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This publication is designed as a statistical summary with a minimum of discussion and is one of the first two in a series of reports on the analyses of data on typical commercial family-operated farms. Even as this publication is in process, reports are being prepared and plans have been made for the processing and releasing of other reports and digests dealing with various phases of the project.

A companion report, F.M. 56, "Typical Family-Operated Farms, 1930-45, An Historical Look to the Future," (a graphic summary) deals more generally with certain aspects of the material presented herein. Another publication, "Typical Family-Operated Livestock Ranches, Montana, 1929-45, Adjustments, Costs, and Returns," treats in considerable detail operations and income on cattle and sheep ranches; another deals with operations of typical north-western wheat-pea farms. Two other reports will deal with cotton farming and with tobacco farming.

Projects are now under way in 26 areas (see fig. 1, page 5) and more are under consideration. It is expected that the information on each of these projects will be kept current and that additional reports will be presented from time to time.

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TYPICAL FAMILY-OPERATED FARMS, 1930-45,
ADJUSTMENTS, COSTS, AND RETURNS

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Agricultural Economists 1/

INTRODUCTION

It is well known that farmers throughout the Nation have contributed immensely to the winning of the war by adjusting their operations, under severe handicaps, to produce food and fiber as never before in history. How well can we expect farmers to adjust to the changed demands and conditions of peace? This is the crucial question now and it will probably assume more importance and attention, particularly among farm groups, in the months ahead as the disastrous conditions abroad are alleviated.

A 16-year record is here shown of farm adjustments and income on common family-operated farms throughout our major agricultural regions, through war and peace and through good years and bad, as measured by prices, costs, drought, depression, and demand. This record should contribute materially to formulating and building sound agricultural programs for the immediate future and for the forthcoming years.

Good times and bad times have had their effects upon the incomes and well-being of all farmers, but their influences have been far different from farm type to farm type, and from area to area. Because their farm organizations were more flexible and their land more suitable for all-round cropping and the production of certain crops in high demand particularly during wartime, some farm operators have been in a far better position to take advantage of their opportunities, and thus contribute measurably to the national welfare and also to live successfully through periods of misfortune.

1/ The authors have drawn freely from information collected by State agricultural statisticians, State offices of the Field Service Branch of the United States Department of Agriculture, and from information published by State experiment stations. They have also received assistance from several members of their Bureau and other Federal and State agencies.

Changes in farm organization, production, mechanization, practices and labor efficiency during the last 15 years, and more particularly during the last decade, have been far more significant and broader in scope than is generally recognized. Operators of family-operated farms in some areas and particularly of some types have increased their size of farm, their emphasis on certain crops and livestock production, their use of improved varieties and higher yielding seeds, and their use of machinery and power equipment. The speed with which these changes in crop and livestock systems have been made and with which technological changes have been adopted have varied widely from type of farm to type of farm and from farming area to farming area.

The man-land-capital ratio on some family-operated farms has been sufficiently high to permit the operators to advance with the tide of technology that has given each of them an opportunity to handle more resources more skillfully. Other farmers have lacked sufficient resources, particularly land and capital, to permit them to take advantage of such opportunities. Labor-saving machines, better crop rotations, improved crop varieties, better livestock and other good farming practices have yielded almost continually increasing returns where put into use on operating units of appropriate size.

This report is therefore intended for the administrators, the researchers, and the students and individuals who are interested in the various aspects of agriculture and agricultural development. It presents basic data on farm organization, production, production efficiencies, mechanization, investment, income, prices, costs, and returns to capital and labor in each year from 1930 to 1945 on commercial family-operated farms of given sizes and types in a number of the more important agricultural areas in the United States. There is a minimum of discussion.

This information is based on data from diverse sources. Some is obtained on individual farms and from summaries of crop-correspondent inquiries including acreages and yields of crops and yields and disposition of livestock by classes. Some comes from A.A.A. tabulations on individual farms giving size of farm, tenure, crop acreages, livestock numbers and related statistics. Some has been derived from field surveys, from farm-management association and cost-account reports, and from the United States Census of Agriculture.

The information given in this publication (which reports on only a portion of the farms under consideration and in prospect and on one phase of the analyses only) is based only on organizations and operations on commercial family-operated farms. It excludes part-time self-sufficing, corporation, and large-scale farms. (A later study is designed for treatment of plantation and large-scale farming.) It is upon these and

other commercial family-operated farms that the Nation depends largely for its food and fiber. It is upon these farms that economic stresses and strains on the agricultural plant are assessed and here the bulk of the adjustments will be made to meet any increased demands and production for emergency conditions. It is upon the commercial family-operated farms that farmers' production possibilities are revealed through analyzing the physical organizations and appraising their resources for production. Upon these farms sound farm organization and agricultural programs will be required and will yield results.

Family-operated farms, however, like the individuals who operate them and like the rank and file of people in any community, differ from each other in size, in ability and capacity to produce, and in most other general features. To provide a sound basis for discussion and analysis and to obtain significant and useful information on organization, adjustments, production, income, costs, and related factors on farms in a given area it is first necessary to group farms by type. To provide useful information on the economic well-being of farmers and to make comparisons of farm organization, adjustments and economic well-being among farms and farm groups, it is necessary to consider all farms in a rather wide range of sizes within a given type. Each of the farm organizations presented in the discussion which follows is set up, therefore, so in every detail it is the average of all common-sized commercial family-operated farms of that type in a designated area. Each changes in size and constitution as the rank and file of family-operated farms of a given type change.

Each of these farm units is therefore an "area-type" farm organization which represents the great mass of commercial family-operated farms of the respective type in the area. In each particular, each "area-type" farm is the mean or the average of commercial family-operated farms of a given type, the limits of which span the practical range of family-size farms of the specified type in the designated area. Some farms of the same type in the designated area are too large to be considered family-operating units and may offer the operator more opportunity for his labor, capital, and other resources. Other farms of this same type in the area are too small to be considered family-operating units and neither provide the family the opportunity for use of its resources nor offer opportunity for adjustments and income equal to that found on these commercial family-operated farms. By excluding these extremes which represent a relatively small percentage of the farms of their respective types the group is made much more uniform, improving rather than limiting the usefulness of these data. The organization of the commercial family-operated farm established to serve the purposes of the present analysis thus may not be exactly like an individual farm of a particular size and type.

Although each of these family-operated farms differs from the other in location, size, productiveness, and in many other factors, essentially the same general procedures and methods are used in sampling, collecting, assembling, processing and analyzing the data for them all. This permits direct comparison among the farms of many items of information.

This report does not give all the details and analyses on these common family-operated farms (intensive analyses of these data are planned for subsequent reports) nor does it represent completely and with finality all the agriculture in the respective areas. Information on other sizes and types of farms is desirable before a more complete analyses of the agriculture can be made.

To permit certain analyses that are necessary for a more complete understanding of the operations and returns of farms and to provide an insight into the distribution of income among farms by type for specific research and administrative purposes, plans were made for obtaining and analyzing data for two or three different sizes of farms in addition to the "area-type" farm in each of the areas represented in figure 1. These "size-type" farms represent common family-sized farms; sometimes near the lower, the middle, or the upper family-size units. The farm size and the farm organization on the "size-type" farms remain comparatively fixed or at most vary within narrow limits.

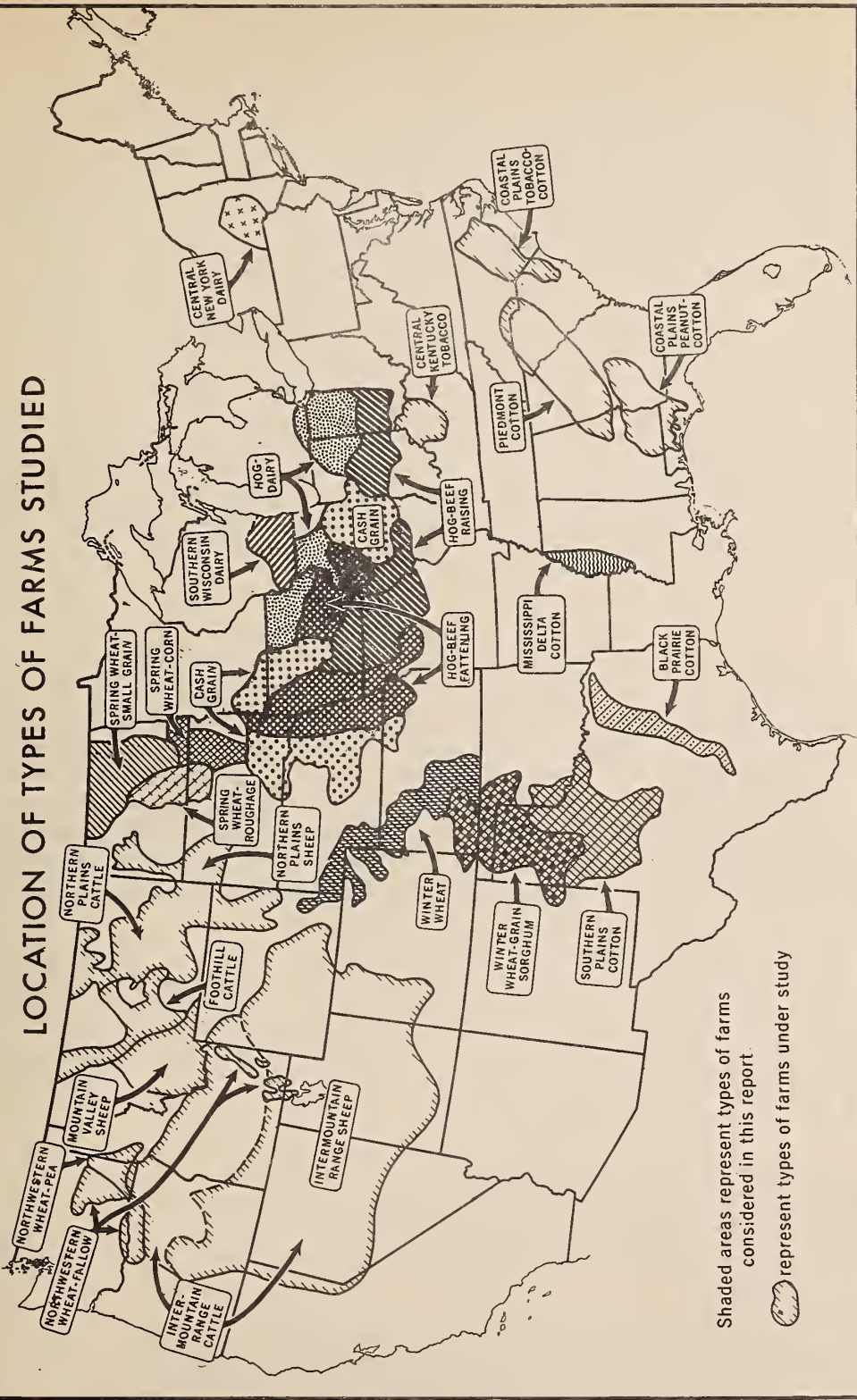
The area-type farms give important information on costs of production, prices, yields, production, tenure, indebtedness, income, and expense on the rank and file of family-operated farms and they provide a direct measure for comparison among farms in different areas. In addition the analyses of the "size-type" farms yields information pertaining to the organization, operation, income and related data on a specific size and type of farm but makes no attempt (as do the "area-type" farms) to measure change in size of farm and organization or to explain, or compare with other areas the income and economic well-being of families in general operating farms of a given type.

The same general methods and procedures of sampling, collecting, summarizing and analyzing the data have been employed alike on area-type and size-type farms. Summarization has already begun on the size-type farms in some areas but only the initial groundwork of obtaining the data has been performed in other areas.

It should be kept clearly in mind that this project is not designed to analyze and represent farm operations and incomes for entire type-of-farming areas. This is done only when a particular type of farm is predominant and fully representative of the particular type-of-farming area. This project is designed rather to study, analyze, and represent farming operations on family-operated farms by size and type. Areas are selected for study where a particular type of farm is common even though other types of farms may often be found in the same area. As the farms for study are selected by type this does not reduce or impair in any way the usefulness or representativeness of the analyses. Figure 1, therefore, shows the location of types of farms considered in this report and under study. It should not be interpreted as representing all types of farms in any area or as showing areas represented by types of farms studied.

The project is designed to yield current information as well as an historical picture. It is a moving picture to a certain extent showing changes in farm adjustments, production, practices, mechanization, labor utilization, income, prices, costs, and related data on commercial family-operated farms, and their effects on the economic well-being of farm families. In addition to including new types and sizes of farms as resources, personnel, and time permit; the information on each farm in the project will be kept current. As the number of farms is increased and as the series on each farm grows in length, the data will become more useful and valuable for analyzing the operations of various farmers, and for measuring and appraising the economic well-being of farm families.

LOCATION OF TYPES OF FARMS STUDIED



Shaded areas represent types of farms considered in this report


 represent types of farms under study

Figure 1.- Studies have been completed for 14 types of farms and results from those of the 12 other types indicated will soon be available. All analyses will be kept current to provide a continuing source of information on the various details of farm organization, operation, income and costs. Other types of farms are found in all of these geographic areas, but in each case the type studied is the most important one.

DISCUSSION OF TERMS USED

Although the analyses of typical farms (as the term is here used) are made in considerable detail, a concerted effort has been made to use accepted farm-management terms so far as they are consistent and are practical for these purposes. The procedure employed (in addition to assaying and evaluating the organization, the operation, and the income of the entire farm operating unit regardless of ownership) is designed to evaluate and appraise the equity of the operator, the mortgagor, and the landlord, to estimate their shares of farm income, and to appraise and allocate farm income to resources (capital, land, and labor including management). (See Example:- Farm-income statement, typical farms).

To clarify matters, where departures from some generally accepted meanings of terms has been necessary, a brief discussion is given. It should be kept in mind that all items to which these terms apply, and which are given in the tables and figures that follow, are on a per farm basis and are limited to commercial family-operated farms of a given type.

