 1940

	Your farm Quantity	Your farm Value	Average of 24 farms Quantity	Average of 24 farms Value	7 highest profit farms Quantity	7 highest profit farms Value	7 lowest profit farms Quantity	7 lowest profit farms Value
Eggs, dozen	____	$ ____	121	$16	150	$19	90	$12
Poultry, number	____	____	15	7	16	7	17	8
Milk, quarts	____	____	1019	30	1067	32	750	23
Cream, pints	____	____	133	13	246	25	123	12
Veal, pounds	____	____	44	3	50	4	73	5
Pork, pounds	____	____	461	23	624	31	571	28
Beef, pounds	____	____	19	1	--	--	64	4
Potatoes, bushels	____	____	25	12	27	13	27	13
Canned products, qts.	____	____	158	24	176	28	131	20
Garden produce		____		46		57		46
Wood, cords	____	____	9	36	9	36	10	40
Average value per farm		____		$211		$252		$211
No. persons in family		____		4.6		5.1		4.6

Farm produce used by the farm families amounted to almost 1/4 of the net income on these farms. About one-half of this amount came from products such as fruit, vegetables and fuel wood, for which a ready market is not available. This is a good way of utilizing family labor which may not otherwise be fully employed. The range in income from this source was from $97 to $426. While the amount of food and fuel that can be used by the family depends on the size of family and the size of the home, this item is of considerable importance on small farms.

Wood Products Used

In addition to obtaining fuel from the farm, an average of 204 posts were cut on 33 of the farms in this area on which these records were kept. The average value of home grown posts and fuel used on the farm and in the home was $73 or an average of about $4 per acre[1]. Lumber, averaging 4,500 board feet per farm was sawed by four farmers. Items such as these reduce the cash expenses of the farm and are important sources of farm income.

Size group[1]	No. farms	Acres[1] woods	Cords, fuel No.	Cords, fuel Value	Posts No.	Posts Value	Total value	Value per acre
20 acres and under	20	11	10	$42	178	$21	$63	$5.73[2]
Over 20 acres	13	29	15	62	244	29	91	3.14
Average	33	18	12	49	204	24	73	4.05

[1]The acreage of woods was computed by adding one-half of pastured woods to the ungrazed woods acreage.

[2]These farmers undoubtedly cut more than the annual growth.

Investment

While the farms on which the highest earnings were obtained were slightly larger and comprised larger investments than the average of all of the 24 farms in this group, table 3, differences in total investment does not appear to have been the principal cause for differences in earnings.

Table 3.--Investment in real estate, machinery, supplies, feed, productive livestock, and horses, 24 small farms, Coon Creek, 1940

	Your farm	Av.24 farms	7 highest profit farms	7 lowest profit farms
Crop acres	____	44.6	48.8	37.5
Land	____	$3307	$3365	$3459
Buildings	____	3516	3521	3136
Machinery and equipment	____	723	602	777
Supplies	____	208	374	177
Feeds	____	489	490	415
Productive livestock	____	1178	1175	1133
Horses	____	265	313	231
Total investment	____	$9,686	$9,840	$9,328

Crop Production

The weather was favorable for the production of crops in 1940. As a result, yields of corn, grain, hay and pasture were above normal and excellent stands of hay and pastures were obtained from new seedings. Tobacco yields were good except where the crop was damaged by hail, but the quality was poor on many farms where hail, rust or shed burn occurred.

Hay acreages were large both on the highest earnings farms and on those with low earnings, comprising 61% of all cropland on the former and 60% on the latter farms. A slightly larger acreage of tobacco was also raised on the highest earnings farms, table 4. This undoubtedly made possible the larger sales of dairy products and tobacco. The differences between the two groups in crop yields, table 5, do not appear to have contributed to the difference in income except possibly in the case of tobacco.

