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Preliminary Report

Business Analysis of 181 General Crop, 11 Dairy and 10 Fruit Farms, Twin Falls County, Idaho, 1921

by

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CONTENTS

PRELIMINARY REPORT

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INTRODUCTION

The study of farm organization begun in the vicinity of the town of Twin Falls, Idaho, in November, 1919, by the Department of Farm Management and Farm Economics of the University of Idaho Agricultural Experiment Station in cooperation with the Bureaus of Plant Industry and Agricultural Economics, United States Department of Agriculture, has now been carried on for three years, that is for the crop years 1919, 1920, and 1921. The business analysis of 200 farms for 1919 has been published as Idaho Agricultural Experiment Station Bulletin No. 123. The cost of producing and the relative profitableness of the seven leading crops for 1919 and 1920 has been published as Idaho Station Research Bulletin 2. The business analysis of 192 farms for 1920 also has been issued as a preliminary mimeographed report.

This report presents (1) the business analysis of the farms studied for the crop year 1921; (2) a comparison of the financial returns of the general cash crop farms for the three years, 1919, 1920 and 1921; and (3) the average crop yields secured and the prices received for crops during the three-year period.

A separate report dealing with the cost of producing and the relative profitableness of the crops grown in 1921 will be issued. During June and July 1922 usable records were obtained for 181 general crop farms, 11 dairy farms and 10 fruit farms. In the case of the fruit farms, the apple was the chief source of the fruit income.

BUSINESS ANALYSIS OF 181 GENERAL CASH CROP FARMS

In analyzing the business of the 181 general crop farms they were first arranged into three size-groups. The first group contains all farms of 40 acres and less, the second those ranging from 41 to 80 acres inclusive, and the third all over 80 acres in size. In the case of rented

NOTE.—Mr. S. B. Nuchols, Agronomist, in the Office of Sugar Plant Investigations, Bureau of Plant Industry, assisted in collecting the data which forms the basis of this paper. In the preparation of the paper, Mr. Byron Hunter represents both the University of Idaho is due Miss Edna Bigelow for the compilation of these data and to the farmers interviewed for the information furnished concerning their farm business.

farms the capital, receipts and expenses of the tenants and landlords were combined and the records then used on an owner basis. In studying this report the reader should remember that the data presented in all of the tables except number VIII are averages and that the first ten tables pertain only to the season of 1921.

Business Summary by Size of Farm

Table I presents a brief summary of the business of the 181 general crop farms arranged in groups according to size of farm. Note from Table I that the return to capital for the group of smallest farms was 0.8 per cent, for the middle size-group 1.6 per cent, and for the group of largest farms 2.0 per cent. Note also that the average value of land, beginning with the smallest size-group, was $289, $261, and $250 per acre, respectively. The variation in the return to capital, therefore, is is partly due to the difference in the value of land in the three groups. If, however, all land be uniformly valued at $250 per acre, the average return to capital for the respective groups would be 1.0 per cent, 1.7 per cent, and 2.0 per cent. It will thus be seen that the first size-group (the smallest farms) gave the lowest return to the farm capital, and the third size-group (the largest farms) the highest. For three consecutive years (1919 to 1921) the group of smallest farms gave the lowest return to the farm capital. During this same period the group of largest farms gave the highest return to capital. From this it would appear that small farms are not so well adapted to this type of farming (general cash crop) as the larger ones.

Table I. Summary of the business of 181 general cash crop farms, 1921.

	40 acres and less	41 to 80 acres	Over 80 acres	All farms
Number of farms	72	70	39	181
Average acres per farm	36	72	135	71
Average acres in crops	32	62	113	61
Average value of land per acre	$ 289	$ 261	$ 250	$ 263
Average farm capital	11,891	21,070	38,120	21,086
Average receipts	1,583	2,621	4,754	2,666
Average expenses	1,114	1,860	3,358	1,928
Average farm income	469	761	1,196	738
Interest on capital at 7 per cent	832	1,475	2,668	1,476
Average labor income	—363	—714	—1,472	—738
Average family used perquisites	323	392	470	382
Labor income plus perquisites	—40	—322	—1,002	—356
Value of unpaid family labor	64	82	118	82
Average value of operator's labor	692	813	910	786
Average return to capital, per cent	.8	1.6	2.0	1.6
Crop index (average crop yield)	103	98	100	100

The term "farm" as used in this report is the total amount of land operated from one center. It may lie in one of several tracts.

Farm capital includes the average value at the end of the year of all real estate, machinery, livestock, and other investments used in conducting the farm business. It includes the value of the farm dwelling, but not the house furnishings.