Size, Investment, and Income

In order to study and appraise fully the income, costs of production, and productiveness of farms from year to year, analyses and comparisons within the farm-operating unit and among farms of different types are necessary. To provide direct means of comparison, the information on all farms was first summarized on an operating unit basis regardless of ownership or property rights. The terms which appear under this caption (exclusive of rent and interest paid by the farm operator and operator's income) apply to the entire farm-operating unit.

Total land in farm:- The sum of total acres in crops plus acres of failure or abandoned farm land, fallow, idle, pasture, woodland, wasteland, house yards, barnyards, feed lots, roads, lanes and fences, operated under one unit from a given farmstead and with a given set of machinery and equipment. Land that is rented from others and operated in this unit is included. Land on which more than one crop is grown during the year is included once only.

Proportion rented₁:- The sum of the acreages rented from others by part owners and tenants expressed as a percentage of total land (both owned and rented) in typical family-operated farms. It thus becomes the proportion of all land rented from others rather than the proportion of farms rented.

Cropland harvested:- The land from which cultivated crops were harvested; land from which hay (including wild hay) was harvested; and land in fruits, vegetables, and truck. Where two or more crops were

Example

FARM-INCOME STATEMENT - TYPICAL FARMS

1. CASH RECEIPTS:		
2.	Crops	\$3,978
3.	Livestock	1,929
4.	Livestock products	600
5.	Government payments and miscellaneous	417
6.	Total	\$6,924
7. CASH EXPENDITURES:		
8.	Labor hired	\$ 184
9.	Crop and livestock expense	250
10.	Machinery and power (incl. farm share of auto)	893
11.	Building repair and replacement (excl. dwelling)	204
12.	Miscellaneous	140
13.	Taxes	300
14.	Total	\$1,971
15.	NET CASH INCOME	\$4,953
16. PERQUISITES:		
17.	Food (used for human consumption on farms where produced)	\$ 248
18.	Fuel	0
19.	House rental (gross rental, \$271) - (depreciation, \$75)	186
20.	Total value of perquisites	\$ 444
21.	NET CHANGE IN INVENTORY	\$1,537
22.	NET FARM INCOME	\$6,954
23. Rent and mortgage interest paid		\$1,788
24. Operator's net farm income		\$5,146
25. Operator's net cash farm income		\$5,111

ALLOCATION OF NET FARM INCOME

26.	LAND AND CAPITAL	\$2,841
27.	Gross rental value of land and buildings	\$5,023
28.	Total land and building expense 1/	545
29.	Net rent on land and buildings	\$2,478
30.	Interest on machinery, livestock, feed, and supplies	\$ 368
31.	OPERATOR AND FAMILY LABOR AND MANAGEMENT	\$4,093
32.	Unpaid family labor (at hired labor rates)	\$ 355
33.	Return to operator and management	\$5,740
34.	Amount paid for labor hired	\$ 184
35.	RETURN TO ALL LABOR AND MANAGEMENT	\$4,277
36.	TOTAL HOURS OF LABOR USED	4,110
37.	RETURN PER HOUR TO ALL LABOR	\$ 1.04

1/ Real estate taxes and depreciation on buildings including dwellings.

harvested in 1 year from the same acreage, such acreage was included only once in the acreage of cropland harvested. However, the acreage and the total quantity of each crop harvested were ascertained and credited to production.

Total labor used:- The total hours of man labor required under given standards of performance with methods and types of power and equipment used on the farms in the production, harvesting, and marketing of crops and livestock; in the maintenance and management of pastures; and in the repair and upkeep of machinery, equipment, buildings, fences and improvements, including dwellings.

Labor hired:- The total hours of labor that was hired during the year and for which wages were paid. It does not include family labor for which no cash wages were paid.

Total investment:- The estimated current value (January 1) on the typical farm of land, buildings, and improvements, including dwelling; machinery and equipment; livestock; and crops, feed, seeds, and supplies.

Cash receipts:- The total amount of cash received during the calendar year from the sale of crops, livestock, and livestock products, and from Government payments. All current marketings are included whether produced during the year or from inventories on hand January 1.

Cash expenditures:- The total cash paid during the calendar year for commodities and services used in production including all cash payments for feed, seeds, and fertilizers; livestock and livestock equipment and supplies; machinery and equipment purchases, repairs, replacements, and operations; repair and upkeep of farm buildings excluding dwelling; custom work and hired labor; and taxes, telephone, electricity, and miscellaneous items. Rent and interest payments and additions to capital such as purchases of additional land and buildings are not included under cash expenditures. Only part of the cash expenditures of operating the farm automobile is included in cash expenditures; the remaining portion is charged to the personal account of the operator. The portion of the automobile expenditure charged to the farm business differs among regions.

Value of perquisites:- The value at current farm prices of all meats and meat animals, livestock products, vegetables, fruits, cereals, fuel and wood, consumed during the calendar year by members in the farm households on farms where produced, plus a nominal rental on farm dwelling. The annual rental of the farm dwelling is estimated at 12 percent of the current value of the dwelling. This approximates estimated rental rates of similar dwellings and, over the long run, it compares closely with the total annual cost of maintaining the farm dwelling; it varies less from year to year than does the cost.

Net change in inventory:- This reflects primarily the change during the calendar year in quantity of assets. Gain or loss of income solely from changes in prices of fixed and working assets is avoided by revaluing the beginning inventory of working assets at year-end prices and excluding changes in land and building values (fixed assets) from consideration in inventory (except for purposes of estimating investment). Current assets are not revalued, on the assumption that they are intended for sale, are readily salable at a market price, and in large part are disposed of during the year. The difference between current cash expenditures for machinery and current year depreciation appears here as an inventory change. Net farm income then reflects depreciation on working capital and farm buildings as an operating expense.

Net farm income:- The annual return including change in inventory and estimated value of perquisites to the operator for his labor and management, to the unpaid members of the household for services rendered on the farm during the calendar year, and to total farm investment regardless of ownership. In terms of the previous criteria it is net cash farm income plus value of perquisites and net change in inventory.

Rent and interest paid by operator:- The total weighted average value of rent (cash, cash-share, crop-share, and livestock-share rentals) paid to landlords by farm operators plus interest paid by farm operators on their mortgage indebtedness. It is that portion of net farm income which goes to persons other than the farm family. Rent paid is the total rental value of the farm calculated as the weighted average of rental payments under common rental arrangements minus the landlord's share of crop and livestock production expenses, real estate taxes, and building depreciation, multiplied by the percentage of land in the typical farm that is rented. Interest is the average amount of interest paid during the year by the operator to mortgagors.

Operator's net farm income:- The annual return, including inventory change and estimated value of perquisites, to the operator for his labor and management and return on his investment, and to unpaid members of the farm household for services rendered on the farm during the calendar year.

Operator's net cash farm income:- Cash receipts from farming minus the operator's cash farm expenditures for commodities and services used in production including operator's cash outlays for feeds, seeds, and fertilizers; livestock and livestock equipment and supplies; machinery and equipment purchases, repairs, replacements, and operations; repair and upkeep of farm buildings excluding dwelling; custom work and hired labor; and taxes, telephone, electricity, and miscellaneous items; and including rent and interest paid by the operator.

Allocation of Net Farm Income

Net farm income includes return to the operator for his labor and management, to the unpaid members of the family for services rendered, and to capital invested in land and buildings and in working assets; therefore it becomes necessary to make some division or allocation of net farm income to obtain net return to capital and labor, including management. It seems superficial and impossible to differentiate between operator's labor and operator's management on a typical family-operated farm; no attempt is made to do so in this report. Any reference to operator's labor here also implies management.

Land and buildings:- The amount of the net farm income that is allocated as a return for the use of land and buildings on all typical farms, except that for dairy farms in southern Wisconsin and central New York is allocated on the basis of net rentals that could reasonably be expected should the land and buildings be rented out as an alternative to the owner himself operating the farm. Net rental value of land and buildings for a particular type of farm is obtained by subtracting from total rental value of the typical farm under common rental arrangements in the area, the landlord's share of production expenses under that arrangement, each weighted by the proportion of land in farms of that type rented in the respective manner in the area.

In southern Wisconsin and central New York dairy areas, where little land is rented on other than a livestock-crop share basis, a return to land and buildings based on interest rates on farm-mortgage holdings of similar character seemed to be most appropriate. The return to land and buildings on these two dairy farms, therefore, is the farm mortgage interest rate on similar holdings in the respective areas multiplied by the current investment in land and buildings on the respective typical farm.

Working assets:- The amount of net farm income allocated to working assets (machinery, equipment, livestock, crops, feeds, seeds, and supplies) is based on weighted average interest rates charged by commercial banks and Federal agencies on short-term loans in the respective regions. The allocation of income to working assets is thus obtained by multiplying the investment in these assets on January 1 by the respective interest rate.

Operator and family labor:- The return to operator and family for labor and management is that portion of net farm income that remains after returns to land and buildings and to working assets have been allocated in the above manner.

Operator's labor:- Return to operator for his labor and management is that portion of net farm income remaining after returns to land and buildings and to working assets have been allocated in the way

described and allowances have been made for the remuneration of unpaid family labor evaluated at hired laborer's wage rates without board. It can be calculated directly by subtracting the payment to unpaid members of the farm family as derived above from return to operator and family labor.

All labor:- The return to all labor is the remuneration for all labor and management used in production on the typical farm with due allowance for return to capital invested and all production expenses exclusive of labor and management. It is readily obtained by adding expenditures for hired labor to the return to operator and family labor.

Percentage return to investment:- The rate of annual return to operator and landlord on each dollar invested in the business of the typical farms as of January 1. It is obtained directly by dividing return to investment in land and buildings and working assets as defined above by total investment in farm assets and expressing the resulting ratio in percentage terms.

Return per hour to all labor used:- The return to all labor is the amount of money and money equivalent available (includes perquisites and credits in inventories) for the payment for all hired labor, unpaid family labor and operator labor and management used in production on the farm after production expenditures other than labor have been met and appropriate credit has been made for the use of capital (land, buildings, equipment, livestock, feeds and supplies) employed in the farm business. It is obtained directly by dividing returns to "all labor" by "total labor used."

Index Numbers of Production, Costs, and Returns

An integral part of this project is the developing and constructing of several series of index numbers to give summary measures of changes in several items and to permit and facilitate direct comparisons of production, prices, and costs. Important factors in explaining, measuring, and comparing incomes are changes in production and changes in the amounts of land, labor, and capital that are employed and the effectiveness with which they are utilized in production, and changes in prices and cost relationships.

Production and income have increased on nearly all farms in recent years, but the extent to which they have risen and the causes for the increase differ materially from farm to farm. Some farmers have increased production by operating more land, keeping more livestock, buying more feed, and hiring more labor. Other farmers have increased production with substantially less labor by buying more machinery and equipment, and by operating more land. In some instances substantial reductions have been made in costs of production whereas in others costs have changed very little.

To provide a direct means of measuring the effect of production, farm practices, methods of production, mechanization, prices, costs, and related factors upon farm income and the economic well-being of farm families, each item of expense and income (including perquisites and changes in inventory) was assigned weights and then all were appropriately combined into a series of index numbers.

Prices received and prices paid by operators of typical farms were each respectively weighted by the quantity of the particular item sold or purchased on a particular farm. The formulae are weighted aggregates of actual prices and quantities. The formula for income or value is: $\frac{\sum q_1 p_1}{\sum q_0 p_0}$; for quantity or production, $\frac{\sum q_1 p_0}{\sum q_0 p_0}$; and for

price, $\frac{\sum q_1 p_1}{\sum q_1 p_0}$; where p_1 and q_1 are current-year prices and quantities, and p_0 and q_0 are weighted average prices and quantities respectively in the base years. In most instances, weighted average prices and quantities for the period 1935-39 were employed as base weights.

During the first 5 years of the 16-year period (1930-45) covered in this report a major depression occurred; during the first 10 years several localized droughts and two general droughts occurred; and during the last 5 years an unparalleled World War occurred. The period 1935-39 gave a suitable base for prices on nearly all farms but produced a very unsatisfactory base for crop yields, crop and livestock production, and income on most farms. The 5-year period 1937-41 yielded a fairly reasonable base for production on some farms, but was too low on some farms and too high on others. Any appropriate base period for prices seemed to be unreasonable as a base for production and income. Any period that seemed appropriate for production and income on typical farms in one area gave uncomparable results in other areas.

The period 1930-44—though it contained the depression, droughts, and the war—gave reasonable average values for crop yields, crop and livestock production, mechanization, price, income, and related items. Index numbers are available for a large number of items not presented in this report. The index numbers for a few selected items, the terms of which are discussed here, are presented on 1930-44 = 100 in the following section and on 1935-39 = 100 in the last section.

Gross income:- Includes total cash receipts, Government payments, perquisites, and net change in inventory of crops and livestock. The price of feeder livestock is not considered a part of gross income on farms where bought.

Total production:- Includes all products sold, consumed and held in inventories on the farm, plus farm produced power, minus feed, seed, and livestock purchased. It thus represents the total quantity of products produced during the year on the typical farm.

Production per hour of man labor:- "Total production" divided by total hours of man labor. It represents the total physical output for each hour of man labor used in production.

Operating expense per unit of production:- "Cash expenditures" plus net depreciation incurred in the production of each unit of product. Land and buildings, working capital, and operator and unpaid family labor charges are not included in operating expense.

Total cost per unit of production:- Total farm expense including cash operating expense, net depreciation, and imputed return to operator and family labor and investment incurred in the production of each unit of product. Algebraically it is "cash expenditures" plus net depreciation and imputed return to operator and family labor and to investment, divided by total gross production. Total gross production here is the sum of all products sold, consumed, and held in inventories on the farm.

Total input per unit of production:- The total cost (excluding changes in prices) of producing each unit of product. Algebraically it is the sum of all items or units produced, each multiplied by its respective base price, divided by the sum of all items used in production, each multiplied by its respective base price; the base period is the same for both numerator and denominator. In other words, it is "Total cost per unit of production" as given above, adjusted for changes in price. All costs have been adjusted for change in price level and thus the ratio of input per unit of production or output becomes a measure of efficiency in production.