Table 4.--Crop acreages of 24 small farms, Coon Valley, 1940

	Your farm	Av. 24 farms	7 highest profit farms	7 lowest profit farms
	acres	acres	acres	acres
Alfalfa hay	____	3.1	3.5	2.2
Alfalfa and grass hay	____	10.6	12.7	12.8
Clover and timothy hay	____	6.5	8.7	1.1
Timothy and grass hay	____	3.1	3.5	3.0
Annual legume hay	____	1.8	1.6	3.0
Total hay	____	25.1	30.0	22.1
Corn silage	____	5.2	4.8	3.8
Corn stover	____	.1	--	--
Corn grain	____	6.0	6.3	5.8
Total corn	____	11.3	11.1	9.6
Oats	____	2.6	1.2	3.1
Barley	____	1.2	1.2	1.3
Other grain	____	2.2	2.0	--
Total grain	____	6.0	4.4	4.4
Tobacco	____	1.8	3.0	1.1
Other	____	.4	.3	.3
Total acres in crops	____	44.6	48.8	37.5
Total acres in farm	____	118.8	119.8	122.9

Table 5.--Crop yields, 24 small farms, Coon Creek, 1940

	Your farm	Av. 24 farms	7 highest profit farms	7 lowest profit farms
Alfalfa hay, tons	____	2.1	1.9	3.0
Alfalfa and grass hay, tons	____	1.8	1.4	1.8
Clover and timothy, tons ..	____	1.0	1.2	1.1
Timothy and grass, tons ...	____	1.2	1.3	0.9
Annual legume, tons	____	2.0	2.6	1.7
Corn silage, tons	____	5.2	9.8	10.6
Corn grain, bushels	____	58	63	54
Oats, bushels	____	43	54	35
Other grain, bushels	____	57	58	--
Tobacco, pounds	____	1499	1651	1397

Livestock Production

More hogs and fewer sheep were kept on the highest earning farms than on the others, table 6. The former group also had a larger crop acreage per farm, and had 1.9 acres of crops per animal unit as compared with only 1.7 acres of crops per animal unit on the lower profit farms. The average butterfat production per cow was 256 pounds and livestock returns per $100 worth of feed on the high earnings farms was $237 as compared with averages of 204 pounds and $184 respectively for the other group.

Table 6.--Livestock organization, 24 small farms, Coon Creek, 1940

	Your farm	Av.24 farms	6 highest profit farms	6 lowest profit farms
Cows, number	____	13	13	12
Young stock, number	____	8	9	8
Bulls, number	____	1	1	1
Pork produced, cwt.	____	21	32	17
Poultry, number	____	63	46	65
Sheep, number	____	5	1	7
Horses, number	____	3	3	3
Crop acres per animal unit	____	1.9	1.9	1.7

What Factors Contribute to Larger Earnings?

Efficient use of feed adds dollars

Efficient use of feed was again one of the most important factors in producing high earnings, figure 1. Livestock returns for feed is important because feed constitutes the largest single item of cost in livestock production. Highest returns from feed are usually obtained from higher producing livestock. Good quality roughage, grain, and pasture are also essential to economical production. Differences in returns from feed fed to dairy cows, hogs, and poultry are given in tables 7, 8, and 9.