Receipts are derived from the sale of crops, the net increase from livestock, outside labor, rent of buildings, etc. If the value of crops and supplies on hand at the end of the year was greater than at the beginning, the difference is a receipt. Feed and supplies on hand at the beginning, of the year were listed at prices which prevailed at the end of the year. In computing the net increase from livestock, the value of work stock and cows on hand at the beginning of the year also was based on prices prevailing at the end of the year.

Expenses include not only the money actually paid out during the year to conduct the farm business but also the value of the unpaid labor performed by members of the farmer's family. The value of the farmer's labor is not included. Neither are personal and household expenses. If the value of crops or supplies on hand at the end of the year was less than at the beginning, the difference is considered an expense.

Farm income is the difference between receipts and expenses. It is derived from two sources, the earnings of the farm capital and the labor and management of the farmer.

Interest for the use of the farm capital was computed at 7 per cent, 7.2 per cent being the average rate paid on farm mortgages in Twin Falls County in 1919 according to the preliminary census figures.

Labor income is the amount the farmer has left for his labor and management after allowing 7 per cent interest for the use of the capital. In addition to labor income the farmer also receives the use of the farm dwelling and the farm grown food products consumed by his family.

Family perquisites represent the value of the farm grown food products consumed by the farmer's family and the residence value of the farm dwelling. The value of the food products used in boarding the farm labor is not included. For the 181 farms the average value of the family used perquisites was $382.

Labor income plus perquisites represents the full amount the farmer has left for his labor and management after allowing 7 per cent for the use of the farm capital.

Return to capital is computed as follows: To farm income the value of the family used perquisites is added. From the sum thus obtained the estimated value of the operator's labor is subtracted and the remainder is divided by the total farm capital.

Relation of the Size of Farm to the Efficient Use of Labor and Machinery

Table II reveals the fact that the size of farm has considerable in-

fluence on the possibility of efficiently organizing and operating farms.

Table II. Influence of size of farm on the efficient use of labor and machinery on 181 farms, 1921.

	Number of farms	Crop acres per 12 months of man labor	Crop acres per work horse	Value of machinery per crop acre
40 acres and less	72	35	10	$15
41 to 80 acres	70	56	13	12
Over 80 acres	39	59	15	12

Note that in the group of smallest farms there were 35 crop acres per 12 months of man labor while in the largest size-group there were 59 acres. Note also that the crop acres per work horse increased from 10 in the smallest size-group to 15 in the largest size-group. Note further that the small farms are at a disadvantage with respect to the use of machinery, there being $15 invested in machinery per crop acre in the smallest size-group and $12 per crop acre in the largest. It appears, therefore, that the larger farms can be organized and operated so as to use labor and machinery more efficiently than the small ones when the type of farming consists of the production of general cash crops. This contrast would doubtless be still greater were it not for the system of exchange work practiced on the small farms in making up the harvest crews.

Relation of Crop Yield to Return to Capital

Table III is designed to show the influence of high and low crop yields on the return to the farm capital.

Table III. Influence of crop yield on the return to farm capital, 1921.

	Number of farms	Average acres per farm	Average return to capital
Per cent of average yield:			Per cent
85 acres and less	45	62	—1.1
86 to 99	44	82	.6
100 to 114	54	81	2.3
115 and over	38	56	4.7

In the first column of Table III the 181 farms are arranged in groups according to the crop yields of the individual farms. Note that the 45 farms having crop yields of 85 or less per cent of the average returned —1.1 per cent to the farm capital. Note also that the return to capital steadily increased as crop yields increased, though not in like proportions until the last group is reached, the 38 farms having crop yields of at least 115 per cent of the average. This group of farms, it

will be noted, returned 4.7 per cent to farm capital. The importance of securing high crop yields, therefore, should be self-evident.

Relation of Size of Farm to Plane of Family Living

Farm income (See Table I) is the difference between receipts and expenses. It is derived from two sources, the earnings of the farm capital and the labor and management of the farm operator. That is, expenses in Table I do not include interest for the use of capital nor wages for the farmer. If there is no interest or other debts to pay, the sum of farm income, family perquisites, and the value of unpaid family labor represents quite accurately the average plane upon which the families on the owner farms of the respective size-groups must live. The sum of these three items averaged $856 for the group of smallest farms, $1165 for the middle size-group and $1784 for the group of largest farms. These are the sums from which, on the average, the families of these farms must live, pay interest and debts, and save. It is quite evident, therefore, that the farm business should be of sufficient magnitude to yield a satisfactory living for the farm family.