Quantity of power and machinery used:- Includes tractors, trucks, machinery and equipment, farm-produced power, and farm share of automobile, each reduced to its respective average value in 1950 and weighted accordingly by the number of items. It represents the combined amount of machinery, equipment, and power on the farm at 1935-59 average values.

Prices received for products sold:- Refers to the weighted aggregates of actual prices received for all products sold by producers on typical farms. It is the sum of the prices received for each item sold in the current year weighted by the respective quantity of the product sold in the same year divided by the sum of the weighted base year (1935-39) prices received for each item sold weighted by the respective quantity of the product sold in the current year.

Prices paid including wages to hired labor:- Refers to the weighted aggregates of actual prices paid by operators of typical farms for all goods and services used in production and maintenance. It is the sum of current-year prices paid, including wages, each weighted by the quantity of the respective commodities or services bought in the same year, and divided by the sum of base year (1935-39) prices paid for each item purchased weighted by the amount of goods and services bought in the current year. The formula for both prices paid and prices received is:

$$\frac{\sum q_1 p_1}{\sum q_1 p_0}$$

and p_0 being weighted average prices in the base period, 1935-39.

COMPARISON OF SELECTED ITEMS ON TYPICAL FARMS

This section presents in graphical and tabular form the information on crop yields, production, production costs, production efficiency, income, distribution of income, and price and cost relationships on all typical farms considered in this report. It shows in considerable measure the effects of changes in farm production, mechanization, practices, prices, and costs on the returns to farm families operating each of the types of farms.

It shows that annual earnings of farm families decline in periods of low production and low prices and rise during periods of high prices and increased production regardless of the type of farm; but the extent to which earnings decline and increase differs on each farm. Some farm operators—because of their favorable situations with regard to climate, soils, and topography, and the combination of enterprises they operate—have maintained production and income fairly well through bad years and good years. Other farm operators were pressed so hard and so long during the depression and droughts in the 1930's that they were forced to liquidate breeding herds on an unprecedented scale and thus were unable to take full advantage of high prices and flush conditions during the war that has just ended. Still other farm operators have had so little capital and equipment available that they could not do much more than hold their own at any time.

Incomes of dairy farmers in general have varied less than incomes of most farmers because conditions fluctuate less on dairy farms. Typical dairy farms considered in this report are fairly well balanced so far as feed and labor are concerned. Extensive increases in the dairy enterprise can be brought about only by additional outlays for equipment, feed, and labor which are some of the more expensive items. Grain farmers who are well situated, on the other hand, can alter their farming program fairly quickly to take advantage of favorable situations. Labor-saving equipment and mechanical power and equipment for large-scale operations have been available to them. In 1940-44, operating expenses per dollar of income on some grain farms were as little as 20 cents, compared with 70 cents in the early 1930's. Operating expenses per dollar of income were higher and the reduction was less in recent years on livestock farms than on grain farms. In 1940-44 operating expense per dollar of income on livestock farms was around 35 cents, about half what it was in the early thirties. Economies in the use of labor have been greater on grain farms.

Many of these relationships are shown in the tables and figures that follow. Detailed analyses and discussions of these relationships are held for later presentation.

FARM EARNINGS

OPERATOR'S NET FARM INCOME, TYPICAL FAMILY-OPERATED
FARMS, BY TYPE, 1930-45

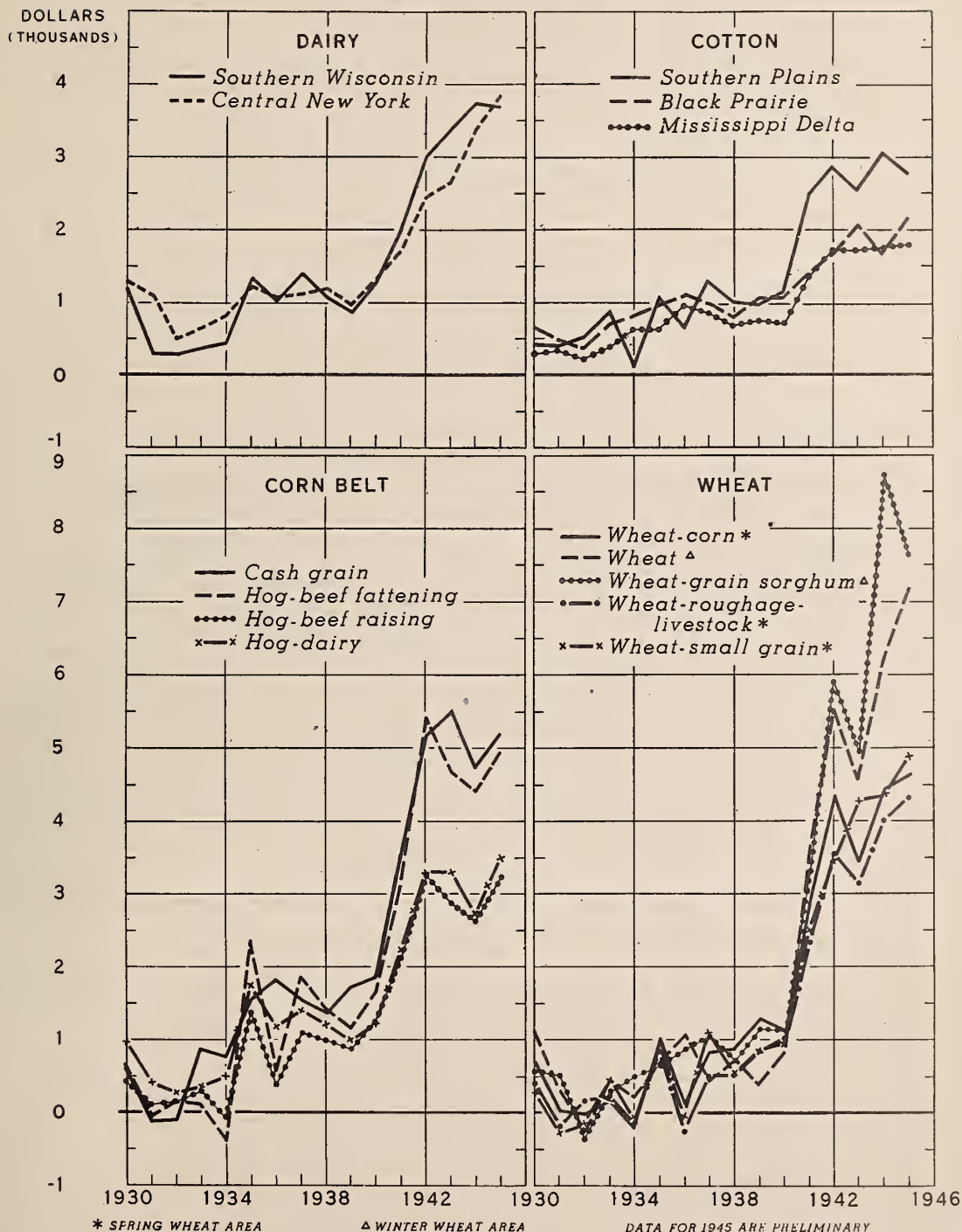


Figure 2.- Annual earnings of farm families follow the same general pattern regardless of the type of farm. Farmers have more money to spend when business is good, employment high, and factory payrolls large. But they are poor customers when city workers become unemployed and reduce their purchases of farm products.

Table 1.- Operator's net cash farm income and operator's net cash farm income, typical family operated farms, by type, 1930-45

Calendar year	Dairy farms		Corn Belt farms		Spring wheat farms (Northern Plains)			Winter wheat farms (Southern Plains)		Ootton farms		
	Dollars	Dollars	Dollars	Dollars	Wheat-corn-livestock	Wheat-small grain-roughage	Wheat-sorghum	Wheat	Southern Plains	Black Prairie	Delta of Mississippi	
1930	1,280	1,194	598	404	686	253	391	1,114	549	412	538	297
1931	1,092	284	- 145	102	17	- 273	- 172	287	508	395	458	334
1932	492	326	- 112	129	8	- 165	151	- 253	- 349	520	356	228
1933	628	357	843	293	162	446	229	458	281	863	685	341
1934	801	430	745	- 74	- 210	- 75	- 155	209	474	106	775	604
1935	1,226	1,342	1,530	2,339	1,006	902	837	689	643	1,079	949	607
1936	1,059	1,019	1,808	557	81	- 21	- 268	1,069	893	631	1,076	961
1937	1,099	1,366	1,564	1,086	805	1,090	505	432	1,042	1,337	989	844
1938	1,184	1,067	1,366	985	863	554	540	733	728	1,022	795	677
1939	967	858	1,723	1,132	1,271	855	841	382	1,139	972	1,051	765
1940	1,309	1,271	1,841	1,632	1,108	942	1,011	825	1,121	1,168	1,050	695
1941	1,693	1,998	3,540	3,160	2,855	2,498	2,337	3,680	3,278	2,478	1,404	1,341
1942	2,446	3,012	5,146	5,399	4,365	3,438	3,554	5,512	5,922	2,840	1,640	1,704
1943	2,653	3,369	5,494	4,678	3,443	4,274	3,140	4,584	4,967	2,537	2,040	1,712
1944	3,369	3,738	4,720	4,421	4,430	4,354	4,001	6,230	6,732	3,042	1,697	1,750
1945 1/2	3,823	3,680	5,195	4,931	4,616	4,886	4,320	7,185	7,660	2,745	2,159	1,796

Operator's net cash farm income	
Dollars	Dollars
1930	661
1931	230
1932	941
1933	119
1934	- 14
1935	602
1936	409
1937	329
1938	384
1939	- 34
1940	20
1941	414
1942	520
1943	- 99
1944	123
1945	148
1946	456
1947	805
1948	585
1949	1,929
1950	3,453
1951	3,009
1952	2,849
1953	3,909
1954	4,075
1955	3,803

Operator's net cash farm income	
Dollars	Dollars
1930	927
1931	405
1932	274
1933	302
1934	377
1935	809
1936	1,308
1937	510
1938	558
1939	686
1940	804
1941	1,284
1942	2,060
1943	2,685
1944	2,452
1945	2,369
1946	4,041
1947	2,419
1948	4,331
1949	4,331
1950	4,331
1951	4,331
1952	4,331
1953	4,331
1954	4,331
1955	4,331

1/ Preliminary.

Table 2.- Net farm income and return to operator and family labor, typical family operated farms, by type, 1930-45

Calendar year	Dairy farms		Corn Belt farms		Spring wheat farms (Northern Plains)		Winter wheat farms (Southern Plains)		Ootton farms					
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars				
1930	1,419	1,514	1,305	1,278	659	1,202	1,004	491	565	1,574	1,055	528	793	343
1931	1,230	482	322	399	293	568	139	331	-	599	971	503	546	379
1932	597	524	212	518	270	392	116	126	260	27	-	673	433	255
1933	742	539	1,177	453	427	477	267	577	303	699	509	1,135	443	441
1934	927	604	1,117	-	23	651	-	74	149	470	774	259	960	711
1935	1,388	1,666	2,448	2,882	1,609	2,007	1,243	1,113	985	941	860	1,330	1,144	692
1936	1,204	1,280	2,458	965	479	1,384	165	89	-	1,393	1,214	815	1,298	1,128
1937	1,245	1,713	2,825	2,436	1,357	1,704	1,024	1,475	534	662	1,393	1,699	1,207	998
1938	1,341	1,357	2,109	1,851	1,150	1,387	1,062	738	564	1,028	1,028	1,261	935	807
1939	1,101	1,089	2,652	1,622	1,044	1,246	1,562	1,088	938	611	1,506	1,148	1,237	911
1940	1,480	1,589	2,755	2,208	1,462	1,490	1,384	1,232	1,123	1,100	1,561	1,473	1,251	829
1941	1,908	2,444	4,851	3,807	2,368	2,548	3,302	3,154	2,582	4,226	4,162	3,054	1,634	1,581
1942	2,759	3,679	6,934	6,347	3,651	3,696	5,072	4,398	3,969	6,274	7,586	3,384	1,881	2,001
1943	3,014	4,150	7,582	5,874	3,287	3,839	4,152	5,566	3,582	5,293	6,332	3,177	2,406	2,028
1944	3,804	4,521	6,926	5,766	3,128	3,291	5,403	4,524	4,524	7,245	11,629	3,772	2,034	2,065
1945 1/2	4,324	4,590	7,502	6,284	3,782	4,119	5,958	6,363	4,866	8,271	10,036	3,331	2,548	2,098

Return to operator and family labor										
Calendar year	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
1930	754	492	110	25	68	550	312	42	58	248
1931	621	421	448	511	123	106	166	325	352	266
1932	62	222	264	133	15	114	141	231	4	403
1933	288	89	720	79	204	215	99	332	123	719
1934	480	14	569	584	157	292	244	109	181	6
1935	911	1,014	1,071	1,929	1,126	1,367	861	749	729	906
1936	725	651	1,438	172	165	820	18	107	331	479
1937	762	1,052	906	1,326	783	982	643	808	462	680
1938	854	707	925	1,032	752	865	681	346	469	867
1939	613	459	1,194	677	605	636	1,033	635	703	906
1940	984	981	1,315	1,125	939	825	839	709	836	880
1941	1,405	1,844	2,802	2,559	1,758	1,777	2,484	2,034	2,061	2,988
1942	2,214	3,000	4,093	4,506	2,727	2,681	3,717	2,656	3,063	4,779
1943	2,364	3,363	4,192	3,363	2,168	2,465	2,673	3,145	2,470	4,346
1944	3,132	3,754	3,331	3,029	1,863	1,829	3,497	3,082	3,169	8,169
1945 1/2	3,579	3,643	3,765	3,546	2,473	2,539	3,668	3,557	3,412	7,016

1/ Preliminary.

