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### The organization and financial returns of 129 small sized Louisiana cane farms, 1930

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**The Organization and Financial Returns  
of 129 Small Sized Louisiana  
Cane Farms, 1930**

By

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Assistant Economist



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C. T. DOWELL,  
Director

the owner determines the organization of these farms and in many instances supervises field operations.

Finally there is that type of organization composed of small to medium-sized farms owned by the operator or rented from private individuals or organizations other than mill owners. This large group of farmers is comparatively independent of direct control or supervision by the mill owner or manager. However, indirectly each is much dependent upon the other. The small farmer, in order to produce cane, must have ready access to an efficient financially sound mill. He looks to the mill operator for advice on the growing of his crop, for obtaining new varieties of cane, for improved practices, and in many cases for financial aid. The mill operator relies upon the small growers for a part of the cane which he grinds, and is in serious difficulty should the supply of "outside cane" be small or entirely withdrawn.

It is from this group of farmers, small yet independent growers, that the data included in this study were secured. These planters, many of them with a long and profitable experience as cane growers, found themselves practically driven from the growing of cane and heavily in debt in 1926 and 1927 due primarily to the ravages of the mosaic disease. As a group they were slower in adopting the P. O. J. varieties than were the plantation operators, and, likewise, less rapid in their modification of cultural methods to fit the requirements of the new canes. The unfavorable harvest season of 1929 coupled with a falling price further retarded the return to cane. This caused many men to search for substitute cash crops and for new systems of organization. As a consequence a large diversity of organizations was in operation during 1930. By comparing these various organizations on a basis of net profit those factors which are associated with high net returns may be determined. These factors should and will have a prominent part in settling the agriculture of the area once more on a sound and profitable foundation. It is hoped that this and other studies will tend to hasten this readjustment to the

direct benefit of operators and owners of small-sized cane producing farms.

The business organization and financial statements were secured from 129 farms at the end of the 1930 harvest season. These farms were located in Vermilion, St. Martin, Iberia, St. Mary, Assumption, Ascension, and Iberville parishes. Statements of crop sales and of payroll expenditures were available from the private records of many planters. Inventories and all other items not kept in record form were obtained by the survey method. The individual farms were selected at random throughout the area covered so as to represent a cross section or illustrative group near the true average of all farms of this type.

Differences occur between farms in various parts of the area. In stating these variations the parishes studied have been divided into three groups; Vermilion and St. Martin parishes, although not geographically joined, are similar and are referred to in the text as the Northern and Western area. Farms in Iberia and St. Mary parishes, the Teche area, are similar in organization and consequently are grouped together. Assumption, Ascension, and Iberville parishes, compose the Eastern or River area.

#### REAL ESTATE INVESTMENT

Approximately four-fifths of the land included in this study was owned by the farm operator (Table 1). Share rent is much more common than the cash rent basis in the western areas and also predominates, although to a lesser degree, in the eastern group of parishes.

The farms studied averaged 97 acres of crops and 163 acres of total land area per farm (Table II). Some variations occurred between areas studied. Vermilion and St. Martin parish farms were smallest in size, both as to total acres and cropped acres, with 148 and 79 acres respectively; the Teche area came next with 152 total acres and 103 acres in crops; and Eastern area farms were the largest with an average size of 204 total acres and 108 crop acres. In addition to approximately 60 per cent of the total farm



land which was in crops, 15 per cent was idle or pasture lands of such a character that they could be readily tilled. About 22 per cent of the land was swampy or wooded. This non-tillable land varies considerably in character and in the use to which it was put, but in most instances it returned very little to the gross income of the farm business. The average valuation of all land as estimated by the operators was \$42.60 per acre.

TABLE I. LAND HOLDINGS AND TENURE OF 129 LOUISIANA CANE FARMS BY PARISH GROUPS, 1930

	Per Cent of Total Land Operated			
	Vermillion and St. Martin	Iberia and St. Mary	Assumption, Ascension, and Iberville	All Farms
	Per Cent	Per Cent	Per Cent	Per Cent
Owned Land .....	82.6	78.3	76.6	78.9
Cash Rented .....	3.8	3.8	9.6	5.5
Share Rented ....	13.6	19.6	14.5	16.5
Total .....	100.0	101.7	100.7	100.9
Rented Out .....	....	1.7	0.7	0.9
Total Operated ...	100.0	100.0	100.0	100.0
Number of Farms	37	61	31	129

Since non-tillable land is principally idle land, it forms an overhead expense of the farm business which must be borne by the productive enterprises. When considered in this light the investment which must be carried by each acre in crops amounted to \$71.44 for all farms. This real estate investment was lowest on the Teche farms which have a small proportion of waste land, and was highest in the Northern and Western area (Table III). The increase in the burden of taxes and high investment charges which

TABLE II. LAND CLASSIFICATION OF 129 LOUISIANA CANE FARMS BY PARISH GROUPS, 1930

	Vermilion and St. Martin		Iberia and St. Mary		Assumption, Ascension, and Iberville		All Farms	
	Acres per Farm	Per Cent	Acres per Farm	Per Cent	Acres per Farm	Per Cent	Acres per Farm	Per Cent
Crop Land.....	79	53.3	103	67.9	108	53.1	97	59.6
Tillable Land Lying Out.....	10	6.9	11	6.9	31	15.5	16	9.5
Tillable Pasture.....	16	10.7	11	7.4	9	4.3	12	7.3
Acres Wooded.....	8	5.3	7	4.9	29	14.1	13	7.8
Acres Marsh or Swamp.....	32	22.0	17	10.9	24	11.7	22	14.0
Other Land—Roads, Farmstead, etc.....	3	1.8	3	2.0	3	1.3	3	1.8
Total Land Operated.....	148	100.0	152	100.0	204	100.0	163	100.0
Number of Farms.....	37		61		31		129	

Approximately 60 per cent of all land in these farms is in crops and 15 per cent additional is tillable or readily capable of being cropped. Iberia and St. Mary Parishes have less non-tillable land and a larger proportion of total land in crops than do the other parish groups. The non-tillable land varies considerably in character. On some farms it is pastured, but in most instances lies unused and forms an overhead item which must be borne by the productive enterprises.

TABLE III. INVESTMENTS ON 129 LOUISIANA CANE FARMS BY PARISH GROUPS, 1930.