Receipts and Expenses

Table IV shows the principal sources of receipts and the average amount derived from each source for the three size-groups of farms. It also shows the principal items of expense and the average amount of each item. Expenses, it will be observed, are divided into two classes, "CASH" and "NON-CASH". Table V presents the various items of receipts and expenses in percentages in order to show the similarity or variation in the type of farming of the three groups of farms.

Table IV. Receipts and expenses on 181 general cash crop farms, 1921.

	40 acres and less	41 to 80 acres	Over 80 acres	All farms
Number of farms	72	70	39	181
Recepits from:				
Wheat	$ 322	$ 738	$1,320	$ 698
Potatoes	337	632	898	572
Sugar beets	238	184	660	308
Beans	52	173	321	157
Clover seed	108	253	383	224
Hay	50	80	218	98
All other crops	114	199	226	170
Total crop receipts	1,221	2,259	4,026	2,227
All livestock	248	272	579	328
Increase feed and supplies	23	42	24	31
Miscellaneous	86	48	125	80
Family used perquisites	323	392	470	382
Total receipts	1,906	3,013	5,224	3,048
Expenses:				
Month and day labor	42	175	708	237
Contract labor	127	157	380	193
Total hired labor	169	332	1,088	430
Taxes	255	402	744	417
Water tax	73	145	267	142
Feed bought	64	61	73	65
Threshing and hulling	47	108	198	103
Seed bought	58	105	139	94
Maintenance of auto	96	150	173	134
Repair of machinery	16	35	53	31
Repair of buildings	5	17	13	11
Repair of fences	4	10	19	10
Other expenses	119	184	316	187
Total cash expenses	906	1,549	3,083	1,624
Interest at 7 per cent	832	1,475	2,668	1,476
Depreciation	144	229	357	222
Operator's labor	692	813	910	786
Unpaid family labor	64	82	118	82
Total non-cash expenses	1,732	2,599	4,053	2,566
Total expenses	2,638	4,148	7,136	4,190

Table V. Percentage of receipts and expenses from different sources, 1921.

	40 acres and less	41 to 80 acres	Over 80 acres	All farms
Number of farms	72	70	39	181
	Per cent	Per cent	Per cent	Per cent
Receipts from:				
Wheat	16.9	24.5	25.2	22.9
Potatoes	17.7	21.0	17.2	18.7
Sugar beets	12.5	6.1	12.6	10.1
Beans	2.7	5.6	6.1	5.1
Clover seed	5.7	8.5	7.4	7.3
Hay (mostly alfalfa)	2.6	2.7	4.2	3.2
All other crops	5.9	6.6	4.3	5.6
Total crop receipts	64.0	75.0	77.0	72.9
All livestock	13.0	9.0	11.1	10.8
Increase feed and supplies	1.5	1.4	.5	1.2
Miscellaneous	4.5	1.6	2.4	2.6
Family used perquisites	17.0	13.0	9.0	12.5
Total receipts	100	100	100	100
	Per cent	Per cent	Per cent	Per cent
Expenses:				
Month and day labor	1.6	4.2	9.9	5.6
Contract labor	4.8	3.8	5.3	4.6
Total hired labor	6.4	8.0	15.2	10.2
Taxes	9.7	9.7	10.4	10.0
Water tax	2.8	3.5	3.8	3.5
Feed bought	2.4	1.5	1.0	1.6
Threshing and hulling	1.8	2.6	2.8	2.4
Seed bought	2.2	2.5	2.0	2.2
Maintenance of auto	3.7	3.6	2.4	3.2
Repair of machinery	.9	.9	.7	.7
Repair of buildings	.1	.4	.2	.3
Repair of fences	.1	.3	.3	.2
Other expenses	4.5	4.4	4.4	4.5
Total cash expenses	34.3	37.4	43.2	38.8
Interest at 7 per cent	31.6	35.5	37.4	35.2
Depreciation	5.5	5.5	5.0	5.3
Operator's labor	26.2	19.6	12.8	18.7
Unpaid family labor	2.4	2.0	1.6	2.0
Total non-cash expenses	65.7	62.6	56.8	61.2
Total expenses	100	100	100	100
	Per cent	Per cent	Per cent	Per cent
Per cent cash expenses are of total receipts	47	52	59	53
Per cent non-cash expenses are of total receipts	91	86	78	84
Per cent total expenses are of total receipts	138	138	137	137

Table V reveals the fact that an average of 64 per cent of the total receipts was derived from the sale of crops in the group of smallest farms, 75 per cent in the middle size-group and 77 per cent in the group of largest farms. This table further shows that 13 per cent, 9 per cent and 11.1 per cent of the total receipts were derived from livestock, respectively, in the three groups of farms. Hence, cash crop farming strongly predominated on these farms in 1921. While the smaller farms, on the average, derived a slightly greater proportion of the total receipts from livestock, from miscellaneous sources and family used perquisites than did the larger ones, the type of farming of the three groups varied but little. (See Table VI).