Table 3.- Return per hour to all labor, total hours of labor used and total farm investment, typical family operated farms, by type, 1930-45

Calendar year	Dairy farms		Corn Belt farms		Spring wheat farms (Northern Plains)		Winter wheat farms (Southern Plains)		Cotton farms	
	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours
1930	.21	.16	.08	.07	.10	.04	.20	.06	.14	.10
1931	.17	.05	.05	.01	.02	.06	.01	.08	.11	.10
1932	.04	.02	.01	.02	.02	.04	.13	.17	.09	.08
1933	.08	.01	.18	.02	.03	.10	.10	.06	.15	.12
1934	.13	.03	.15	.09	.07	.03	.01	.12	.18	.20
1935	.22	.25	.28	.43	.31	.24	.17	.18	.22	.19
1936	.18	.18	.37	.08	.20	.03	.31	.27	.24	.25
1937	.20	.27	.25	.31	.20	.26	.10	.32	.21	.20
1938	.21	.19	.25	.25	.20	.13	.19	.20	.19	.19
1939	.16	.14	.32	.18	.30	.21	.07	.35	.24	.21
1940	.24	.25	.36	.28	.24	.23	.22	.33	.24	.20
1941	.34	.43	.74	.60	.67	.61	1.28	1.08	.34	.38
1942	.51	.66	1.04	1.01	.96	.76	1.67	1.82	.41	.45
1943	.56	.73	1.07	.61	.70	.89	1.22	1.38	.46	.46
1944	.72	.61	.89	.75	.92	.54	1.70	2.54	.41	.48
1945	.61	1.02	.87	.70	.98	1.06	2.03	2.26	.51	.48

Calendar year	Dairy farms		Corn Belt farms		Spring wheat farms (Northern Plains)		Winter wheat farms (Southern Plains)		Cotton farms	
	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours
1930	4,831	4,604	4,599	4,118	4,242	3,977	3,082	3,088	4,886	2,799
1931	4,650	4,739	4,642	4,109	3,760	3,826	3,259	2,895	4,601	3,010
1932	4,458	4,705	4,300	3,794	3,527	3,473	2,742	2,728	3,476	2,669
1933	4,998	4,709	4,094	3,898	3,996	3,229	2,566	2,652	3,660	3,452
1934	5,000	5,197	4,110	3,850	3,970	3,667	2,871	3,068	4,017	3,543
1935	5,179	5,514	4,128	4,000	4,066	3,865	3,152	3,326	3,706	3,491

January 1:	Dollars		Dollars		Dollars		Dollars		Dollars		Dollars	
	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours
1930	11,287	17,121	35,049	29,809	16,656	17,369	17,413	26,516	10,656	13,280	3,811	2,799
1931	7,647	10,861	20,416	16,259	9,235	11,376	10,583	16,045	6,667	7,687	1,971	2,531
1932	8,345	12,052	23,690	18,138	11,398	11,444	9,884	17,049	7,886	8,563	2,531	3,551
1933	9,341	13,170	28,710	20,869	13,552	10,850	7,897	17,184	9,116	8,607	4,269	4,269
1934	10,647	14,881	32,003	25,054	16,099	13,947	10,172	20,375	10,464	9,645	4,269	4,269
1944	13,189	18,613	44,579	33,016	21,554	17,927	15,027	26,060	12,973	12,362	5,238	5,238

1/ Preliminary.

INCOME AND EXPENSE

OPERATING EXPENSE, RENT AND INTEREST PAID, AND OPERATOR'S NET FARM INCOME,
TYPICAL FAMILY-OPERATED FARMS, BY TYPE, 1930-45
(PERCENT OF GROSS FARM INCOME)

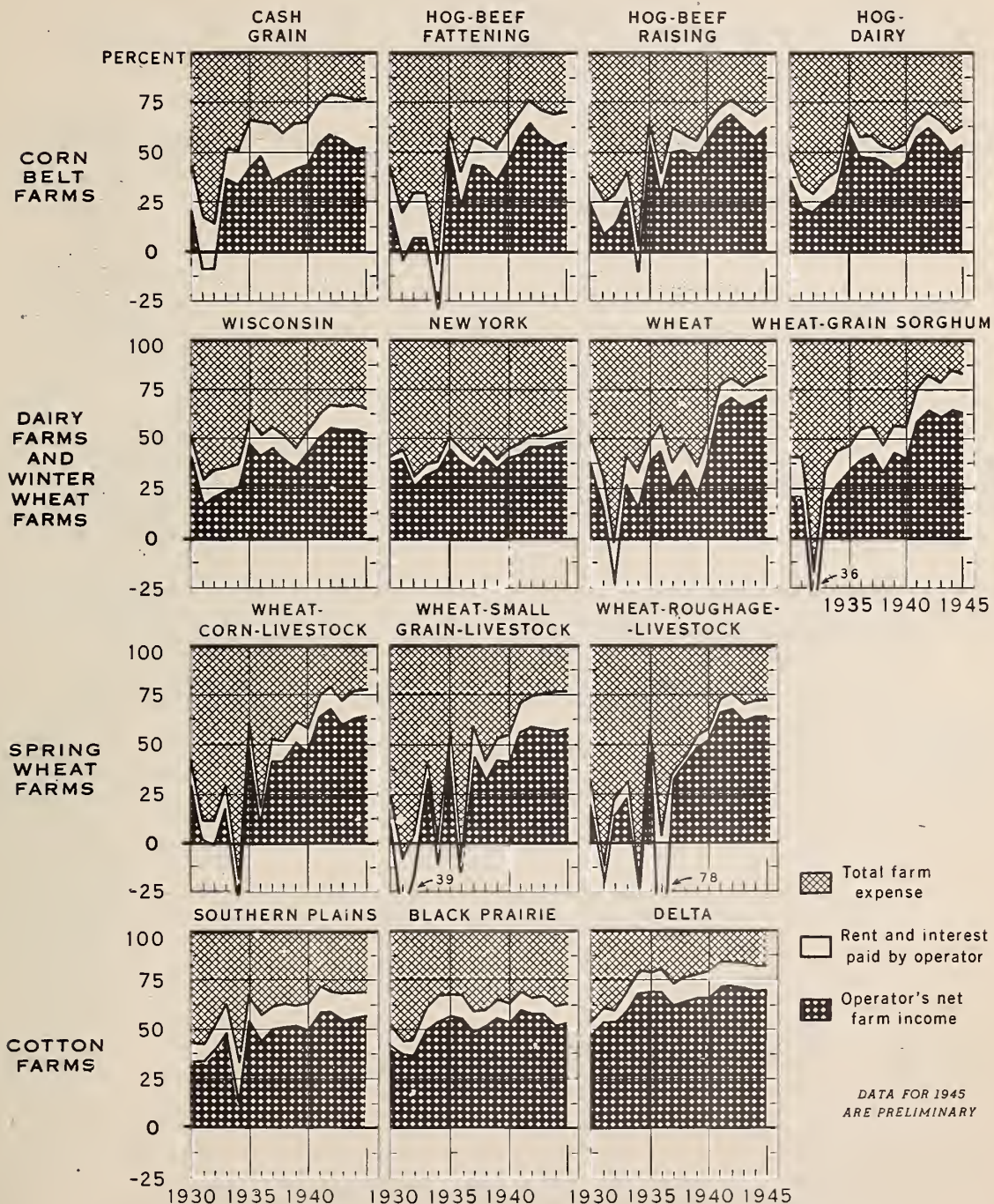


Figure 3.- Farmers really feel the pinch when farm prices are falling for the prices of things they have to buy lag behind and operating expenses take a larger-than-usual share of total income. Most rental arrangements are on a share basis. As a result, the portion of gross income going to landlords and mortgage holders varies directly with gross farm income.

PRODUCTION AND PRODUCTION COSTS

TYPICAL FAMILY-OPERATED FARMS, BY TYPE, 1930-45

INDEX NUMBERS (1930-44=100)

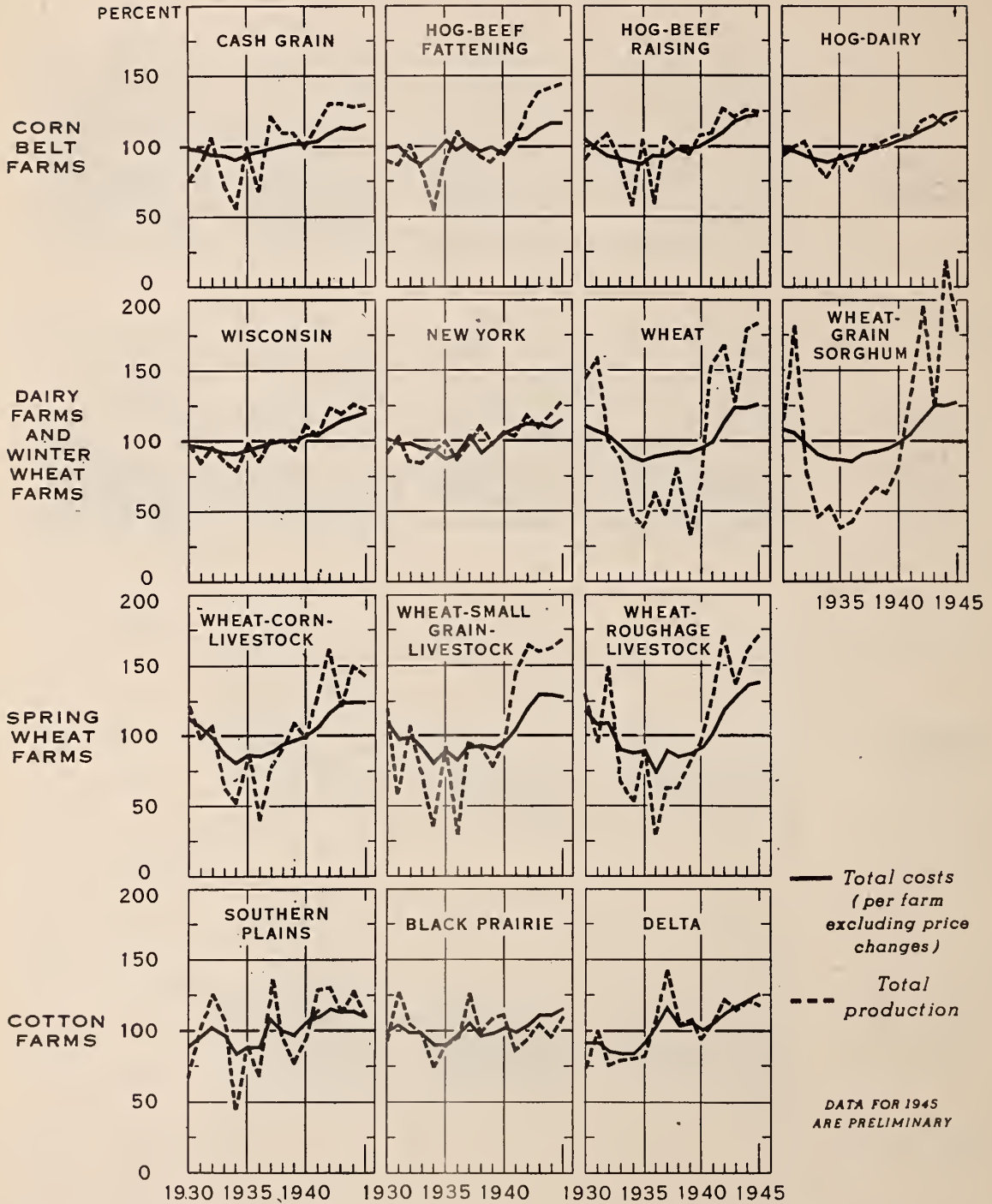


Figure 4.- Operators of typical farms have increased their production 30 to 50 percent during the last 16 years. Total cost per farm has also increased but not to the same extent as production. Farmers, in general, are becoming more efficient producers. Many farm costs continue even though production is reduced.

CROP YIELDS

COMBINED AVERAGE YIELDS OF MAJOR CROPS, TYPICAL FAMILY-OPERATED FARMS, BY TYPE, 1930-45

INDEX NUMBERS (1930-44=100)