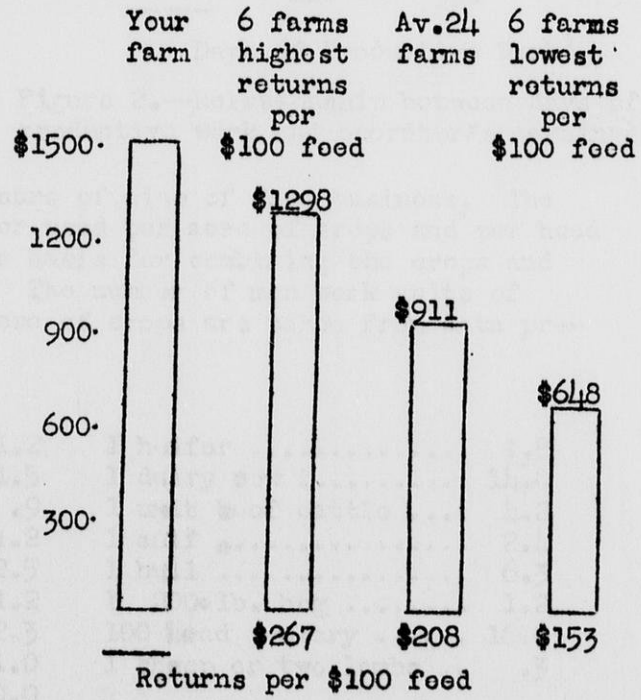

Figure 1.--Relationship between feeding efficiency and operator's earnings.

Careful pasturing of stubble fields, new seedings, and meadows in the fall will cut down the amount of barn feeding required. Skimmilk and whey should be fed to livestock which can use them to best advantage. Corn stover and corn fodder may be fed to work horses, and in limited amounts to young cattle and dry cows.

The larger volume of business again yields greater returns

As usual, volume of business[1] apparently influenced earnings on these farms in 1940, figure 2. You may be able to increase earnings by substituting high value for low value crops, by increasing yields of crops, larger purchases of feeds, more efficient feeding, and greater butterfat per cow, as well as by adding more land to the farm. Large production per acre or per animal unit is necessary if a large volume of business is to be maintained on a small farm.

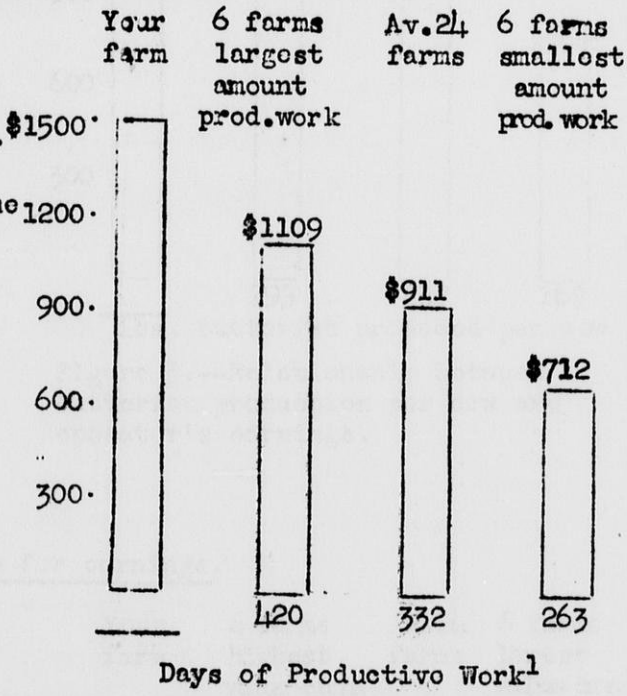

Figure 2.--Relationship between days of productive work and operator's earnings.

[1] Days of productive work are used as a measure of size of farm business. The average number of ten-hour days of man labor used per acre of crops and per head of livestock other than horses is used as a basis for combining the crops and livestock into one single measure of size. The number of man work units of productive work for each animal and each acre of crops are taken from data presented in Wisconsin Research Bulletin 83.

Days of productive work to care for:

1 acre alfalfa silage (1 cutting)	1.2	1 heifer	1.8
1 acre alfalfa	1.5	1 dairy cow	14.0
1 acre other hay	.9	1 unit beef cattle	4.2
1 acre oats or barley	1.2	1 calf	2.4
1 acre corn grain	2.5	1 bull	6.3
1 acre corn hogged off	1.2	1 200 lb. hog	1.2
1 acre corn silage	2.3	100 head poultry	16.0
1 acre clover or timothy seed	1.0	1 sheep or two lambs ..	.3
1 acre tobacco	20.0		
1 acre canning peas or soybean silage.	1.9		

High butterfat production per cow contributes to high earnings.