	Vermilion and St. Martin		Iberia and St. Mary		Assumption, Ascensionn, and Iberville		All Farms	
	Per Farm	Per Crop Acre	Per Farm	Per Crop Acre	Per Farm	Per Crop Acre	Per Farm	Per Crop Acre
Investments:								
Land and Buildings.....	\$6,146	\$ 77.69	\$7,010	\$ 68.07	\$7,816	\$ 72.26	\$6,955	\$71.44
Livestock .....	946	11.96	862	8.38	770	7.12	865	8.88
Machinery and Equipment.....	372	4.70	413	4.01	461	4.27	413	4.24
Feed and Supplies.....	362	4.58	564	5.48	659	6.09	529	5.43
Borrowed Cash to Run Farm.....	178	2.25	493	4.79	999	9.23	524	5.38
Total Invested Capital.....	\$8,004	\$101.18	\$9,342	\$ 90.73	\$10,705	\$ 98.97	\$9,286	\$95.37
Investment in Real Estate per Acre of Total Land Operated .....	\$ 41.41		\$ 46.19		\$ 38.38		\$42.60	
Number of Farms.....	37		61		31		129	
Total Crop Acres.....	2,927		6,281		3,353		12,561	

come with an increase in idle land is an important factor in causing farmers to crop heavy or "black" lands, poorly drained, and inconveniently located acres on which the margin between returns and expenses is small or is non-existent. Several of the farms used in this study included such a proportion of non-productive land that net profits were markedly decreased or losses incurred on the farm as a whole.

The value of buildings is included as a part of the land valuation. Due to the unfavorable economic conditions which have prevailed in the cane belt in recent years, few additions and only necessary repairs have been made to farm buildings. The age and disrepair of farm buildings make accurate evaluation and depreciation difficult, but it is evident that the true depreciation change is comparatively low and exerts only a small influence on net earnings.

#### LIVESTOCK

Work stock make up a major portion of the livestock investment on these farms (Table IV). This investment and the depreciation charges or net decrease followed closely the size of farm. Work stock depreciation consists of death losses and, in a few cases, of decreases in the inventory value of certain animals injured during the year.

Other classes of livestock were kept primarily as a source of produce for home use. A small cash income was derived from the sale of surplus stock and products, but on the average, this was so small as to be relatively insignificant. Several individual farmers, particularly in the Western area, were able to enhance their incomes to an appreciable degree by enlarging the livestock enterprise to a commercial size.



TABLE V. CROP ORGANIZATION OF 129 LOUISIANA CANE FARMS BY PARISH GROUPS, 1930.

	Vermillion and St. Martin		Iberia and St. Mary		Assumption, Ascension, and Iberville		All Farms	
	Acres per Farm	Per Cent	Acres per Farm	Per Cent	Acres per Farm	Per Cent	Acres per Farm	Per Cent
Fall Planted Cane.....	6.2	7.8	12.9	12.5	23.3	21.5	13.5	13.8
Spring Planted Cane.....	1.0	1.3	3.7	3.6	2.3	2.1	2.6	2.7
First Stubble .....	16.1	20.4	22.7	22.0	25.8	23.9	21.5	22.2
Second Stubble .....	1.0	1.2	.1	.1	.3	.3	.4	.4
Total Cane .....	24.3	30.7	39.4	38.2	51.7	47.8	38.0	39.1
Corn .....	30.0	37.9	48.7	47.3	51.3	47.4	44.0	45.2
Cotton .....	16.4	20.7	10.2	10.0	.1	.1	9.5	9.8
Soybeans in Corn.....	(12.7)	(16.1)	(38.4)	(37.3)	(34.1)	(31.5)	(30.0)	(30.8)
Legumes not in Corn.....	.7	.9	.5	.4	.2	.2	.5	.5
Sweet Potatoes .....	4.4	5.6	1.2	1.2	.5	.5	2.0	2.0
Irish Potatoes .....	.1	.1	.7	.7	2.2	2.0	.9	.9
Truck Crops .....	...	...	.5	.5	2.0	1.8	.7	.7
Other Crops .....	3.2	4.1	1.8	1.7	.2	.2	1.8	1.8
Total of All Crops.....	79.1	100.0	103.0	100.0	108.2	100.0	97.4	100.0
Number of Farms.....	37		61		31		129	



of seed cane in that region during the fall of 1929 and represents an abnormal condition. Plantings during the fall of 1930 seem to indicate that the cane acreage is being maintained.

Corn occupies 37.9 per cent of the crop land on Vermilion and St. Martin Parish farms and slightly more than 47 per cent on farms in the other areas.

Cotton may be ranked as a major cash crop on Vermilion and St. Martin Parish farms. It occupies 20.7 per cent of the cropped area on the farms studied in the parishes. As the concentration of cane increases cotton occupies a less significant place in the farm organization. Ten per cent of the crop land of the Teche area farms was used for the growing of cotton. Eastern area farms did not grow cotton on any appreciable acreage.

Sweet potatoes are grown throughout the area as a food and feed crop, but occupy a relatively small acreage and on only a few farms did this crop contribute anything to the cash income. Two per cent of the land of all farms was in sweet potatoes. The greatest concentration, 5.6 per cent of the total crop land, was found in the Northern and Western area.

Secondary cash crops of Irish potatoes, carrots, cabbage, turnips, spinach, and shallots were grown in the Eastern area. The acreage of these crops in the Teche parishes increased rapidly from 1924 to 1929 as indicated by the United States Census. However, they occupied less than two per cent of the total harvested acreage in St. Mary and Iberia parishes in 1929. The proportion of these crops on the cane farms studied is lower than that found by the census indicating that the increase has come about primarily on the small diversified farms of the area which grow no cane.

Approximately one in three farmers applied commercial fertilizer to stubble cane and one in ten made applications on plant cane. In many instances these applications covered only a part of the acreage on the farm. Due to the variation in amounts and kinds of fertilizer applied, there was not a

sufficient number of farms following similar methods to be able to determine the effects of any given practice on yield. The average yield of plant cane was 17.38 tons per acre and of stubble 12.7 tons (Table VI). Cane yields varied but little between areas, excepting Vermilion parish. Yields were relatively low in that parish due to the severity of the drought and to the high proportion of stubble cane. Corn produced 17.6 bushels per acre on the average, and cotton 670 pounds of seed cotton per acre. Sweet potatoes averaged 20 barrels per acre planted.