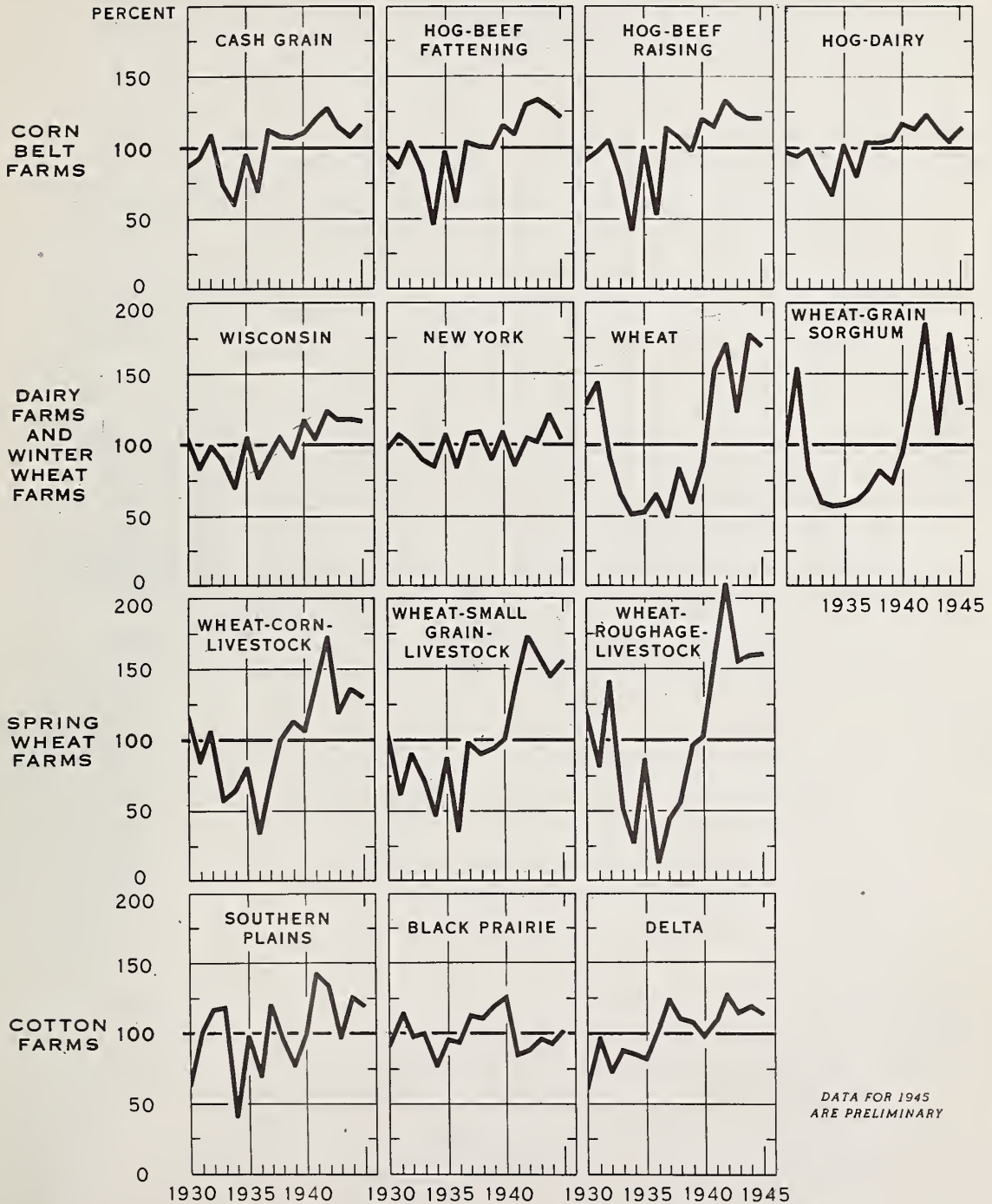


Figure 5.- Crop yields have improved substantially and have contributed materially to the increase in total production and the output per worker. Improved varieties, increased use of fertilizer and lime, land selections for important crops, improved production practices, soil conservation and weather have all played an important part. Yields are highly variable in some areas and relatively stable in others. They are particularly unpredictable throughout the semi-arid Great Plains region.

PRODUCTION EFFICIENCY

PRODUCTION PER HOUR OF MAN LABOR AND COSTS* PER UNIT OF PRODUCTION, TYPICAL FAMILY-OPERATED FARMS, BY TYPE, 1930-45

INDEX NUMBERS (1930-44=100)

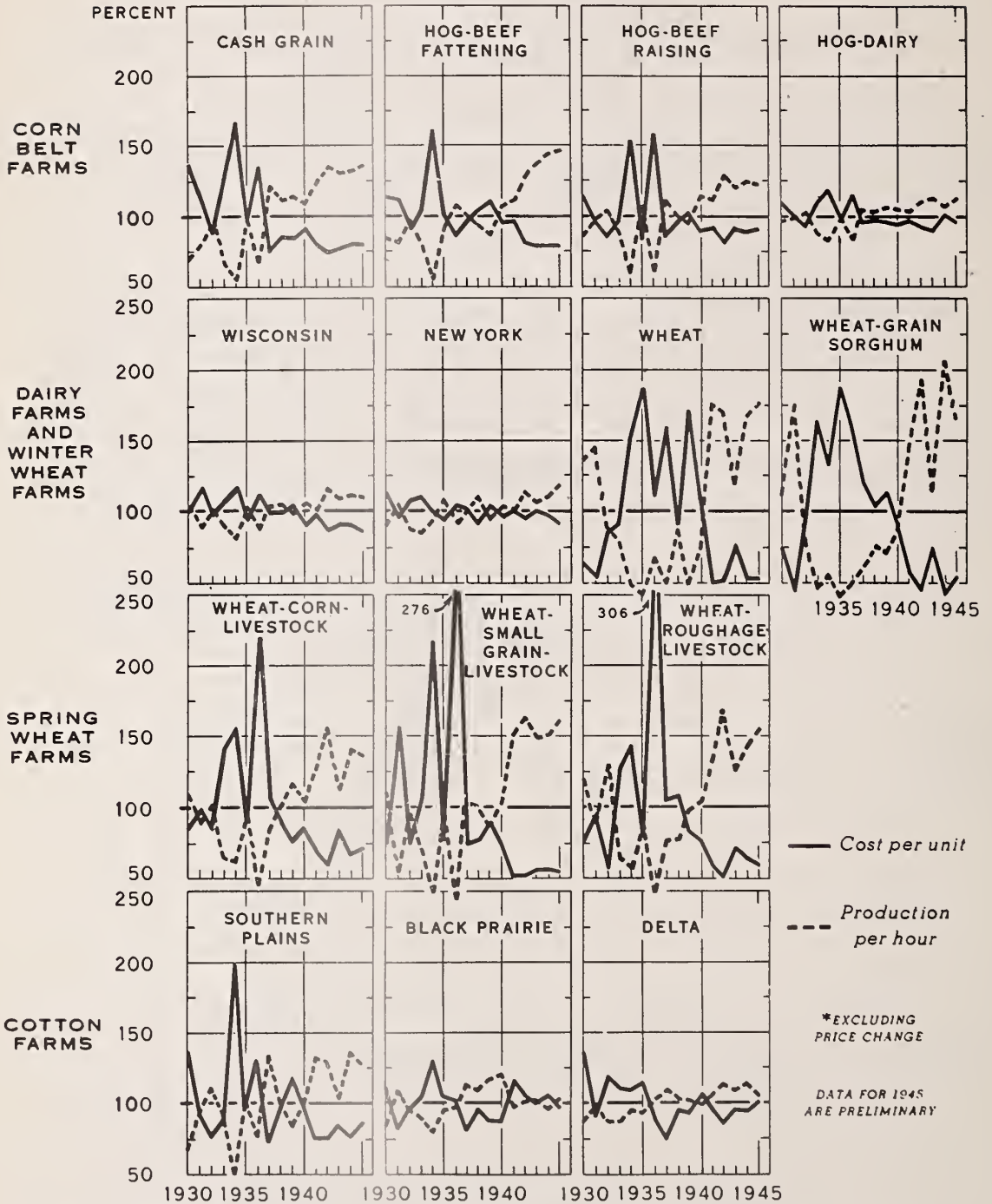


Figure 6.- Real gains have been made in production efficiency during the past decade. Labor productivity has increased generally and unit production costs have been pushed steadily downward. But these gains have not been shared uniformly by families on all types of farms. Increased efficiency is essential to improvement in the material standard of farm living.

Table 4.- Total costs (excluding price change) per unit of production and production per hour of men labor, typical family operated farms, by type, 1930-45
 Index numbers (1930-44 = 100)

Calendar year	Dairy farms		Corn Belt farms		Spring wheat farms (Northern Plains)		Winter wheat farms (Southern Plains)		Soybean farms		Delta of Mississippi		
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
1930	111	101	136	113	109	84	73	74	63	74	137	110	135
1931	95	117	111	95	100	98	196	45	53	45	92	82	69
1932	107	97	89	84	92	84	73	99	85	99	75	96	118
1933	109	107	129	96	108	138	104	163	91	163	87	103	110
1934	100	116	166	192	118	153	214	133	151	133	198	129	108
1935	93	94	91	83	98	90	75	187	187	186	94	103	114
1936	104	111	134	157	116	218	276	112	112	196	130	101	88
1937	101	98	75	85	95	107	73	158	121	121	72	81	74
1938	90	98	84	95	97	89	77	103	92	103	96	95	95
1939	103	104	84	101	95	75	88	170	113	113	116	87	93
1940	97	90	91	88	93	86	74	108	91	91	96	87	107
1941	100	98	80	91	97	68	51	50	50	57	74	115	95
1942	94	86	75	81	91	59	52	52	52	44	74	105	85
1943	100	92	77	91	90	84	57	75	75	74	84	100	95
1944	96	91	78	88	101	67	57	53	53	41	75	106	94
1945 1/2	91	86	79	90	97	70	53	53	53	53	85	97	101

Total costs (excluding price change) per unit of production

Production per hour of men labor

1930	90	103	69	86	96	109	108	118	137	111	67	83	87
1931	105	88	80	98	99	89	58	88	146	175	94	108	99
1932	87	100	96	104	103	101	95	129	88	77	110	94	86
1933	85	89	65	88	87	63	70	63	78	46	91	89	86
1934	94	81	55	59	82	60	40	57	49	55	90	79	95
1935	108	103	97	106	98	93	95	85	42	40	100	95	93
1936	92	87	67	60	84	46	34	40	68	50	77	97	101
1937	101	103	121	110	105	84	102	76	50	68	132	113	108
1938	109	105	111	100	103	100	100	77	87	75	100	109	103
1939	93	98	113	94	106	116	86	97	49	70	83	117	101
1940	104	107	108	113	105	104	104	103	75	86	99	120	99
1941	101	101	123	111	105	128	190	134	175	145	131	96	106
1942	114	116	134	129	111	155	162	167	170	191	128	101	113
1943	106	108	130	119	112	111	149	124	119	113	104	102	109
1944	111	111	131	123	106	141	151	142	167	204	134	97	114
1945 1/2	118	108	135	122	112	135	162	155	176	164	126	103	105

1/ Preliminary.

PRICES RECEIVED, AND PRICES AND WAGES PAID
 TYPICAL FAMILY-OPERATED FARMS, BY TYPE, 1930-45
 INDEX NUMBERS (1930-44=100)

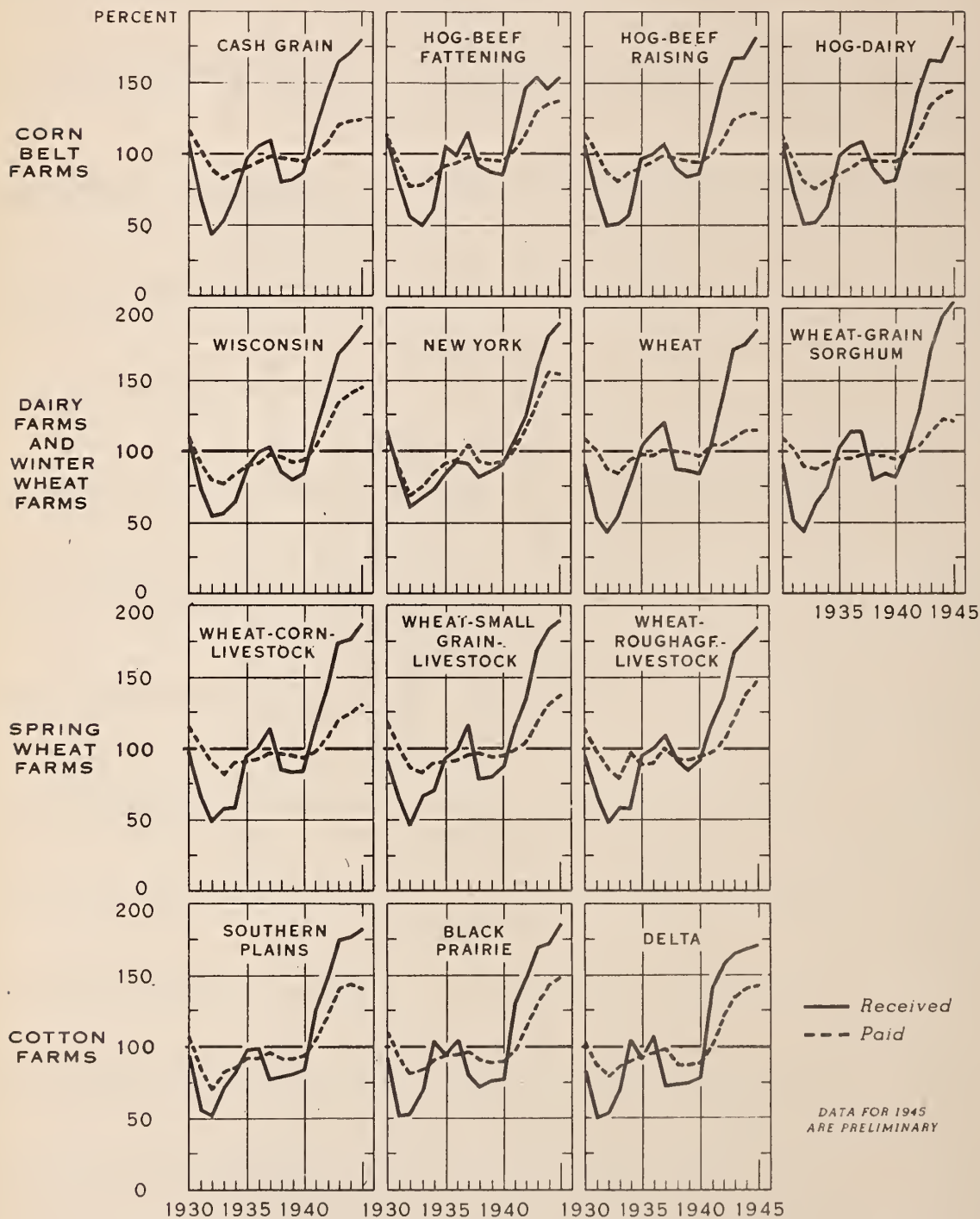


Figure 7.- Farm-product prices are highly responsive to changes in general economic conditions. Prices paid by farmers, on the other hand, are much more stable even when wages paid hired labor are included. Comparisons of index numbers of prices received and paid alone may be misleading for they make no allowance for changes in quantities bought or sold.