Average labor earnings were higher on farms with the heavier butterfat production per cow, figure 3. Heavy production of butterfat per cow tends to be profitable because:

(1) Higher producing cows usually give higher returns for feed than low producers.

(2) High butterfat production provides a larger volume of business than low production.

(3) Labor and equipment is more efficiently used when better producing cows are kept.

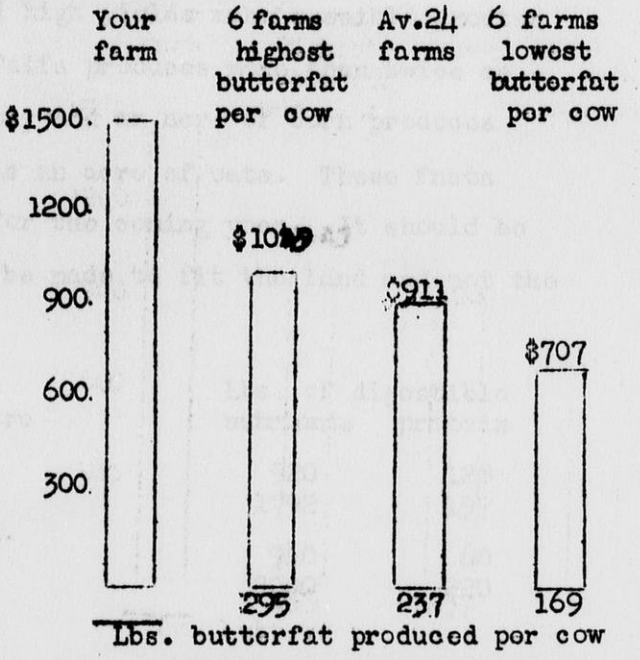

Figure 3.--Relationship between butterfat production per cow and operator's earnings.

Good Crop production makes a good foundation for earnings.

In spite of fewer crop acres and less production per cow, farms producing the highest value of crops per acre showed the higher labor earnings than the average, figure 4. If you are not raising legume hay or if your yields were less than 2¼ tons per acre last year, meadow improvement should be first on your "must" list for the coming year. Hay land should be reseeded before quack and blue grass take the place of the legumes. Tobacco yields have been favorable during the past few years. Tobacco may be desirable if it fits into your soil conservation program and your labor supply. The acreage of small grain should be kept to a minimum.

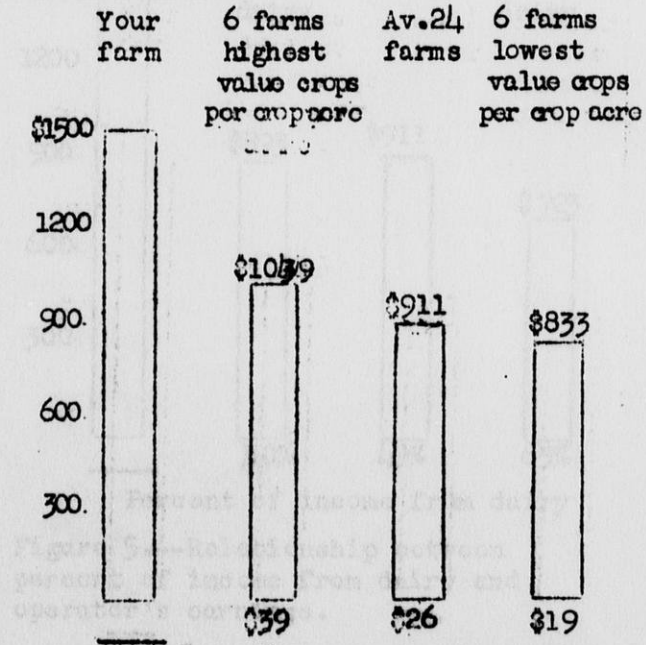

Figure 4.--Relationship between value of crops per crop acre and operator's earnings.