TABLE VI. CANE YIELDS ON 135 LOUISIANA CANE FARMS, 1930

	Tons per Acre
Fall Planted:	
P. O. J. 36.....	15.04
P. O. J. 213.....	19.83
P. O. J. 234.....	16.84
Others .....	18.33
Average Fall Plant.....	17.72
Spring Planted:	
P. O. J. 36.....	17.56
P. O. J. 213.....	14.95
P. O. J. 234.....	14.00
Average Spring Plant.....	15.42
Average Plant Cane.....	17.38
First Stubble:	
P. O. J. 36.....	12.45
P. O. J. 213.....	13.62
P. O. J. 234.....	11.97
Others .....	4.22
Average First Stubble.....	12.75
Second Stubble:	
P. O. J. 36.....	11.71
P. O. J. 213.....	10.00
P. O. J. 234.....	4.29
Average Second Stubble.....	9.62
Average Stubble .....	12.70
Average All Cane.....	14.68

The 1930 growing season in Southwest Louisiana was usually favorable for the production of cotton. The rainfall was much below the average for a period of years and was too low for the optimum growth of corn and cane. These seasonal conditions are reflected in the yields obtained on the farms studied. However large plantations in the area produced greater tonnages of cane per acre than did the farms studied. It seems probable that lack of fertilization, a high proportion of spring planted cane, and perhaps inferior dry season tillage practices account in part for the lower cane yields obtained on these smaller farms.

#### RECEIPTS AND EXPENSES

The average gross income of all farms amounted to \$1,945 or \$19.98 per acre of crop land. Of this amount \$17.67 was received from the sale of crops. Crop sales on farms in the Eastern area amounted to \$26.03 per acre compared with \$12.56 on Vermilion and St. Martin Parish farms and \$15.59 for the Teche area. Although the proportion of cane was greater in the Eastern district the proportion of cash crops grown was nearly equal in all sections. Yield variations and differences in the kind of cash crops grown are reflected in these income figures. As previously indicated, the gross receipts per acre varied more between areas than did the average yield.

Labor expense between areas follows the same tendency as does gross income (Table VII). The range is from \$5.10 to \$17.84 per acre with the Teche area in the intermediate position at \$10.02 per acre. It cannot be assumed that labor expenditures are to any great extent a casual factor in determining gross income. Both receipts and labor expense are closely associated with the proportion of land in cane and with cane yields. Feed expenses (cash expenditures for purchased feed only) show the same general trend, but are relatively low on all these farms as compared with the feed expenditures of plantation organizations. In the Eastern district, with its concentration of cane, the average expense for this item was \$1.96 per acre.

Fertilizer, unpaid labor, and other general expenses showed no significant differences between areas.

TABLE VII. SELECTED RECEIPTS AND EXPENSES ON 129 LOUISIANA CANE FARMS BY PARISH GROUPS, 1930.

	Ver- million and St. Mar- tin	Iberia and St. Mary	Assump- tion, Ascen- sion and Iberville	All Farms
Crop Sales per Farm.....	\$ 993.00	\$ 1,606.00	\$ 2,815.00	\$ 1,712.00
Crop Sales per Crop Acre....	12.56	15.59	26.03	17.67
Hired Labor per Farm.....	403.00	1,032.00	1,930.00	1,068.00
Hired Labor per Crop Acre..	5.10	10.02	17.84	10.96
Feed Expense per Farm.....	36.00	71.00	212.00	95.00
Feed Expense per Crop Acre	0.46	0.69	1.96	0.98
Fertilizer per Farm.....	26.00	101.00	45.00	66.00
Fertilizer per Crop Acre....	0.32	0.98	0.42	0.63
Unpaid Labor per Farm.....	102.00	105.00	210.00	129.00
Unpaid Labor per Crop Acre	1.30	1.00	1.90	1.33
Number of Farms .....	37	61	31	129

#### NET CASH INCOME AND LABOR INCOME

Two measures, Net Cash Income and Labor Income, have been used to determine the profitableness of the farm business. Net Cash Income is that sum which the operator receives to pay depreciation, interest on invested capital, wages of family labor, and as pay for the operator's labor and management. Labor Income or Labor and Management Wage is the amount returned to the operator for his labor, his management, and for assuming the risk of the business after depreciation and capital charges have been met.

Seventy-one per cent of the farms studied made some cash return to the operator (Table VIII). This return averaged \$4.38 per acre or \$426 per farm. Although the differences are not large there is a definite tendency between areas for the net cash income per acre to vary in the same manner as did gross returns and labor expense.



These variations are exaggerated by differences in average size of farm when considered on the farm basis. While seventy-one per cent received a return above cash expenses and inventory decreases, thirty per cent had positive labor incomes or a net return for the operator's time and risks after paying capital charges and allowing the prevailing labor rate for unpaid labor. Considered as an average these farms lacked \$438 or \$4.50 per acre of returning an amount sufficient to pay these non-cash cost items. Vermilion and St. Martin Parish farms were again low per acre, or, as the average labor income of all areas is negative, lacked a greater amount per acre of being able to meet overhead charges. The Teche region made a slightly higher labor income per acre than did the Eastern area, due to differences in the amount of unpaid labor and the lower total investment charge borne per crop acre.