Taxes and hired labor (month and day hands and contract labor) made up the two largest items of the cash expenses, each averaging approximately 26 per cent of the cash expenses and 10 per cent of the total expenses of the 181 farms. While taxes varied widely in the several school and road districts, the average for the 181 farms was $5.85 per acre.

The non-cash expenses are made up of three items: (1) interest on the farm capital, (2) depreciation on buildings and equipment, and (3) the value of the unpaid labor performed by the farmer and members of his family. While these items are not actually paid out they represent the use of capital and services rendered. Interest was approximately 35 per cent of the total expenses for the 181 farms, depreciation 5 per cent, the operator's labor 19 per cent, and unpaid family labor 2 per cent.

Note from Table V that the cash expenses averaged 53 per cent of the total receipts of the 181 farms, and non-cash expenses 84 per cent. Note also that the total expenses equaled 137 per cent of the total receipts. Under the economic readjustments taking place in 1921 this was to be expected. Altho there was some decline in the cash expenses of oprating these farms during the year, the general price of farm products, especially that of crops, was far below the level of the price of the things the farmer had to buy. (See U. S. Dept. of Agriculture Bul. 999).

Crops

The principal crops grown in 1921 were wheat, alfalfa, clover seed, sugar beets, potatoes, and beans. A very limited amount of oats, barley, corn, and alfalfa seed were grown. From Table VI note that wheat occupied approximately 35 per cent of the total crop area of the 181 farms, hay (mostly alfalfa) 25 per cent, clover seed 10 per cent, sugar beets 9 per cent, potatoes 7 per cent, and beans 6 per cent. Approximately one-third of the field crop area was devoted to wheat, one-fourth to intertilled crops (sugar beets, potatoes, beans, and corn).

Table VI. Percentage of the field crop area devoted to different crops, on 181 farms, 1921.

	40 acres and less	41 to 80 acres	Over 80 acres	All farms
Number of farms	72	70	30	181
Average crop acres	32	62	113	61
Crop area in:	Per cent	Per cent	Per cent	Per cent
Wheat	32	36	36	35
Hay	24	24	26	25
Clover seed	9	12	9	10
Sugar beets	13	6	9	9
Potatoes	8	8	7	7
Beans	4	7	6	6
Barley	3	1	2	2
Fruit and garden	4	4	2	3
Miscellaneous crops	3	2	3	3

There is a remarkable similarity in the percentage of the field crop area that was occupied by the respective crops in the three groups of farms. A slightly less proportion of the crop area was devoted to wheat and beans, and a slightly greater proportion to sugar beets, fruit and garden on the small farms on the average than on the large ones. The type of farming, however, was practically the same in the three groups. For the percentage of income derived from the respective crops see Table V. For average crop yields for 1921 see Table XII. For average prices received for crops sold see Tables XIII and XIV.

Livestock

In order to compare the different classes of farm animals, the livestock kept on these farms is expressed in terms of animal units. As here used one horse, one mule, one cow, or one steer is counted as one animal unit. Also two head of young stock (of the above kinds), or 7 sheep, or 5 hogs, or 100 chickens are considered an animal unit.

The average number of animal units kept per farm was 8.5 for the smallest size-group, 11.9 for the middle size-group, and 21.5 for the group of largest farms. That is approximately one animal unit for each 4 acres of land for the smallest size group and one animal unit to each six acres for the other two groups. Work horses constituted approximately 37 per cent of the total animal units on the 181 farms, cattle (mostly dairy cattle) 37 per cent, sheep 10 per cent, hogs 6 per cent, poultry 7 per cent, and productive horses and colts 3 per cent. Practically all of the sheep were on the large farms. The small farms carried a greater proportion of dairy cattle and poultry than the large farms.

Table VII. Average number of animal units per farm and the per cent belonging to each class of livestock, 1921.