Production of high yielding crops is a means of increasing volume of business as the right kind of feed crops and high yields make possible greater livestock carrying capacity. An acre of alfalfa produces more than twice as much feed value per acre as an acre of timothy and an acre of corn produces nearly twice as many dollars worth of feed as an acre of oats. Those facts should be kept in mind when plans are made for the coming year. It should be remembered that the cropping program should be made to fit the land and not the livestock.

Average yield	Crop	Value per acre	Lbs. of digestible nutrients	protein
40 bushel	Oats	$12	920	128
40 bushel	Corn	20	1792	157
1 ton	Timothy hay	8	940	60
2 tons	Alfalfa hay	20	2000	220

Diversification also adds to earnings.

Diversified production usually is desirable from the net earnings standpoint, figure 5. Study possibilities on your farm to see if your present enterprises are worked to the best advantage and to see if another source of income may be developed.

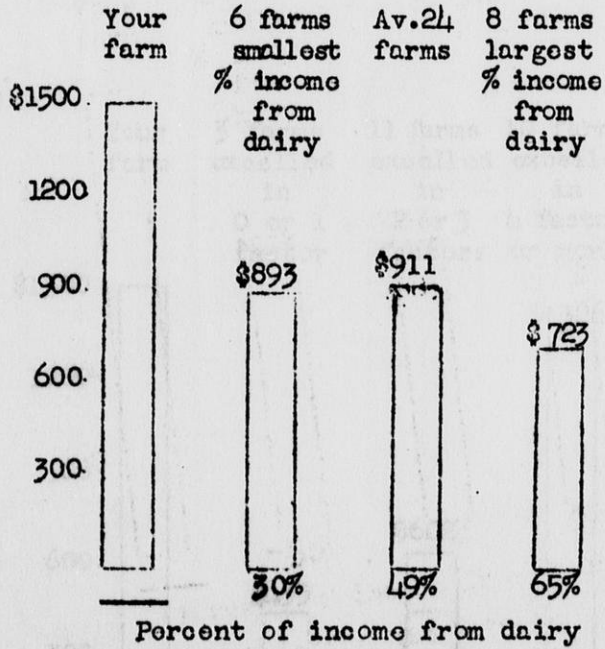

Figure 5.--Relationship between percent of income from dairy and operator's earnings.

A penny saved is a penny earned.

Low power and equipment costs per unit of production should help to keep earnings high. Weigh carefully the needs for, as well as the costs of, new equipment before it is purchased. Operators of small farms may save money by joint ownership of some of the machinery and equipment. Machinery that is used only for a few days each year may be rented.

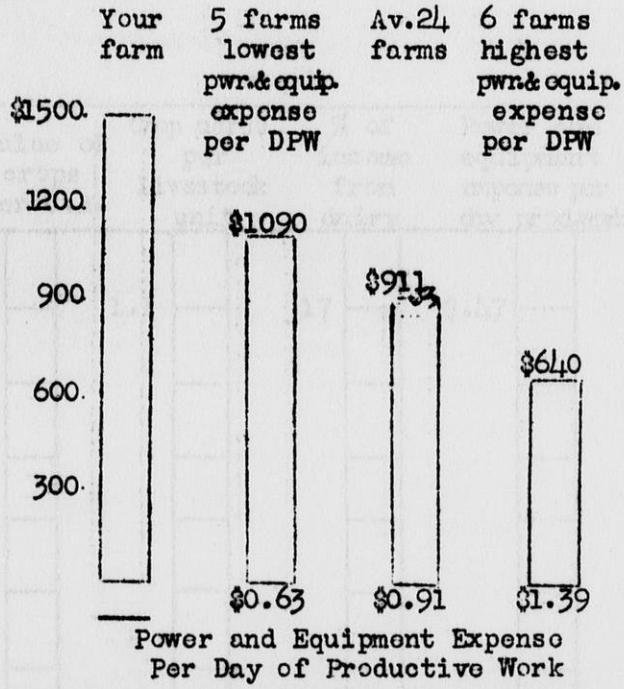

Figure 6.--Relationship between power and equipment expense per day of productive work and operator's earnings.