OPERATING MARGINS

OPERATING EXPENSE PER DOLLAR OF GROSS FARM INCOME,
TYPICAL FAMILY-OPERATED FARMS, BY TYPE, 1930-45

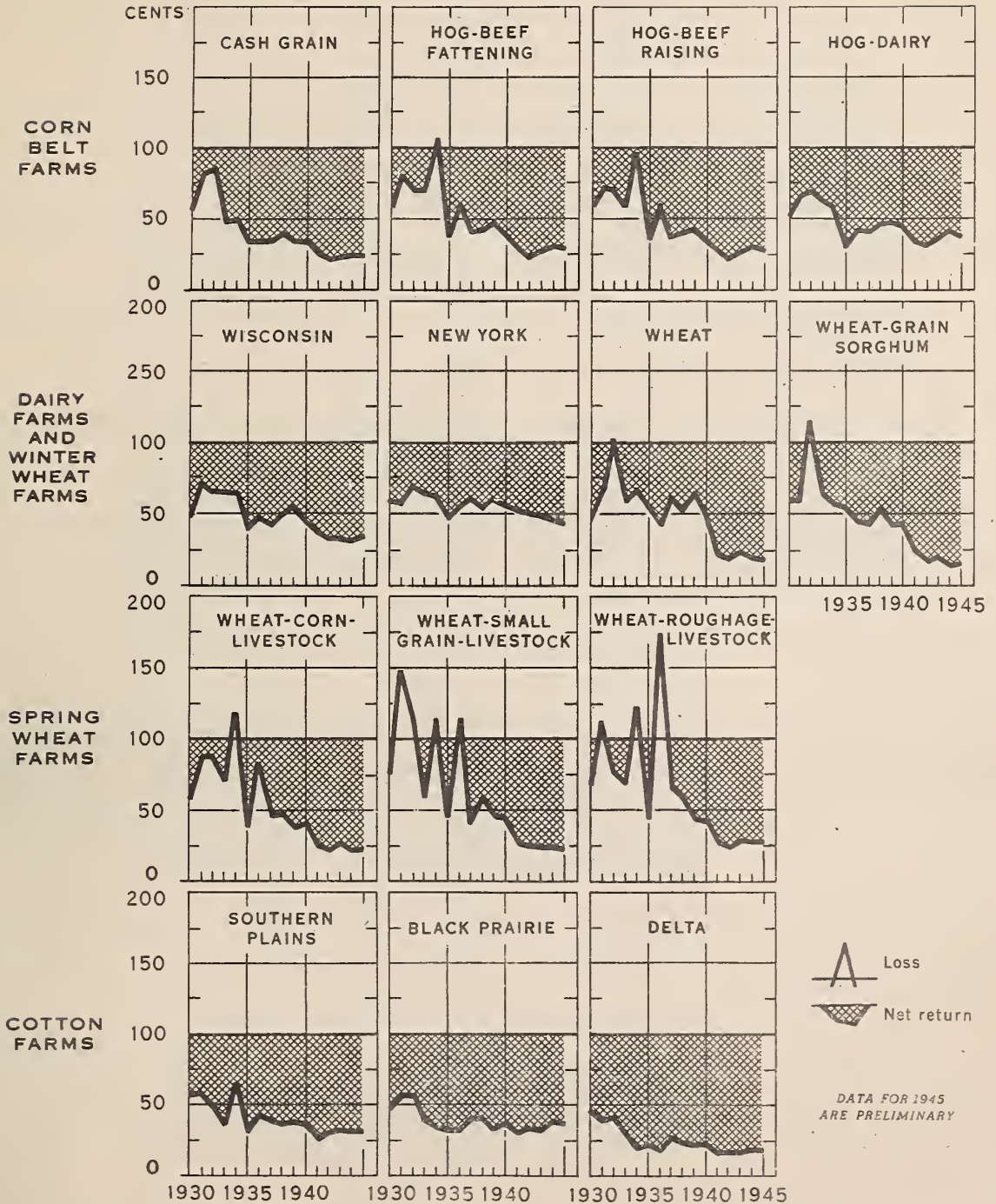


Figure 8.- Low production and low prices for farm products both reduce the normal margin of return per unit above out-of-pocket costs as total dollar operating expenses do not vary much from year to year. The shaded area is the part of each dollar received by the operator that is left for him to pay rent, interest, debts, and to maintain and educate his family.

Table 5.- Total production and operating expense per dollar of gross farm income, typical family operated farms, by type, 1930-45

Calendar year	Dairy farms		Corn Belt farms		Spring wheat farms (Northern Plains)		Winter wheat farms (Southern Plains)		Southern Plains		Ootton farms		
	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	
1930	91	.96	75	.89	90	.93	121	.118	143	115	67	94	72
1931	102	.83	86	86	102	98	98	58	158	161	100	126	99
1932	85	96	105	101	108	102	107	106	99	76	124	104	75
1933	85	86	71	85	92	86	62	74	87	45	106	98	78
1934	92	79	55	54	59	77	52	37	49	53	44	74	79
1935	99	98	96	89	103	94	86	91	39	37	89	89	82
1936	87	85	67	110	60	82	40	30	63	42	68	95	109
1937	99	100	121	99	107	100	76	95	47	57	135	124	142
1938	110	100	109	93	98	100	92	91	79	67	96	98	103
1939	97	94	109	88	94	104	109	77	43	62	77	108	107
1940	106	111	100	98	107	107	98	95	70	80	96	111	93
1941	103	103	114	105	108	105	127	144	151	136	128	85	105
1942	118	123	130	124	127	117	162	164	166	195	130	94	122
1943	109	119	130	138	120	121	121	159	127	125	113	104	114
1944	119	125	128	141	125	114	149	161	179	227	127	96	120
1945 1/2	127	121	123	144	124	120	143	168	183	176	109	108	117

Total production
Index numbers (1930-44 = 100)

Operating expense per dollar of gross farm income

Calendar year	Dairy farms		Corn Belt farms		Spring wheat farms (Northern Plains)		Winter wheat farms (Southern Plains)		Southern Plains		Ootton farms		
	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent	
1930	.58	.84	.56	.57	.60	.52	.58	.75	.48	.59	.56	.48	.46
1931	.55	.71	.82	.80	.74	.66	.89	1.47	.69	.59	.57	.55	.39
1932	.69	.65	.85	.70	.71	.70	.89	1.14	1.02	1.16	.48	.55	.40
1933	.63	.64	.48	.70	.59	.63	.72	.59	.59	.65	.37	.39	.30
1934	.61	.63	.49	1.06	.97	.59	1.18	1.11	.67	.56	.66	.33	.20
1935	.49	.40	.33	.39	.35	.31	.45	.45	.51	.53	.33	.32	.21
1936	.55	.48	.34	.60	.60	.42	1.14	1.74	.43	.45	.43	.32	.19
1937	.61	.44	.34	.42	.38	.41	.40	.40	.62	.44	.38	.40	.27
1938	.53	.49	.40	.44	.41	.46	.48	.58	.52	.53	.37	.40	.24
1939	.60	.34	.35	.48	.43	.48	.38	.47	.64	.43	.38	.34	.22
1940	.55	.46	.34	.39	.35	.45	.41	.45	.90	.44	.37	.36	.21
1941	.52	.38	.25	.28	.28	.35	.28	.28	.23	.25	.27	.30	.15
1942	.48	.33	.21	.23	.23	.31	.25	.25	.19	.18	.30	.33	.16
1943	.48	.34	.22	.28	.28	.35	.24	.24	.23	.22	.32	.32	.16
1944	.46	.33	.24	.31	.31	.41	.23	.24	.20	.15	.31	.38	.18
1945 1/2	.44	.35	.23	.28	.28	.37	.23	.23	.17	.17	.31	.36	.18

1/ Preliminary.

FARM OWNERSHIP

EQUITY OF FARM OPERATORS IN THEIR FARMS, TYPICAL FAMILY-OPERATED FARMS, BY TYPE, 1930-45

(PERCENT OF VALUE OF LAND AND BUILDINGS)

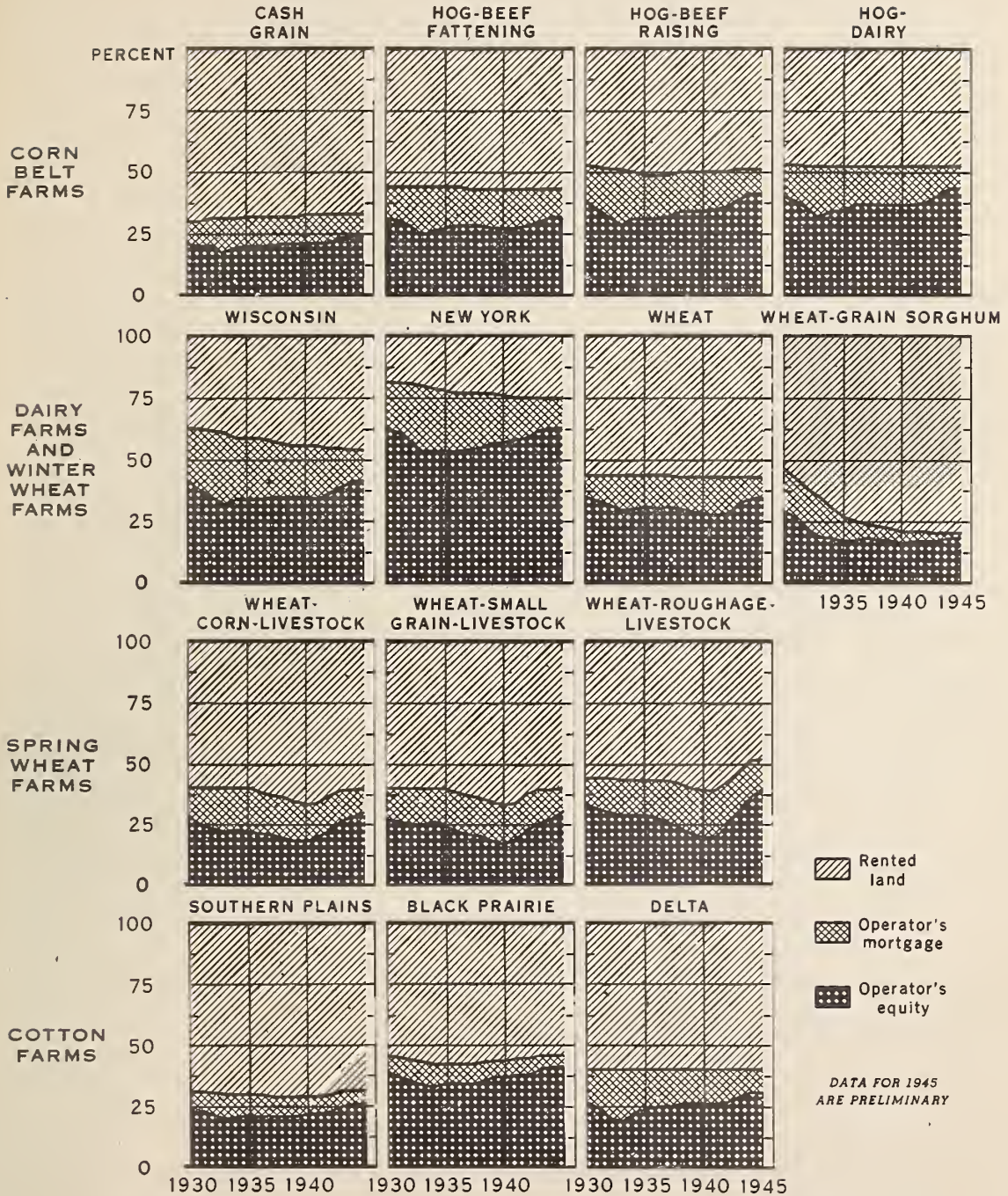
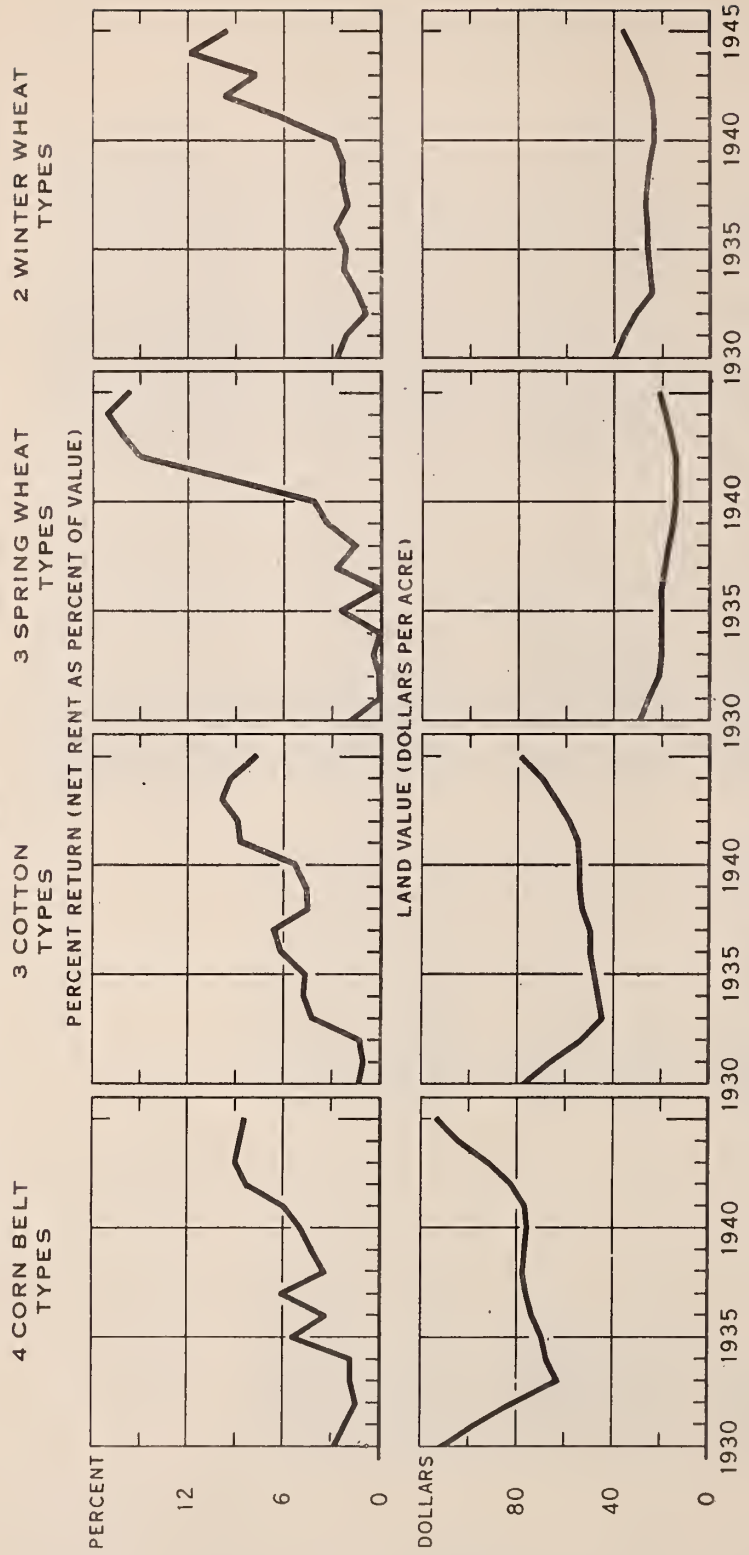


Figure 9.- If debt free owner-operatorship is their goal, operators of these 14 types of farms have made little progress toward it during the last 16 years. Some operators prefer renting to owning, for in this way they can use more land, put more money into livestock and machinery, and utilize their labor and machinery more effectively.