TABLE VIII. NET CASH INCOME AND LABOR INCOME ON 129 LOUISIANA CANE FARMS BY PARISH GROUPS, 1930

	Vermilion and St. Martin	Iberia and St. Mary	Assump- tion, Ascen- sion, and Iberville	All Farms
Net Cash Income per Farm	\$314.51	\$429.56	\$552.55	\$426.12
Net Cash Income per Crop Acre .....	3.98	4.17	5.11	4.38
Proportion of Farms with +Net Cash Incomes....	78%	66%	71%	71%
Labor Income per Farm.....	\$-414.70	\$-415.21	\$-512.16	\$-438.36
Labor Income per Crop Acre	-5.24	-4.15	-4.74	-4.50
Proportion of Farms with +Labor Incomes .....	24%	28%	42%	30%
Number of Farms .....	37	61	31	129
Average Size of Farm in Crop Acres .....	79	103	108	97



TABLE IX. NET CASH INCOME AND LABOR INCOME OF 129 LOUISIANA CANE FARMS ACCORDING TO SIZE OF FARM, 1930

	Less Than 50 Acres	50 to 99 Acres	100 to 199 Acres	200 and More Acres	All Farms
Average Net Cash Income per Farm on Farms with +Incomes .....	\$379.88	\$630.71	\$1,400.72	\$1,571.63	\$799.58
Average Cash Income on Farms with —Cash In- comes .....	—191.00	—258.20	—352.64	—1,482.50	—468.24
Average Labor Incomes per Farm on Farms with +Labor Incomes .....	336.73	559.17	681.08	960.00	575.05
Average Labor Income per Farm with —Labor Incomes .....	—403.58	—570.32	—1,162.88	—2,644.50	—877.51

When the farm business is so organized and the farm so operated as to return a net profit to the operator, this profit may be increased by expanding the acreage or size of farm. However, if the organization and operation is such that the net financial result is a loss, the large farms lose much more than do the smaller ones. This was the experience of cane farmers in 1930, during which incomes as a whole were low, and many farms were operated at a loss. The small cane farm can make only a very moderate profit during prosperous periods and usually the high proportion of unpaid labor absorbs losses in bad years. Large farms have the possibility of much greater profits, but must assume the risk of heavy losses in unfavorable periods.

Chart 1 - Relationship Between Net Cash Income and  
Size of Farm on 69 Louisiana Cane Farms  
Having Positive Incomes, 1930

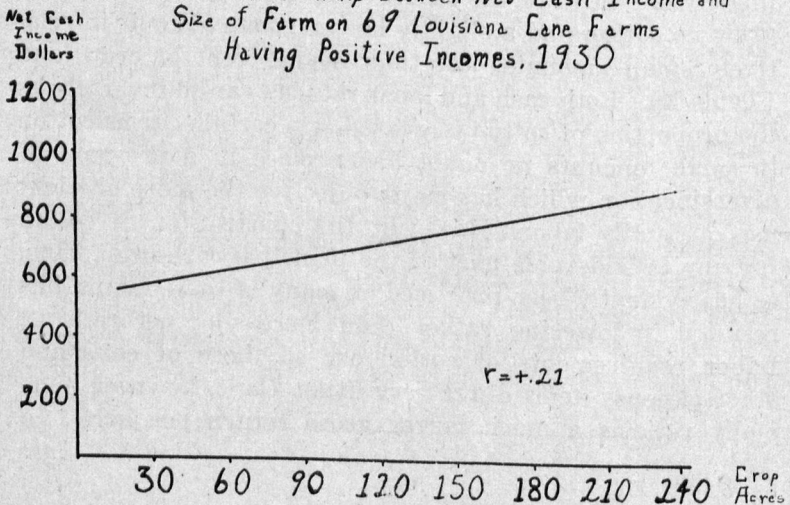
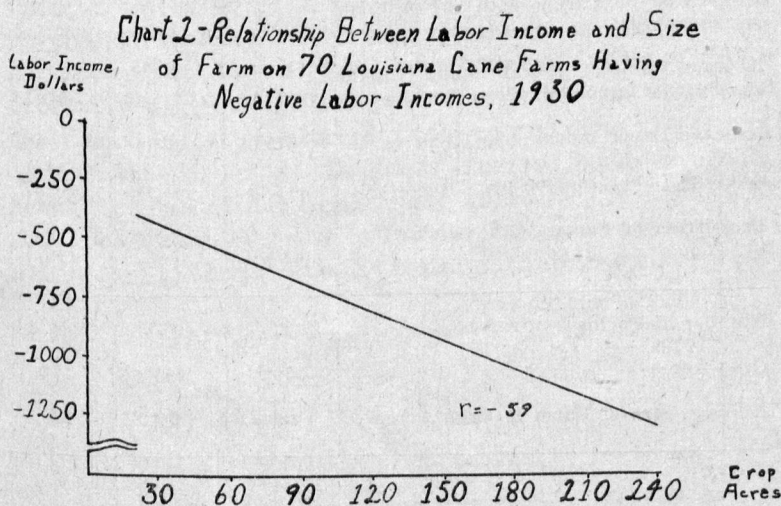


TABLE X. NET CASH INCOMES AND LABOR INCOMES OF 98  
WESTERN CANE AREA FARMS ACCORDING TO THE  
PROPORTION OF CROP LAND IN COTTON, 1930.

	No Cotton	Less Than 20%	20% or More	All Farms
Average Net Cash Income per Crop Acre .....	\$5.23	\$4.41	\$2.81	\$4.11
Per Cent of Farms Having +Net Cash Incomes .....	72%	68%	71%	70%
Average Labor Income per Crop Acre .....	\$-3.88	\$-3.89	\$-5.59	\$-4.42
Per Cent of Farms Having +Labor Incomes .....	34%	26%	18%	27%
Number of Farms .....	32	38	28	98
Crop Acres .....	2237	4097	2874	9208

Except as included in the organization of certain farms to make possible the utilization of family labor through normally slack periods, cotton has not added to the net income of cane farms in the Western area. Its inclusion in amounts of 20 per cent or more of the total crop area is correlated with a decrease in net income. Cotton yields were high in 1930 (page 14); prices were low; cane prices were low; and in parts of the area most affected by droughts cane yields were also low. It is felt that even though the cotton price was relatively lower than may be expected over a period of years, this relationship between income and the proportion of cotton will hold true a large majority of years.



South Louisiana, this comparative advantage of cane over cotton has held true for many years except for the relatively short period which was marked by the failure of the old cane varieties and which came before the introduction of the P. O. J. canes.

#### THE PROPORTION OF TRUCK CROPS

Truck growing in the River or Eastern cane area was closely associated with small-sized farms and with large amounts of family or unpaid labor (Table XI). Truck growers made a larger net cash income per acre than did farmers growing only cane and corn, but due to the small

TABLE XI. NET CASH INCOME AND LABOR INCOME OF 37 EASTERN CANE AREA FARMS ACCORDING TO THE PROPORTION OF CROP LAND IN TRUCK CROPS, 1930.