	40 acres and less	41 to 80 acres	Over 80 acres	All farms
Number of farms	72	70	39	181
Animal units per farm:	A. U.(1)	A. U.	A. U.	A. U.
Work stock	3.2	4.8	7.4	4.7
Productive stock:				
Horses and colts	.3	.3	.9	.4
Cattle	3.6	4.7	6.4	4.7
Sheep	.0	.5	4.7	1.2
Hogs	.5	.6	1.1	.7
Poultry	.9	1.0	1.0	.9
Total animal units	8.5	11.9	21.5	12.6
Percentage of animal units in:	Per cent	Per cent	Per cent	Per cent
Work stock	38	40	34	37
Productive stock:				
Horses and colts	3	3	4	3
Cattle	42	40	30	37
Sheep	0	4	22	10
Hogs	6	5	5	6
Poultry	11	8	5	7
Total	100	100	100	100

(1) A. U.=Animal unit.

The number of work horses kept per farm varied from 2 to 6 in the group of farms of 40 acres and less, from 2 to 8 in the middle size-group, and from 3 to 13 in the group containing over 80 acres. It is quite evident that one of the most practical ways of reducing expenses on many of these farms is to discard the unnecessary work horses.

Variation in Return to Capital and Labor Income

The data presented in Tables I to VII, inclusive, are averages. Such data are likely to lead the reader to think of each farmer on the basis of the average. This may lead to a very distorted conception of the financial status of the individuals for their success varied widely. The average should be considered as the point about which they diverge or scatter, approximately half of them being more and the other half less successful than the average. Table VIII is presented to show the wide variation in the return to the farm capital and the labor income of these farms. It reveals the fact that the return to capital of the 181 farms varied from 20 per cent to −11 per cent, the average of all farms being 1.6 per cent. These variations indicate that a number of these farmers were highly successful while others were probably financially ruined. To think of each on the basis of the average, it will thus be seen, would be absurd in the extreme.

As explained on page 5 labor income is the amount the farmer has left for his labor and management after deducting the farm expenses from receipts and then allowing 7 per cent for the use of the farm capital. Table VIII further reveals the fact that labor income varied from $3,875 to −$4,125, the average being −$738.

Table VIII. Variation in return to capital and in labor income of 181 general farms, 1921.

Return to farm capital			Labor income		
Variation in return to capital	Number of farms	Average acres per farm	Variation in labor income	Number of farms	Average acres per farm
Per cent			Labor income		
19.1 to 20	1	50	$ 3750 to $ 4000	1	160
18.1 to 19	0		3500 to 3750	0	
17.1 to 18	0		3250 to 3500	0	
16.1 to 17	0		3000 to 3250	0	
15.1 to 16	1	160	2750 to 3000	0	
14.1 to 15	3	57	2500 to 2750	1	80
13.1 to 14	1	20	2250 to 2500	1	50
12.1 to 13	0		2000 to 2250	0	
11.1 to 12	1	60	1750 to 2000	1	50
10.1 to 11	2	60	1500 to 1750	0	
9.1 to 10	3	60	1250 to 1500	2	80
8.1 to 9	3	58	1000 to 1250	2	40
7.1 to 8	3	28	750 to 1000	4	51
6.1 to 7	6	71	500 to 750	4	50
5.1 to 6	7	54	250 to 500	9	52
4.1 to 5	13	79	0 to 250	14	54
3.1 to 4	10	93	0 to —250	18	52
2.1 to 3	15	95	—250 to —500	20	63
1.1 to 2	14	75	—500 to —750	19	49
.0 to 1	24	78	—750 to —1000	17	66
.0 to —1	20	78	—1000 to —1250	18	68
—1.1 to —2	12	79	—1250 to —1500	14	60
—2.1 to —3	12	46	—1500 to —1750	6	111
—3.1 to —4	12	47	—1750 to —2000	8	104
—4.1 to —5	10	73	—2000 to —2250	7	120
—5.1 to —6	1	20	—2250 to —2500	7	110
—6.1 to —7	0		—2500 to —2750	0	
—7.1 to —8	2	30	—2750 to —3000	2	139
—8.1 to —9	3	67	—3000 to —3250	1	200
—9.1 to —10	1	20	—3250 to —3500	3	119
—10.1 to —11	1	102	—3500 to —3750	1	220
			—3750 to —4000	0	
			—4000 to —4250	1	80

When the sum of farm expenses and seven per cent of the farm capital exceed the farm receipts, labor income is a minus quantity. If labor income be used as the measuring stick, it is equally absurd to think of each farmer on the basis of the average, for there were 85 below the average and 96 above. The wide range in the return to capital and labor income indicate the possibility of increasing the efficiency and profitableness of many of these farms. This is discussed further in the pages which follow.