NET RENT AND LAND VALUES

NET RENT AS PERCENT OF CURRENT VALUE OF LAND AND BUILDINGS AND ESTIMATED VALUE PER ACRE OF FARM REAL ESTATE, TYPICAL FAMILY-OPERATED FARMS, BY TYPE, 1930-45



TYPE OF FARM	ESTIMATED VALUE OF LAND AND BUILDINGS PER ACRE (DOLLARS)		VALUE PER ACRE BASED ON CAPITALIZED NET RENT* (DOLLARS)			
	1933	1945	1937	1940	1945	1942/45
4 CORN BELT TYPES	\$63	\$114	\$76	\$76	\$78	\$194
3 COTTON TYPES	44	79	50	54	63	140
3 SPRING WHEAT TYPES	20	21	19	14	9	69
2 WINTER WHEAT TYPES	24	36	27	23	13	63

* NET RENT PER ACRE (GROSS RENTAL VALUE LESS TAXES AND BUILDING DEPRECIATION) CAPITALIZED AT CURRENT MORTGAGE INTEREST RATE

Figure 10.- Land values usually lag two or three years behind net farm rentals. Prices of farm real estate rose substantially during the war but not nearly so fast as rental values. Returns to investment in farm land have been at a very attractive level during the past few years.

LOCATION AND GENERAL CHARACTERISTICS OF
TYPICAL FAMILY-OPERATED FARMS

The brief discussion regarding each of the typical farms in this section is intended only to give a minimum of detail on the general location and characteristics of the farm. It is confined chiefly to a description of the size of farm, the cropping systems, livestock enterprises, use of mechanical equipment and power, and the general farm situation, with a minimum of analysis. The data presented in the tables and figures give some of the basic and general information on farm organization, production, costs, and income for the 16-year period (1930-45) and are intended to supply ready information to those who are interested in agriculture and agricultural problems. Many of the relationships and trends brought out in the data will be readily understood by those who are familiar with the typical farms in the various areas.

Intensive analyses of these data are planned for subsequent reports.

Location and general characteristics of typical family-operated dairy farms, central New York

The dairy area of central New York is comprised of these farms which resemble a patch-work quilt along the valleys and slopes of the northeastern Appalachian Plateau with its broad, rolling-topped hills with steep sides and numerous small valleys (fig. 1). The soils are light-colored silts; some are shallow and some have compact subsoils. The farms average 140 acres, of which less than 40 percent is cropland. Nearly 80 percent of the cropland is devoted to the production of hay and silage for the 25 dairy animals that are normally kept; 17 of these animals are usually cows each producing a little less than 6,000 pounds of milk annually. Although these farmers produce about all the necessary roughage for their livestock, they buy practically all of the concentrate feeds. About 50 percent of the total cash expenditures is for the purchase of feeds.

Approximately 85 percent of the total income on these farms is from the dairy enterprise, of which about 70 percent is from the sale of milk which is marketed as fluid milk for retail trade in the Eastern market-milk shed. A farm poultry flock of slightly over 100 layers is the supplementary enterprise on this farm and accounts for about 10 percent of the gross income. The remainder of the income is obtained from the sale of some vegetables and fruit.

In 1930-33 operators of these farms milked about 17 cows obtaining a total milk production of about 95,500 pounds. During the depression, with its accompanying low prices for milk, these operators reduced the number of cows milked by about 11 percent. With the onslaught of the war and the patriotic cry for increased milk production and the accompanying higher prices for farm products these operators not only increased the number of cows milked by about 28 percent, compared with prewar days, but also fed and selected for higher production. The total production in 1941-45 was 118,400 pounds—23 percent above the prewar 1935-39 production. Production per cow was increased during this period by 6 percent.

Dairy farming, unlike grain farming, is a business that cannot be changed and shifted quickly to meet changed conditions. Considerable year-round labor is required and changes in labor requirements usually come slowly. About 5,000 hours of labor are used each year on each of these farms; the family labor is fully utilized all the year and accounts for about 85 percent of the work. Production per hour of man labor in 1940-44 was 16 percent above that in 1930-34. Much of the increase was due to higher crop production mostly because of higher yields. Crop production in 1940-44 was almost 15 percent above that in 1930-34.

INCOME AND EXPENSE, TYPICAL FAMILY-OPERATED DAIRY FARMS, CENTRAL NEW YORK, 1930-45

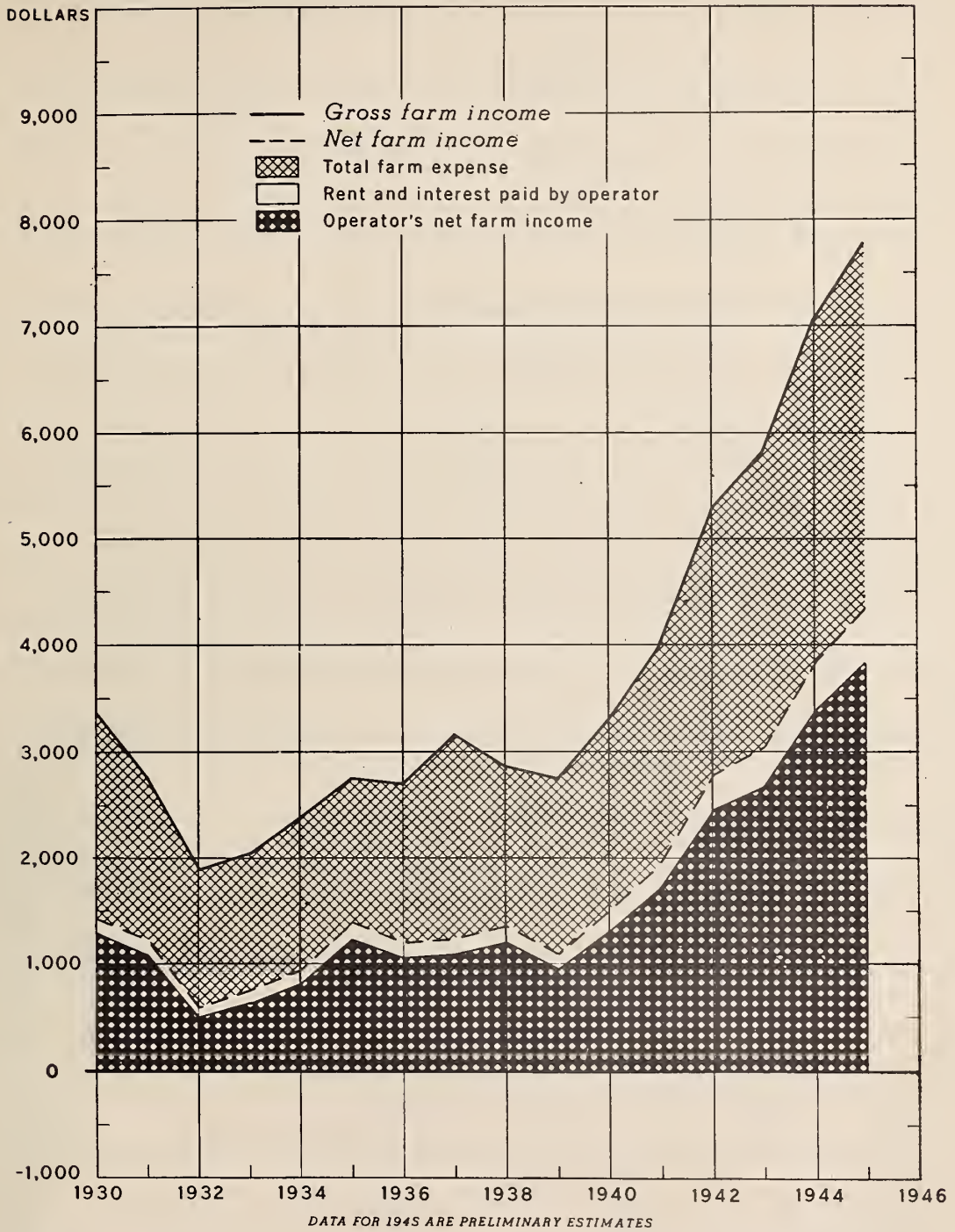


FIGURE 11

Table 6.- Land use, livestock numbers and distribution of income and expense, typical family operated dairy farms, central New York 1930-45

Item	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1945 1/2
Total land in farm	136	139	139	139	138	138	138	138	140	142	144	144	145	145	145	145	145
Proportion of farm land in:																	
Cropland harvested	38	38	37	38	38	38	38	38	39	39	38	38	39	37	37	37	36
Pasture and other land	62	62	63	62	62	62	62	62	61	61	62	62	61	63	63	63	62
Crops harvested:																	
Grains	8.5	9.1	8.5	9.2	9.1	9.1	9.4	8.7	9.7	10.2	10.3	10.2	10.3	8.6	8.6	8.8	8.9
Hay	35.4	37.0	35.8	35.8	34.7	34.9	35.2	35.9	36.7	36.4	35.3	36.0	36.8	36.5	36.0	36.0	36.9
Silage	5.7	6.0	6.1	5.4	6.0	6.5	5.9	6.1	6.3	6.7	6.9	7.0	7.3	6.8	7.5	7.6	7.6
Other crops	1.9	1.9	1.9	1.7	2.5	2.1	1.6	1.7	1.9	1.6	1.7	1.8	1.9	1.7	1.8	1.8	1.8
Crop yield (per harvested acre):																	
All crops (index 1930-44=100)	97	107	101	90	84	108	83	108	109	89	110	85	106	102	122	104	104
Livestock on farm January 1:																	
Dairy cows	17.0	16.6	17.0	16.8	16.3	15.2	15.8	16.4	17.0	17.5	17.9	18.4	18.1	18.5	19.7	20.4	20.4
Stock animals	7.9	7.8	7.9	7.9	7.7	7.1	7.4	7.7	7.9	8.2	8.4	8.2	8.2	8.3	9.2	9.1	9.1
Hogs, all ages	3.0	2.5	2.5	2.4	1.6	1.7	2.9	3.4	3.8	4.0	2.2	2.0	1.9	2.5	4.1	2.1	2.1
Poultry	101	98	98	99	100	95	97	106	101	114	106	106	112	127	130	118	118
Workstock	2.9	2.7	2.6	2.6	2.5	2.5	2.5	2.6	2.5	2.5	2.4	2.4	2.4	2.4	2.3	2.2	2.2
Farms with tractors	21	22	22	22	22	23	24	25	28	30	32	34	36	39	40	42	42
Proportion of cash receipts from:																	
Cattle	17	15	16	14	14	11	12	12	14	13	12	12	11	9	9	10	10
Other livestock	2	2	2	1	2	1	1	2	1	2	1	1	1	2	2	1	1
Milk	67	69	67	67	70	71	70	70	69	68	72	71	72	68	69	66	66
Other livestock products	9	9	10	9	8	11	9	10	11	10	9	9	10	12	13	14	14
Government payments	—	—	—	0	0	0	0	1	1	1	1	1	1	1	1	1	1
Miscellaneous	5	5	5	9	6	6	8	5	6	6	5	6	5	8	6	8	8
Proportion of cash expenditures for:																	
Feed	50	46	49	55	55	51	49	53	37	41	45	46	50	52	50	49	49
Labor	13	12	11	9	8	7	7	8	11	12	12	13	14	15	17	18	18
Power and machinery	15	17	17	14	16	19	20	20	28	23	20	20	17	14	17	19	19
General farm	16	18	16	16	15	17	18	14	18	18	17	15	13	13	11	9	9
Miscellaneous	6	7	7	6	6	6	6	5	6	6	6	6	6	6	5	5	5

1/ Preliminary.