	Less Than 5%	5% or More	Farms With Truck as Sole Cash Crop
Average Net Cash Income per Farm....	\$572.48	\$510.70	\$226.83
Average Net Cash Income per Crop Acre	4.44	8.92	7.87
Proportion of Farms with +Net Cash Incomes .....	67%	80%	83%
Average Value of Operators and Unpaid Family Labor per Crop Acre.....	\$4.25	\$13.15	\$16.82
Average Labor Income per Farm.....	\$-575.68	\$-378.80	\$-128.88
Average Labor Income per Crop Acre..	-4.46	-5.88	-4.47
Proportion of Farms with +Labor In- comes .....	43%	40%	17%
Number of Farms.....	21	10	6
Crop Acres .....	2709	644	173
Average Size of Farm in Crop Acres...	129	64	29

sized farms made considerably less per farm. Labor income losses were more per acre and less per farm on units with a high percentage of truck crops. Due to the small size of these truck-growing farms, the possible gain was limited to a frugal living for the farm family. Family labor did not return the prevailing wage rates which was assumed to be \$22.50 per month for each man and proportionately less for women and children, according to the amount of work done by them.

Price fluctuations determine to a large extent the profitability of the truck enterprise. During 1930 these fluctuations were quite violent and as a consequence the possibility of errors from this source is large in considering a small number of farms. It is the belief of the author that prices received for truck crops on the farms studied were somewhat higher than those which would have been obtained from a larger and more representative sample. It is certain that these prices are considerably above those which have prevailed during the spring of 1931.

Due to the extremely large and rapid price changes which characterize truck crops it seems inadvisable for farmers of this area to rely on these crops as the sole source of income. Although large profits may be made at times, the standard of living of the farm family will be materially lowered on many years of unfavorable price. A farm organization based on a staple crop may utilize these crops profitably as secondary crops to be grown on relatively small acreages or as intercroppings in corn and cane. The extra cash expense is small; the losses incurred on unfavorable years so small as not to seriously affect the farm income; and the gains to be made in favorable seasons are large in proportion to the labor and capital put into the enterprise.



## THE PROPORTION OF CANE

The maintenance of as large a percentage of the crop land in a cash crop as is possible without depletion of soil fertility or a more than proportionate increase in expense is conducive to large incomes. Since cotton and truck crops in large proportions have been shown to be associated with low incomes the only remaining cash crop, cane, will necessarily be positively correlated with income. This proved to be the case as is shown in Table XII. The maximum profit, on the average, was obtained on farms which grew approxi-

TABLE XII. NET CASH INCOME AND LABOR INCOME OF 129 LOUISIANA CANE FARMS ACCORDING TO THE PROPORTION OF CROP LAND IN CANE, 1930.

	Less Than 20%	20% to 29%	30% to 39%	40% to 49%	50% or More	All Farms
Average Net Cash Income per Crop Acre.....	\$0.71	\$1.80	\$4.98	\$5.70	\$5.87	\$4.38
Proportion of Farms Having +Net Cash Incomes.....	44%	70%	76%	77%	73%	71%
Average Labor Income per Crop Acre .....	\$-7.37	\$-7.77	\$-4.17	\$-2.86	\$-3.05	\$-4.50
Proportion of Farms Having +Labor Incomes .....	6%	15%	35%	42%	42%	30%
Number of Farms.....	16	27	34	26	26	129
Crop Acres .....	1523	1840	3222	3224	2752	12,561

Maintaining as large a proportion of the crop land as possible in cane, the cash crop is essential in obtaining a satisfactory income. Income increased directly with the amount of cane up to the point of approximately 50 per cent of the crop area in cane. Net income decreased on farms having more than this proportion of cane, due principally to a rapid rise in feed and labor expense which accompanied high cane acreages. This percentage figure cannot be set definitely for it is influenced by the yield of feed crops, fertilization practice, soil improving crops used, price of feed, and by the amount of second stubble kept. Farms with a low proportion of cane (39% or less) definitely made lower incomes than did those falling in the range of 40 to 60 per cent.



mately 50 per cent of the crop area in cane (Chart 3). By comparing the gross income and expense items on these farms, those items which determine this optimum proportion may be isolated (Tables XIII and XIV). Gross income increases steadily with the proportion of cane as this proportion rises above 20 per cent. On farms growing less than twenty per cent cane, the amount of secondary cash crops was high and the total income was above that received by farms falling in the range of 20 to 29 per cent. This group grew a relatively small amount of cane and did not supplement it with other cash crops. However, all farms with less than 30 per cent cane made low gross incomes. Many expense items remained nearly constant regardless of the amount of cane grown. These amounted to such that the net income received was small on farms with gross cash incomes so low as \$10 to \$15 per acre. As cane increased above 30 per cent, the labor expense and feed expense items also increased. The relationship between the total income and the total expense which is controlled by the two items of labor and feed determines the optimum cane proportion. This figure of 50 per cent, however, is an average of all farms and may vary considerably between individual farms. Many ever changing conditions as cane yield, prices, yield of feed crops, feed prices, efficiency of soil improvement crops, and wage rates, will influence the optimum amount of cane for each farm. We may reasonably expect that a majority of these factors will change in such a manner as to encourage a still further specialization in the cane crop. Although this upper limit may be somewhat variable it is clearly evident that farms with small proportions of cane were not able to obtain net incomes which compare favorably with those of all farms in the area.

The combined effect of the proportion of cane and the size of farm is indicated by the high relationship which exists between acres of cane per farm and net income (Chart 4).