Tenure

In Table IX the 181 general cash crop farms are arranged in groups

according to tenure. Of the total number 132 were operated by their owners, 15 by part-owners (men who farmed rented land in addition to the land they owned) and 34 by tenants. The owner farms averaged 65 acres per farm, the part-owners 92 acres, and the tenant farms 87 acres.

Table IX. Summary of farm business according to tenure, 1921.

	Owner farms	Part owner farms		Tenant farms	
		Part owner operators	Land-lords	Tenant operators	Land-lords
Number of farms	132	15	15	34	34
Average acres per farm	65	52	40	.....	87
Average acres in crops .	55	44	34	.....	76
Average capital	$20031	$17431	$ 9331	$ 1940	$20772
Average farm income ..	666	681(1)	435(2)	363(1)	490(2)
Average family perquisites	391	436	.....	312	.....
Average operator's labor	778	846	.....	789	.....
Average return to capital, per cent	1.4	1.6	4.7	—5.8	2.4

(1) Operator's share of the farm income. (2) Landlord's share of the farm income.

The return to capital is obtained by subtracting the estimated value of the farmer's labor from the sum of farm income and the value of the family used perquisites and dividing the remainder by the average farm capital. Note that the return to capital of the owner operators was 1.4 per cent, of the part owner operators 1.6 per cent, and of the tenant operators —5.8 per cent. The landlords, it will be noted, received 4.7 per cent and 2.4 per cent on their capital, respectively, from the part owner and tenant operated farms.

Six of the 34 tenant farmers paid cash rent and 28 share rent. One of the cash rent farms contained 140 acres, a share of the crop being paid for 20 acres and cash for 120 acres. The other 5 were strictly cash-rented farms. Five of the share-rented farmers paid cash rent for a total of 33.5 acres. This was mostly for the use of pasture. On the other 23 farms the rent consisted entirely of a share of the crops. The 6 cash-rent farms returned an average of 3.9 per cent to the landlord's capital and —25.5 per cent to that of the tenant. The 28 share-rented farms, on the other hand, returned 2.1 per cent to the capital of the landlord and —1.8 per cent to that of the tenant. Cash rents in 1920 were on a war price basis. While cash rents had fallen considerably in 1921, the decline lagged far behind the decline in the prices of farm crops. This placed most of the cash-rent farmers at a serious disadvantage.

THREE TYPES OF FARMING

A summary of the business of 10 fruit, 11 dairy, and 181 general crop farms is shown in Table X. Three of the fruit farms and 3 of the dairy farms were quite highly specialized. That is, a high percentage of the receipts of these six farms was derived, respectively, from fruit (apples in most cases), and the dairy herd. The other farms of these two groups practiced a mixed type of farming, approximately 50 per cent of the receipts coming from either fruit or the dairy herd.

Table X. Business summary of fruit, dairy, and general cash crop farms, 1921.

	Fruit farms	Dairy farms	General cash crop farms
Number of farms	10	11	181
Average acres per farm	62	80	71
Average acres in crops	55	58	61
Average value of land per acre	$ 334	$ 269	$ 250
Average farm capital	22,411	26,371	21,086
Average receipts per farm	5,166	5,063	2,761
Average expenses per farm	2,572	3,038	2,023
Average farm income	2,594	2,025	738
Average family perquisites	492	393	382
Value of operator's labor	722	864	786
Average return to capital	Per cent 10.5	Per cent 5.9	Per cent 1.6

Note that the average value of real estate was $334 per acre for the fruit farms, $269 for the dairy farms, and $263 for the general crop farms. The fruit farms, it will be seen, returned an average of 10.5 per cent to the farm capital, the dairy farms 5.9 per cent, and the general crop farms 1.6 per cent. In making these comparisons it must be remembered that the price of dairy products for 1921 had not dropped in proportion to the decline of the price of general farm crops. It must also be remembered that 1921 was an excellent apple year. There was a heavy yield of apples and the price received was very satisfactory. Furthermore the number of farms, in either the fruit or dairy group, is scarcely large enough to give very reliable averages.

THREE YEARS' BUSINESS OF GENERAL CASH CROP FARMS

The investigation has now been carried on in the Twin Falls district for three consecutive years, from 1919 to 1921 inclusive. The study, it will be seen, began during the peak year of the period of prosperity that was brought on as a result of the world war. Table XI

is presented to show the average financial status of these farms as they pass from the period of prosperity into the period of depression.