It pays to do a well-rounded job of farming.

That it pays to do a well-rounded job of farming is indicated in figure 7 which shows that operators who are above average in 4, or more, of the 6 important factors, days of productive work, livestock returns for feed, pounds of butterfat per cow, value of crops per crop acre, diversification and power and equipment efficiency, have more than twice as large operator's earnings as those who are above average in two factors or less. None of the farmers were above average in all six factors.

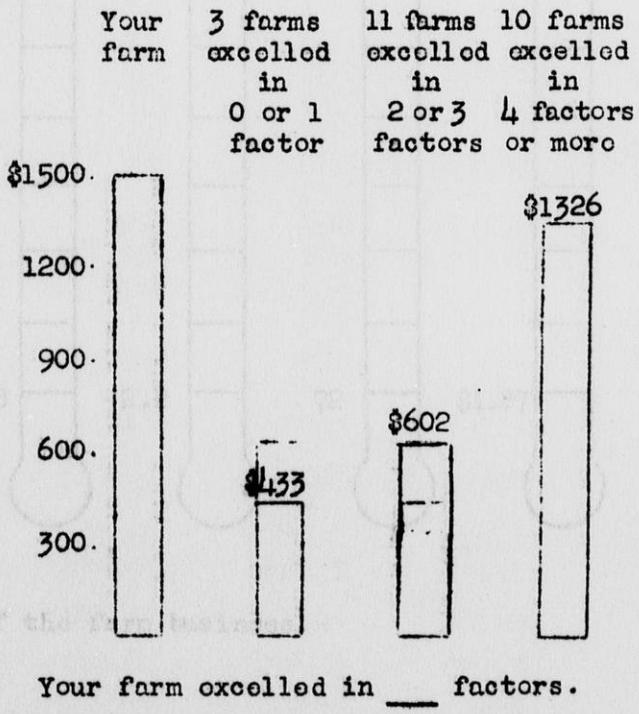

Figure 7.--Relationship between number of factors in which farm excels and operator's earnings