Chart 3 - Relationship Between Net Farm Income and the Proportion of Crop Land in Cane on 107 Louisiana Cane Farms, 1930

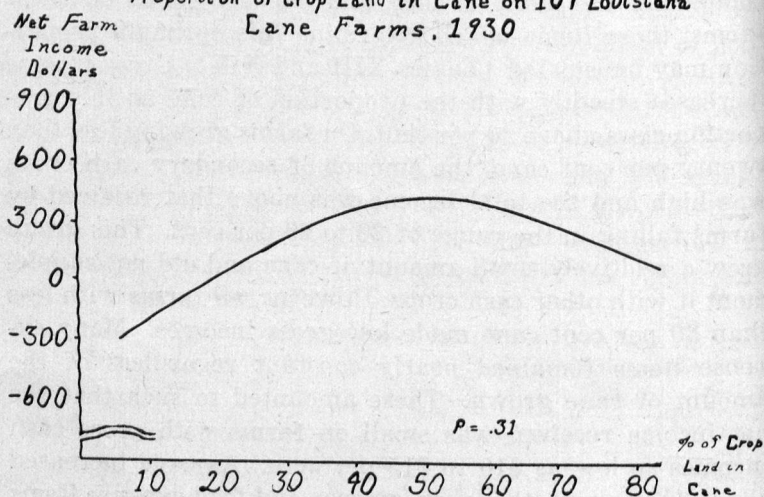


Chart 4 - Relationship Between Net Cash Income and Acres in Cane on 61 Louisiana Cane Farms Having Positive Incomes, 1930

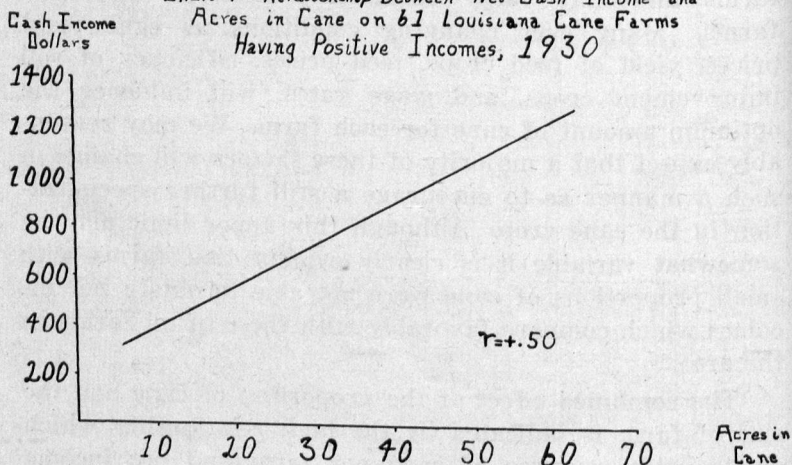


TABLE XIII. GROSS INCOME OF 129 LOUISIANA CANE FARMS ACCORDING TO THE PROPORTION OF TOTAL CROP LAND IN CANE, 1930.

	Less Than 20%		20% to 29%		30% to 39%		40% to 49%		50% or More		All Farms	
	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre
Incomes and Increases:												
Crop Sales.....	\$958	\$10.06	\$634	\$9.31	\$1,622	\$17.12	\$2,595	\$20.93	\$2,573	\$24.30	\$1,720	\$17.67
Livestock Net Increase.....	76	.80	37	.55	44	.47	26	.21	39	.37	42	.43
Increase Feed, Seed, and Supplies .....	119	1.25	97	1.42	150	1.58	168	1.35	195	1.84	148	1.52
Other Sources.....	6	.07	12	.17	95	1.00	30	.24	2	.02	35	.36
Total Gross Income.....	\$1,159	\$12.18	\$780	\$11.45	\$1,911	\$20.17	\$2,819	\$22.73	\$2,809	\$26.53	\$1,945	\$19.98
Number of Farms.....	16		27		34		26		26		129	
Crop Acres .....	1523		1840		3222		3224		2752		12,561	
Average Size of Farm .....	95 Acres		68 Acres		95 Acres		124 Acres		106 Acres		97 Acres	

Farms growing less than 20 per cent cane grew additional cash crops so that their gross income per acre was slightly higher than the group having 20 to 29 per cent of the crop land in cane. However, it was essential that the gross cash income per acre for the whole farm be much above these comparatively low figures. On the farms studied this was associated with a high percentage of cane.

TABLE XIV. EXPENSES OF 129 LOUISIANA CANE FARMS ACCORDING TO THE PROPORTION OF CROP LAND IN CANE, 1930.

	Less Than 20%		20% to 29%		30% to 39%		40% to 49%		50% or More		All Farms	
	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre	Per Farm	Per Acre
Cash Expenses:												
Labor .....	\$558	\$5.86	\$333	\$4.38	\$1,012	\$10.68	\$1,538	\$12.40	\$1,747	\$16.50	\$1,068	\$10.96
Machinery Repair .....	38	.39	28	.41	30	.32	50	.41	53	.50	39	.40
Fence and Building Re- pairs .....	47	.50	34	.50	47	.50	62	.50	53	.50	48	.50
Feed .....	46	.48	19	.28	61	.64	126	1.01	218	2.06	95	.98
Seed .....	77	.81	27	.40	23	.24	40	.33	28	.27	35	.36
Fertilizer .....	26	.28	20	.29	60	.63	129	1.04	84	.80	66	.68
Tractor, Truck, and Car Expenses .....	56	.59	27	.39	80	.84	49	.40	56	.53	55	.56
Taxes .....	183	1.92	131	1.92	182	1.92	238	1.92	203	1.92	187	1.92
Other Expenses .....	58	.61	34	.51	29	.31	29	.23	20	.18	32	.33
Total Cash Expense.....	\$1,089	\$11.44	\$653	\$9.58	\$1,524	\$16.08	\$2,261	\$18.24	\$2,462	\$23.26	\$1,625	\$16.69

Non-Cash Expenses:												
Livestock—Net Decrease	21	.22	69	1.01	62	.65	38	.30	58	.54	53	.54
Depreciation .....	103	1.08	73	1.08	102	1.08	134	1.08	114	1.08	105	1.08
Unpaid Labor .....	131	1.38	166	2.44	111	1.17	148	1.19	95	.90	129	1.33
Decrease in Feed, Seed and Supplies .....	31	.32	17	.24	49	.52	39	.32	99	.94	48	.49
Total Non-Cash Expense	\$286	\$3.00	\$325	\$4.77	\$324	\$3.42	\$359	\$2.87	\$366	\$3.46	\$335	\$3.44
Grand Total Expense....	\$1,375	\$14.44	\$978	\$14.35	\$1,848	\$19.50	\$2,620	\$21.13	\$2,828	\$26.72	\$1,960	\$20.13
Income Above Cash Exp...	\$70	\$74	\$127	\$1.87	\$387	\$4.09	\$558	\$4.49	\$347	\$3.27	\$320	\$3.29
Income Above Total Exp.	\$—216	\$—2.26	\$—198	\$—2.90	\$63	\$0.67	\$199	\$1.60	\$—19	\$—0.19	\$—15	\$—0.15



## LABOR

Both net cash and labor income vary inversely with the amount of labor expense per acre (Table XV). One exception to this is found in the group which expends less than 80 per cent as much for labor as do all farms on the average. These farmers make slightly less net cash profit per acre than do the two groups that center at the average, 100. The fact that the group lowest in rank, as to labor used, carried the economizing of this expense item to an unprofitable point is also indicated by the low proportion of these farms which make positive cash incomes. As the amounts spent for labor increase to 120 per cent or more of the average expenditures for all farms, a rapid drop occurs in net income and in the proportion of farms with positive incomes.