Summary of Farm Business

In considering Table XI note (1) that the average size of these farms varied but 2 acres during the three-year period; (2) that the average value of land was $373 per acre in 1919, $366 in 1920, and $263 in 1921, a decline in value of $7 per acre in 1920, and $103 in 1921; (3) that the average farm capital declined from $30,531 in 1919 to $29,023 in 1920, and to $21,086 in 1921; (4) that farm receipts averaged $1462 and $2273 less in 1920 and 1921, respectively, than in 1919; (5) that farm expenses, on the other hand, were only $16 less in 1920, and but $265 less in 1921 than in 1919; and (6) that the average return to capital was 7.2 per cent in 1919, 2.3 per cent in 1920, and 1.6 per cent in 1921.

Table XI. Business summary of general cash crop farms, 1919, 1920, and 1921.

Year	1919	1920	1921
Number of farms	200	192	181
Average acres per farm	73	71	71
Average acres in crops	62	60	61
Average value of land per acre	$ 373	$ 366	$ 263
Average farm capital	30,531	29,023	21,086
Average farm receipts	5,035	3,573	2,762
Average farm expenses	2,288	2,272	2,023
Average farm income	2,747	1,301	739
Average family used perquisites	257	424	382
Average value of operator's labor	968	1,058	786
Average return to capital	Per cent 7.2	Per cent 2.3	Per cent 1.6

The year 1919 was a very prosperous season for a very large majority of the farms studied. While operating costs were high, the price of farm crops was at a still higher level. During the crop season of 1920 the cash expenses of farming were on practically the same level as in 1919. The general level of the price of farm crops, on the other hand, took a precipitous drop during the closing months of 1920. See Table XIII for average farm prices. During 1921 the prices of most things that the farmer had to buy declined considerably, altho not so precipitously as did the prices of most of the products he had to sell. A study of Tables XIII and XIV will assist materially in making clear the cause of the decline in the profitableness of operating these farms in 1920 and 1921.

Crop Yields

Average crop yields for the three-year period are shown in Table XII. Wheat, oats, barley, corn, clover seed, beans, and potatoes are usually quoted on the Twin Falls market by the hundred weight or pound. For this reason and to better enable the reader to compare the average quantities of feed produced per acre by some of these crops, yields are expressed in pounds, hundred weight and tons.

Table XII. Average crop yields, 1919, 1920, and 1921.

Crops	1919	1920	1921
Wheat	2268 lbs.	2382 lbs.	2712 lbs.
Corn	2660 lbs.	2537 lbs.	2430 lbs.
Barley	1906 lbs.	1886 lbs.	1930 lbs.
Oats	1446 lbs.	1445 lbs.	1583 lbs.
Red clover seed	286 lbs.	243 lbs.	216 lbs.
Alsike clover seed	318 lbs.	352 lbs.	347 lbs.
Beans	1122 lbs.	1191 lbs.	1123 lbs.
Red clover hay (1 cut)	1.1 tons	1.0 tons	1.3 tons
Alfalfa hay (3 cuts)	3.9 tons	3.8 tons	3.9 tons
Sugar beets	9.2 tons	12.3 tons	9.4 tons
Potatoes	137 cwt.	163 cwt.	150 cwt.

Corn, it will be seen, gave a slightly higher yield than wheat. The average yield of wheat was more than 500 pounds per acre above that of barley, and over 900 pounds above that of oats. The difference in the yields of these crops, and the fact that wheat usually commands a higher value per hundred weight than the other two crops, accounts for the low acreage of oats and barley grown in the Twin Falls district.

Average Farm Prices Received for Crops

Table XIII shows the average farm prices received for the crops produced on the 181 farms during the crop years 1919 to 1921, inclusive. Price indexes for 1920 and 1921 (1919 prices equaling 100) are presented in Table XIV. In order to make the prices of the various crops more comparable, and because they are usually so quoted on the Twin Falls market, the price of wheat, oats, barley, and potatoes is given in Table XIII per hundred weight, and the price of alfalfa seed, clover seed, and beans, per pound.

Table XIII. Average farm prices received, 1919 to 1921, inclusive.

Crops	1919	1920	1921
Wheat	$ 3.08 cwt.	$ 2.43 cwt.	$ 1.35 cwt
Barley	2.83 cwt.	1.48 cwt.	1.21 cwt
Oats	3.03 cwt.	2.22 cwt.	1.69 cwt.
Potatoes	1.78 cwt.	1.01 cwt.	1.03 cwt
Alfalfa seed	.28 lb.	.13 lb.	.17 lb.
Red clover seed	.44 lb.	.12 lb.	.15 lb.
Alsike clover seed	.39 lb.	.23 lb.	.15 lb.
Beans	.07 lb.	.05 lb.	.04 lb.
Alfalfa hay	17.79 ton	7.34 ton	4.63 ton
Sugar beets	11.00 ton	12.00 ton	6.00 ton

Table XIV. Per cent of 1919 prices received in 1920 and 1921, (1919 prices equal 100).