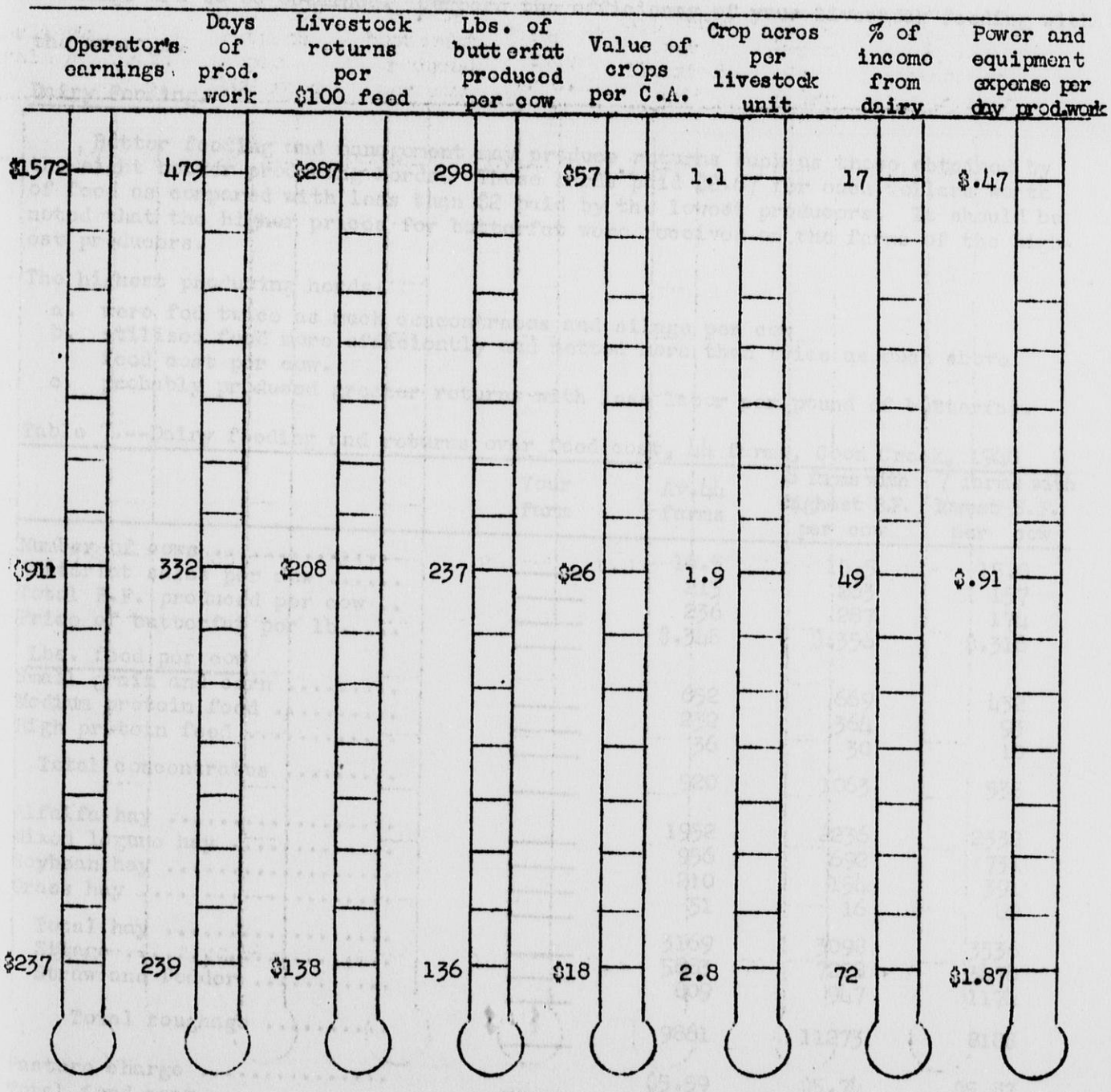

Figure 8.--Find the strong and weak parts of the farm business.

Efficient Livestock Feeding

Efficient production in major farm enterprises is necessary if high operator's earnings are to be obtained. Compare the efficiency of your livestock feeding with the average.

Dairy Feeding.

Better feeding and management may produce returns such as those obtained by the eight better producing herds. These herds paid $2.67 for each dollars worth of feed as compared with less than $2 paid by the lowest producers. It should be noted that the higher prices for butterfat were received on the farms of the highest producers.

The highest producing herds:

a. were fed twice as much concentrates and silage per cow
b. utilized feed more efficiently and netted more than twice as much above feed cost per cow.
c. probably produced greater returns with less labor per pound of butterfat.

Table 7.--Dairy feeding and returns over feed cost, 44 farms, Coon Creek, 1940

	Your Farm	Av. 44 farms	8 farms with highest B.F. per cow	7 farms with lowest B.F. per cow
Number of cows	____	16.5	15.5	15.0
Butterfat sales per cow	____	215	263	157
Total B.F. produced per cow	____	236	287	174
Price of butterfat per lb.	____	$.348	$.356	$.316
Lbs. feed per cow				
Small grain and corn	____	652	669	432
Medium protein feed	____	232	364	93
High protein feed	____	36	30	10
Total concentrates	____	920	1063	535
Alfalfa hay	____	1952	2236	2332
Mixed legume hay	____	956	692	731
Soybean hay	____	210	154	391
Grass hay	____	51	16	82
Total hay	____	3169	3098	3536
Silage	____	5883	7228	3478
Straw and fodder	____	809	947	1174
Total roughage	____	9861	11273	8188
Pasture charge	____	$5.59	$5.74	$5.87
Total feed cost	____	$39.53	$43.90	$34.12
Total value of butterfat	____	$82.17	$102.46	$55.06
Returns over feed cost	____	$42.64	$58.56	$20.94
Returns per $100 of feed	____	$242	$268	$195

Hog Feeding and Returns.