TABLE XV. NET CASH INCOME AND LABOR INCOME OF 129 LOUISIANA CANE FARMS ACCORDING TO THE TOTAL AMOUNT OF LABOR USED PER CROP ACRE, 1930

	Amount of Total Labor Expense per Crop Acre in Per Cent of Average, \$16.45					
	Less Than 80%	80% to 99%	100% to 119%	120% to 139%	140% or More	All Farms
Average Net Cash Income per Crop Acre.....	\$5.10	\$6.17	\$6.90	\$3.24	\$-0.40	\$4.38
Per Cent of Total Farms Having +Net Cash Incomes .....	73%	80%	91%	53%	48%	71%
Average Labor Income per Crop Acre .....	\$-1.86	\$-2.52	\$-3.88	\$-8.21	\$-10.11	\$-4.50
Per Cent of Total Farms Having +Labor Incomes .....	36%	40%	29%	27%	13%	30%
Number of Farms.....	45	25	21	15	23	129
Crop Acres .....	4807	2135	1803	1749	2067	12,561

The statistically measured relationship between labor expense and income is shown in Chart 5. The total labor requirement was found to be closely associated with the yield of cane ( $r=+.50$ ). This reflects the increased harvest requirements of high-yielding cane crops. To eliminate this factor the number of crop acres worked per man is used as a measure of labor efficiency for the growing season.

Inefficient use of labor during the growing season, as indicated by a small number of crop acres per man, is associated with a small size of farm (Table XVI). This excess labor is practically all unpaid or family labor. An increase in the proportion of crops with high labor requirements, diversification of crops and livestock and the expansion of the farm area by the rental of additional land furnish means of eliminating this inefficiency of operations. An examination of the individual farms composing the upper group indicates that a few of them are working such a large amount of land per man that inferior tillage and care of the crop result. This extreme economy of labor has not been accompanied by an increase in power or other labor-saving machinery. However, those instances showing an over emphasis of the labor factor are few in number and do not make themselves evident in the average of all farms working thirty or more acres of crop land per man.

The measure used, crop acres per man, should not be confused with acres of cane per man. In dealing with individual farms the proportion of crops having high labor requirements is significant. However, its marked association with income indicates something of the importance of efficient labor use on cane farms. Statistically measured, labor efficiency was second only to cane yield in the determination of both cash and labor incomes.

Chart 5-Relationship Between Farm Income  
and Labor Index on 107 Louisiana  
Cane Farms, 1930

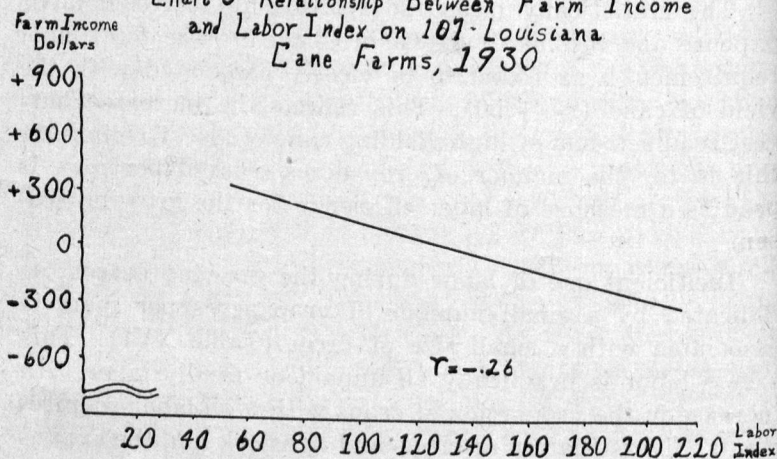


Chart 6-Relationship Between Net Cash Income and Yield  
of Cane on 69 Louisiana Cane Farms Having Positive  
Cash Incomes, 1930

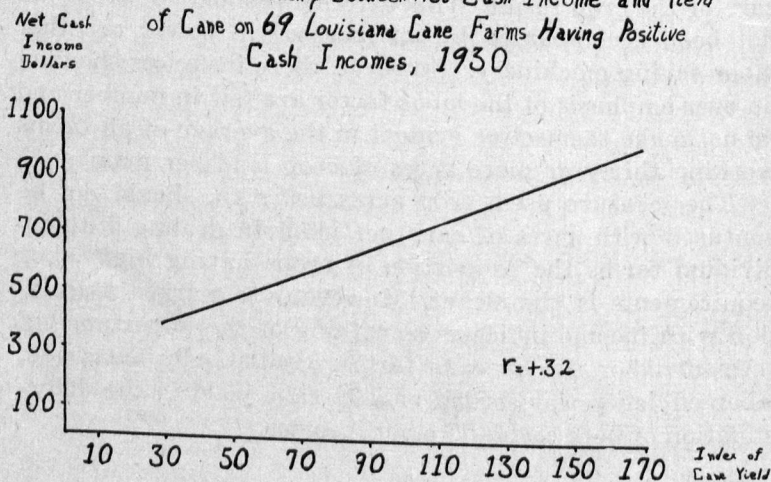


TABLE XVI. NET CASH INCOME AND LABOR INCOME OF 129 LOUISIANA CANE FARMS ACCORDING TO THE NUMBER OF CROP ACRES WORKED PER MAN UP TO HARVEST, 1930