	1919	1920	1921
	Per cent	Per cent	Per cent
Wheat	100	79	44
Barley	100	73	56
Oats	100	52	43
Potatoes	100	57	58
Alfalfa seed	100	46	61
Red clover seed	100	27	34
Alsike clover seed	100	59	38
Beans	100	71	57
Alfalfa hay	100	41	26
Sugar beets	100	109	55

In the study of Tables XIII and XIV barley, oats, and alfalfa seed may be disregarded because of the small percentage of receipts derived from these crops. The price received for sugar beets, it will be noted, was $11 per ton in 1919, and $12 in 1920, an advance of 9 per cent. The prices of all other crops took a tremendous slump. The advance in the price of sugar beets, it will be remembered, was due to the fact that the 1920 crop was grown under contract.

The average price received for wheat in 1921 (See Table XIV) was 44 per cent of the 1919 price, potatoes 58 per cent, red clover seed 34 per cent, alsike clover seed 38 per cent, beans 57 per cent, alfalfa hay 26 per cent, and sugar beets 55 per cent. Hence the drops in the value of real estate and the profitableness of farming were inevitable. The price received for farm products has as great, if not a greater influence on farm profits than crop yields. While crop yield is more or less under the control of the farmer, he is forced in the main to sell his crops for the price offered. Nevertheless, some farmers, thru good judgment, or good luck, were able to sell for very much better prices than others. The importance of a thoro knowledge of market conditions, therefore, cannot be over emphasized.

CONCLUSIONS

The year 1921, like 1920, was very abnormal. The abnormal feature was the disproportionate relationship between the price of the things the farmer had to sell and what he had to buy. The low price level of farm products which obtained during 1921, it should now be clear to all, was due largely, (1) to an overproduction of many farm crops, (2) to the curtailed buying power of our export customers which, in turn, was caused by the poverty stricken condition of Europe, and (3) to the fact that the prices of many of our farm products are controlled by foreign demand. The precipitous decline in the return to capital of these general cash crop farms, namely, from 7.2 per cent in 1919 to 1.6 per

cent in 1921, reflects vividly the seriousness of the condition in which the farmer found himself.

The return to the farm capital of the 181 general cash crop farms in 1921 varied from 20 per cent to —11 per cent. Labor income also varied from $3875 to —$4125. These wide variations indicate the possibilty of increasing the profitableness of many of these farms. The following are some of the more important factors that made for success in 1921: (1) High crop yields (See Table III); (2) high return per animal (when a considerable portion of the receipts were derived from livestock); (3) the selection of crops that were relatively profitable, and which properly utilized the available man and horse labor; (4) performing the farm operations in such a manner, and at such times, as to accomplish the greatest results with the least outlay of labor; (5) keeping expenses at a low level without interfering with high yields; and (6) the prices obtained for farm products, there being a wide spread in the prices received for each crop.

The apple was easily the most profitable crop produced in 1921. There was a heavy yield and the price was fair. A few of the 181 general cash crop farms owe much of their success to the apple altho it was considered a side line.

Dairying in 1921 was far more profitable than general cash crop farming (See Table X). The eight mixed dairy and cash crop farms were more successful than the three highly specialized dairy farms. During the war period, when cash crops were more profitable than livestock, there was a general swing to cash crops. The swing, we are reasonably certain, now should be in the opposite direction. From a farm organization standpoint it appears that the greatest need of a large majority of the farms studied is a well-balanced combination of cash crop and livestock farming. Especially is the district well adapted to the producton of hogs, poultry, and dairy products. The change should be made gradually as high producing animals can be obtained. Nothing is more unprofitable than a low producing dairy cow, or a hen that lays but a few eggs during the year.

The average value of the family used perquisites of the farms studied is not high. Since drastic reductions of living and farm operating expenses are necessary, many farmers will do well to turn to a policy of making the farm produce more of the family used food. More of the income will then be available for other purposes. Questionnaires mailed to 25,000 reporters in all parts of the United States by the United States Department of Agriculture showed that in the Pacific Coast Division 13.6 per cent of the food consumed, and which was brought in from outside, could economically be produced locally.

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