The better hog men:

a. produced hogs with a third less corn and grain per pound of gain
b. fed more protein concentrates
c. received $1.79 per dollar's worth of feed consumed by the hogs, while the less efficient swine herds did not pay full market price for the feed consumed.

A complete swine sanitation program:

a. is a corn and grain saver. It also works well in a soil conservation program. Save both ways.
b. may make it possible for you to raise more hogs, thereby increasing your volume of business.
c. reduces death losses and produces faster gains.
d. is a program of cleanliness:
    1. Clean hog house and feeding floor and scald with hot water and lye.
    2. Wash the uddors of the sows before farrowing.
    3. Use rotation hog pasture.

Table 8.--Feed per 100 lbs. of hogs produced and returns over feed cost, 31 farms, Coon Creek, 1940.

	Your farm	Av.31 farms	6 farms with highest returns over feed cost per cwt. pork	10 farms with lowest returns over feed cost per cwt. pork
Pounds of pork produced	____	4974	6389	4779
Average marketing weight	____	221	235	206
Lbs. feed per cwt. pork				
Corn	____	240	181	324
Small grain	____	129	114	158
Total grain	____	369	295	482
Commercial feed	____	8	11	7
Total concentrates	____	377	306	489
Milk or buttermilk	____	461	165	827
Feed cost per cwt. pork	____	$4.33	$3.34	$5.74
Price of pork per cwt.	____	5.71	5.99	5.58
Returns over feed cost per cwt. of pork	____	1.38	2.65	-0.16
Returns per $100 feed	____	$132	$179	$97
Range in returns over feed cost			3.03	-2.13
Range in feed per cwt. of pork produced*			208 lbs.	544 lbs.

*Does not include skimmilk or buttermilk.

Poultry Feeding and Returns.

1. The poorer flocks did not pay for the feed consumed; the better flocks doubled the selling price of the feed.

2. Only twelve of the 44 farms on which these records were kept had flocks of more than 100 hens, and only 6 of these had more than 200 hens. Small flocks require about as much labor as a flock of 150 or 200 and cannot be expected to provide any substantial income.

3. The farms with flocks of over 100 hens netted $131 over feed cost and flocks with over 200 hens netted $219 over feed cost.

4. High egg production per hen is essential to profitable egg production.

5. Increasing the size of the poultry flock is a good way of adding to the volume of business on the small farm, without adding to the labor load.

Table 9.--Feed cost and returns per 100 hens, 35 farms, Coon Creek, 1940

	Your farm	Av.35 farms	7 farms with highest returns over feed cost per 100 hens	8 farms with lowest returns over feed cost per 100 hens
Average number of hens	____	108	96	73
Number of eggs per hen	____	126	186	78
Average lbs. feed per 100 hens				
Corn and small grain	____	7,492	10,654	7,312
Commercial feed	____	2,705	2,818	2,493
Total feed used	____	10,197	13,472	9,805
Milk	____	3,168	6,777	652
Feed cost per 100 hens				
Corn and small grain	____	$77.58	$111.75	$77.90
Commercial feed	____	52.27	58.92	46.90
Total concentrates	____	$129.85	$170.67	$124.80
Milk	____	4.75	10.16	.98
Total value of feed	____	$134.60	$180.83	$125.78
Value of egg sales	____	$156.83	$256.20	$ 59.00
Value of poultry sales	____	38.22	72.05	15.61
Value of produce used in home..	____	30.79	45.40	45.73
Gross poultry returns	____	$225.84	$373.65	$120.34
Change in inventory	____	-21.20	- 7.02	-25.56
Total credits per 100 hens ..	____	$204.64	$366.63	$ 94.78
Returns over feed cost per 100 hens	____	$70	$185	$-31
Returns per $100 feed	____	$152	$203	$ 75