	Less Than 20 Acres	20 to 29 Acres	30 or More Acres	All Farms
Average Net Cash Income per Crop Acre.	\$-0.74	\$4.69	\$5.73	\$4.38
Per Cent of Farms Having a +Net Cash Income .....	54%	71%	81%	71%
Average Labor Income per Crop Acre....	\$-11.53	\$-5.04	\$-1.43	\$-4.50
Per Cent of Farms Having a +Labor Income .....	7%	27%	50%	30%
Number of Farms .....	28	59	42	129
Crop Acres .....	1646	6090	4825	12,561
Average Size of Farm in Crop Acres.....	59	103	115	97

#### THE YIELD OF CANE

The per acre yield of cane considered either as an average of all cane or separated as plant and stubble proved to be a most significant factor in the determination of net income (Table XVII). The expenses per unit of areas remain nearly constant up to harvest regardless of yield. Harvest costs increase with yield but at a less than proportionate rate, and gross income varies in direct proportion to yield. It is evident from a study of the farms receiving the greatest yields that these general principles hold true on all the farms studied. No farms obtained high yields at a more than proportionate outlay per acre while many have evidently sacrificed net incomes through low yields obtained because of the extreme economy practiced in the use of fertilizers, legume seed, and in some instances of labor, power and equipment. Due evidently to random fluctuations in the data, the cash income per crop acre is not consistent between the two yield groups which center at the

average. However, the variation between the extremes is so great as to emphasize the necessity of high yields.

Chart 6 shows graphically the relationship as it existed on all farms. Yield per acre exerted a greater determination on both net cash income and labor income than any other factor studied.

TABLE XVII. NET CASH INCOME AND LABOR INCOME OF 129 LOUISIANA CANE FARMS ACCORDING TO THE YIELD OF CANE, 1930

	Yield as a Percentage of the Average				
	Less than 80%	80 to 99%	100 to 119%	120% or more	All Farms
Average Net Cash Income per Crop Acre <sup>1</sup> .....	\$ 0.81	\$ 6.56	\$ 4.57	\$ 8.24	\$ 4.38
Average Labor Income per Crop Acre <sup>2</sup> .....	—6.57	—5.03	—3.56	—0.17	—4.15
Average Labor Income per Crop Acre <sup>3</sup> .....	—7.55	—3.85	—3.75	+1.56	—4.33
Crop Acres .....	5,016	2,703	1,821	3,021	12,561

<sup>1</sup>(All cane average—14.68 tons.)

<sup>2</sup>(Plant cane—17.38 tons.)

<sup>3</sup>(Stubble cane—12.70 tons.)



## SUMMARY

1. The farms studied averaged 163 acres in size with 97 acres in crops. Approximately three-fourths of the land in farms was tillable and one-fourth was swampy or wooded. Vermilion and St. Martin parish farms averaged 79 acres in crops as compared with 103 in Iberia and St. Mary parishes and 108 in the Eastern area. Iberia and St. Mary parish farms included a smaller amount of non-tillable land than did those of the other areas.
2. Land and buildings were valued by the farm operator at \$42.60 per acre of total land or \$71.44 per acre in crops. Other investments were comparatively small but brought the total to \$95.37 per crop acre.
3. Work stock investment and depreciation varied with the size of farm. The average work stock decrease per farm amounted to \$59.00. Livestock other than work stock made up a relatively small part of the farm investment and accounted for only a small portion of the total income. This livestock was kept primarily as a source of produce for home consumption. A few farms have expanded the livestock enterprises and made them significant sources of income. Cattle raising as a source of cash income was associated with large amounts of non-tillable land and was characterized by extensive methods. The hog and poultry enterprises, handled more intensively, were found to be developed on a commercial basis on a number of farms. These enterprises fit well into a diversification system which tends to the more efficient use of family labor.
4. Cane occupied 39.1 per cent of all crop land, corn 45.2 per cent, and cotton 9.8 per cent. Vermilion and St. Martin parishes were characterized by relatively low proportions of cane and corn and a larger amount of cotton and sweet potatoes. The Eastern area had the greatest concentration of cane, 47 per cent. Corn acreage was practically equal to cane. Secondary cash

crops of potatoes and of various truck crops were grown, but cotton was not included in the organization of the farms of this area. Iberia and St. Mary parish farms were intermediate in crop organization as compared with the other areas. Cane yields averaged 14.68 tons per acre, corn 17.6 bushels; cotton, 670 pounds of seed cotton, and sweet potatoes 20 barrels.

5. Receipts from crop sales averaged \$17.67 per crop acre. The Eastern area ranked high with \$26.03; the Western and Northern area low at \$12.56, and the Teche area was intermediate in the amount received from the source with \$15.59 per acre. Labor expense varied in a like manner. The range was from \$5.10 to \$17.84 per acre. Feed expenses were likewise high in the Eastern area and low in the Western and Northern area. Other expense items remained fairly constant between sections of the district studied.
6. Net cash income and labor income did not vary greatly between areas. With 71 per cent of all farms studied making positive net cash incomes, the average return was \$4.38 per crop acre or \$426.12 per farm. Thirty per cent made more than enough net cash income to pay depreciation, family labor, and interest on invested capital. On the average all farms lacked \$4.50 per acre or \$438.36 per farm of returning enough to pay these charges.
7. The size of farm did not markedly affect the net income per acre, but brought out the effect of other factors when considered on a per farm basis. The range of profit and loss increased directly as the size of farm.
8. Cotton included in the organization to any considerable proportion of the crop area was associated with a decrease in both net cash income and labor income.
9. Farms of the Eastern area which grew truck crops on a commercial scale or relied upon these as a sole source of cash income made relatively high net cash returns per acre, but due to this small size were very low when considered on the farm basis. Truck grow-

ing was associated with large amounts of family labor which in most instances did not return prevailing wage rates through its use in the production of these crops.

10. Labor income and cash income increased as the proportion of cane was increased up to approximately 50 per cent of the crop area. After this point was reached labor and feed expenses rose more than proportionately to gross income.
11. Labor expense per acre and crop acres per man as associated with income both indicate that labor efficiency is an important factor in determining profits. Excessive use of labor is the most pronounced cause of labor inefficiency although there is a tendency on some farms to over economize on the use of labor. The excessive supply of labor was, in most cases, the result of lack of adjustment between the size of farm or the crop organization and the available supply of unpaid labor.
12. Of the factors studied, the yield of cane was the most important in the determination of income.