Table 7.- Investment, income and related factors, typical family operated dairy farms, central New York, 1930-45

Item	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total land in farm	136	139	139	139	138	138	138	138	140	142	144	144	145	145	145	145
Proportion rented	16	19	19	20	21	23	23	23	23	23	24	25	25	25	25	25
Acres	52	54	52	52	52	52	52	52	55	55	54	55	56	54	54	55
Crop-land harvested	4,431	4,179	4,138	4,650	4,699	4,544	4,877	4,877	4,877	4,998	4,926	4,963	5,000	4,998	5,179	5,216
Total labor used	697	605	617	544	546	498	672	783	783	891	881	918	955	953	1,134	1,171
Labor hired	10,283	10,283	2,015	7,647	7,695	8,315	8,873	2,207	2,311	2,311	2,611	2,652	3,047	3,242	3,183	3,598
Total investment	6,528	6,295	5,438	5,004	4,968	5,106	5,244	5,460	5,460	5,538	5,616	5,616	5,760	6,595	6,670	7,290
Land and buildings	1,008	982	914	824	785	766	787	931	1,039	1,039	1,108	1,220	1,283	1,283	1,322	1,477
Machinery and equipment	2,924	2,104	1,598	1,304	1,319	1,365	1,960	2,090	2,191	2,164	2,087	2,233	2,635	3,707	3,998	4,098
Livestock	827	922	665	515	623	1,106	682	792	625	600	687	672	1,032	1,027	1,199	1,613
Crops on hand	3,452	2,266	1,667	1,807	2,029	2,099	2,367	2,604	2,360	2,505	2,772	3,537	4,192	5,200	6,139	6,947
Cash receipts	1,933	1,473	1,168	1,165	1,375	1,301	1,475	2,036	1,650	1,693	1,819	2,133	2,539	2,782	3,389	3,566
Cash expenditures	1,239	793	479	642	694	758	892	1,468	710	812	953	1,364	1,653	2,418	2,610	3,381
Net cash farm income	510	418	342	353	368	408	448	433	433	431	410	475	566	466	778	818
Value of perquisites	-310	19	-224	-253	-95	222	-136	323	198	-142	117	49	940	110	219	105
Net change in inventory	1,419	1,230	597	742	927	1,368	1,204	1,245	1,341	1,101	1,480	1,308	2,759	3,014	3,804	4,324
Net farm income	139	138	105	114	126	162	145	146	157	134	171	215	313	361	435	501
Rent and interest paid by operator	1,280	1,092	492	628	801	1,226	1,059	1,099	1,184	967	1,309	1,693	2,446	2,653	3,369	3,823
Operator's net farm income	1,064	661	363	514	526	624	746	357	580	674	800	1,182	1,412	2,092	2,430	2,929
Operator's net cash farm income	379	369	344	295	283	286	278	273	273	271	275	270	276	313	320	348
Land and buildings (net rental)	285	240	191	199	164	191	201	210	214	217	221	233	269	337	352	397
Working assets (current interest rate)	665	609	535	494	447	477	479	483	487	488	496	503	545	690	672	745
Total investment	754	621	62	286	400	911	725	762	894	613	984	1,405	2,214	2,384	3,132	3,579
Operator and family labor	147	116	-297	-22	142	575	365	345	446	216	548	913	1,997	1,616	2,268	2,677
Operator's labor	997	797	197	386	547	999	633	928	1,040	619	1,195	1,678	2,570	2,795	3,710	4,217
All labor	5.9	5.9	5.9	5.9	5.8	5.7	5.5	5.4	5.3	5.2	5.1	5.2	5.1	5.2	5.1	5.1
Percentage return to investment	.21	.17	.04	.08	.13	.22	.18	.20	.21	.16	.24	.34	.51	.56	.72	.81
Return per hour to all labor used	97	77	35	44	57	66	75	78	83	68	92	119	172	187	237	269
Gross farm income	91	102	85	83	92	99	87	99	110	97	106	103	118	109	119	127
Operator's net farm income	90	105	67	85	94	108	92	101	109	93	104	101	114	106	111	116
Total production	117	84	78	81	85	79	94	104	83	94	94	106	110	137	194	151
Production per hour of man labor	127	95	86	82	82	81	94	96	84	92	88	101	109	135	148	146
Operating expense per unit of production	111	95	107	109	100	93	104	101	90	103	97	100	94	100	96	91
Total cost per unit of production	105	103	99	93	86	83	82	82	93	106	109	110	115	117	117	128
Power and machinery used (quantity)	116	85	61	67	73	84	93	92	82	66	91	107	125	159	181	190
Prices received for products sold	109	86	69	75	85	92	94	104	93	91	101	101	116	134	156	154
Prices paid including wages to hired labor																

Allocation of net farm income

Index numbers (1930-44 = 100)

1/ Preliminary.

NOTE: See text for explanation of terms.

Location and general characteristics of typical family-operated dairy farms, southern Wisconsin

These farms practically blanket the Dubuque Hills and Silty Drift Lands of southern Wisconsin. They average about 120 acres and, in general, have remained unchanged in size during the last 16 years. About 60 percent of the farm land is cultivated; the remainder is in fairly productive pasture.

Operators of these farms have a fairly well-balanced operating unit. Each produces (with the exception of some commercial mixed protein feeds) about all the concentrate feeds and roughages necessary for the maintenance and production of livestock, and utilizes available family labor throughout the year. The operator and his family normally supply more than 80 percent of the labor requirements. Until recently, when wartime conditions called for increased production, less than 4 percent of total cash expenditures went for hired labor. Increased production on dairy farms, of course, increases the labor load and, as the family's time was already well utilized, labor had to be hired. Expenditures for labor during 1941-45 averaged 16 percent of total cash expenditures as compared with a little over 3 percent for prewar.

The livestock enterprises on these farms consist of a dairy herd of about 15 fairly high producing milk cows and 7 or 8 young animals for replacements; a hog enterprise netting about 60,000 pounds of pork each year; and a poultry enterprise of approximately 120 layers.

Corn for grain and silage, small grains (mostly oats), and hay each occupy about one-third of the cultivated acreage. Pasture (mostly blue-grass) occupies about 40 acres.

Crop production has been increased materially in recent years on these farms. There has been little change in acreage of crops but yields have risen. Crop yields on these farms in 1940-44 were 30 percent above those in 1930-34. This increase in feed supplies permitted these farmers to increase the production of milk, pork, and poultry. In 1940-44 milk production was 23 percent above 1930-34; pork production was 41 percent, and poultry production was 56 percent above 1930-34. About 65 percent of the total receipts on these farms is from the dairy enterprise, 20 percent from the hogs, and 8 percent from poultry.

INCOME AND EXPENSE, TYPICAL FAMILY-OPERATED DAIRY FARMS, SOUTHERN WISCONSIN, 1930-45

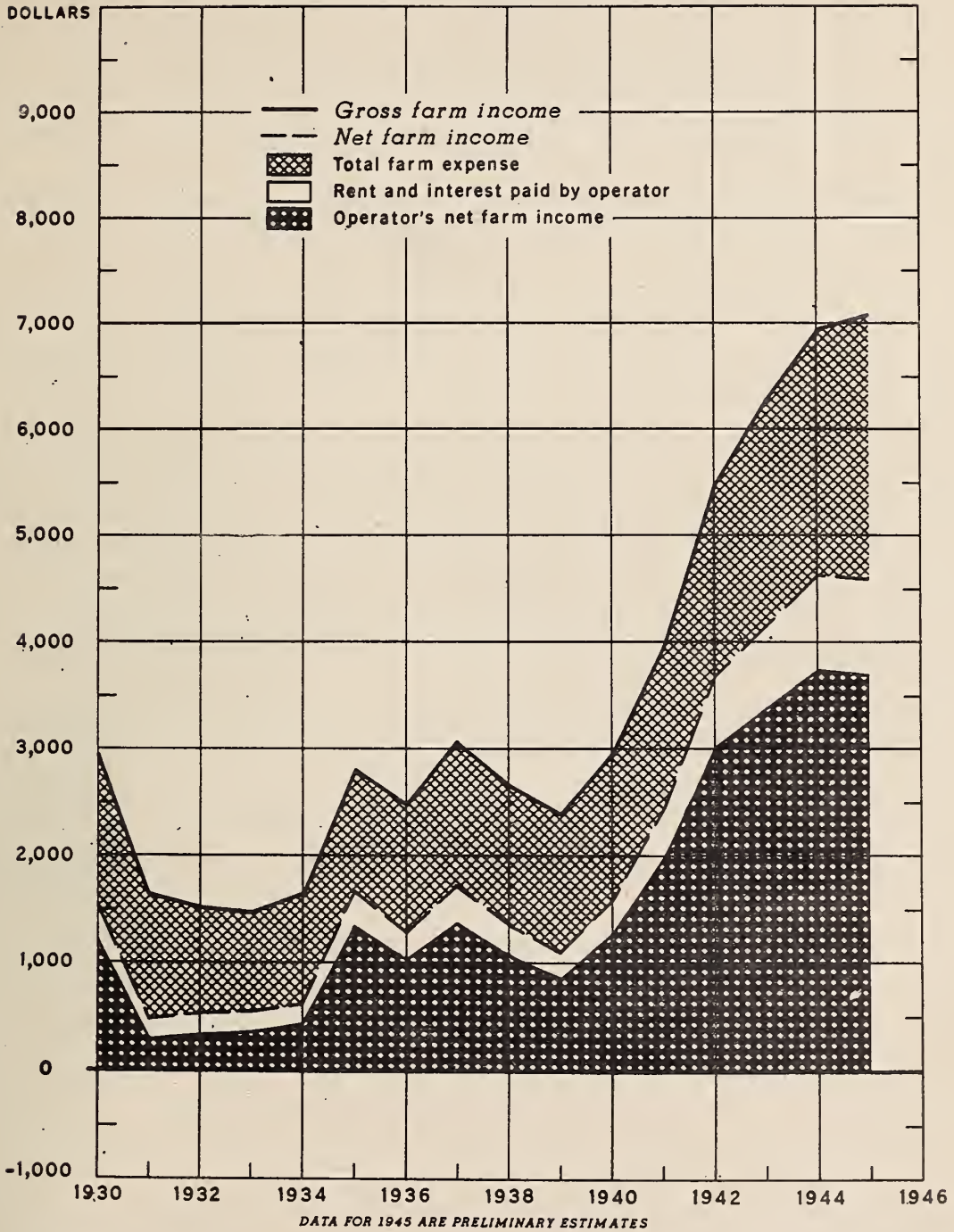


FIGURE 12

Table 6.- Land use, livestock numbers and distribution of income and expense, typical family operated dairy farms, southern Wisconsin 1930-46

Item	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946
Total land in farm	120	120	120	120	120	120	120	120	120	120	121	121	122	122	122	122	122
Proportion of farm land in:																	
Cropland harvested	56	56	56	56	55	58	58	59	59	57	57	57	58	59	61	61	61
Idle, and failure	2	3	3	3	5	2	2	0	1	3	3	3	2	1	1	1	1
Pasture and other land	42	41	41	41	40	40	40	41	40	40	40	40	40	40	38	38	36
Crops harvested:																	
Corn, grain	10.0	11.2	12.5	13.2	13.5	13.1	9.3	13.4	14.2	12.6	12.4	12.5	14.0	15.4	15.7	15.9	15.9
Corn, silage	10.0	9.6	9.5	8.7	9.4	8.9	11.8	10.8	8.4	8.2	8.4	8.0	8.1	8.4	10.5	10.6	10.6
Small grain	24.4	24.8	26.4	25.8	23.2	26.5	25.3	27.3	27.4	24.5	23.8	22.6	23.9	22.7	23.0	24.9	24.9
Hay	21.1	19.9	17.5	18.2	17.8	19.2	21.6	17.9	19.0	21.4	22.6	23.4	22.5	22.9	23.2	21.8	21.8
Crop yield (per harvested acre):																	
Corn	37.1	30.0	40.0	38.3	33.6	37.2	23.3	34.6	41.8	39.7	44.4	43.0	48.0	48.7	49.7	46.8	46.8
All crops (index 1930=100)	105	82	99	90	70	106	77	92	106	91	118	104	124	118	118	117	117
Livestock on farm January 1:																	
Dairy cows	13.6	14.0	14.5	14.8	15.1	14.7	14.8	14.7	14.7	14.6	15.1	15.4	15.9	16.9	16.9	17.6	17.6
Stock animals	7.3	7.6	7.6	7.5	7.6	6.9	7.5	7.9	7.8	8.2	7.9	9.0	9.5	10.0	10.8	10.4	10.4
Hogs, all ages	14.0	15.0	14.5	15.4	13.9	10.8	14.7	12.9	13.2	15.5	16.8	17.8	21.0	23.1	24.6	19.4	19.4
Poultry	110	110	105	104	110	107	113	121	108	111	117	114	129	147	157	133	133
Workstock	3.5	3.4	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.0	2.9	2.7	2.7
Farms with tractors	46	48	48	48	49	52	56	60	64	68	70	72	75	76	76	78	78
Proportion of cash receipts from:																	
Hogs	17	18	14	14	13	18	21	24	19	18	14	15	21	21	19	16	16
Cattle	14	15	15	12	9	12	10	12	13	15	14	13	14	13	12	11	11
Other livestock	3	3	4	3	3	3	3	2	2	3	2	2	2	3	2	2	2
Milk	49	51	57	57	56	53	49	50	47	45	52	51	47	47	52	52	52
Other livestock products	6	6	7	6	7	9	7	7	8	6	6	6	8	7	8	8	8
Government payments	--	--	--	0	6	2	3	2	3	6	5	4	3	2	1	1	1
Miscellaneous	11	7	3	8	6	3	7	3	8	7	7	9	5	7	6	10	10
Proportion of cash expenditures for:																	
Feed	8	7	6	8	11	11	10	10	7	9	9	9	11	12	10	10	10
Labor	18	19	18	16	15	14	15	15	14	15	20	21	25	28	30	31	31
Power and machinery	33	34	37	38	38	38	40	42	46	40	36	36	31	27	32	34	34
General farm	30	28	27	25	24	25	25	23	24	26	24	24	22	20	17	15	15
Miscellaneous	11	12	12	13	12	12	10	10	9	10	11	10	11	13	11	10	10

1/ Preliminary.

Table 9.-- Investment, income and related factors, typical family operated dairy farms, southern Wisconsin, 1930-45

Item	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total land in farm	120	120	120	120	120	120	120	120	120	120	121	121	122	122	122	122
Proportion rented	37	37	36	39	41	41	41	42	43	44	44	44	45	45	46	46
Cropland harvested	68	68	68	68	66	70	71	71	71	68	69	68	71	71	71	71
Total labor used	4,684	4,705	4,724	4,739	4,809	4,783	4,776	4,717	4,717	4,709	5,090	5,017	5,197	5,414	5,514	5,518
Labor hired	920	916	915	922	963	939	961	992	990	994	1,299	1,252	1,338	1,465	1,565	1,569
Total investment	17,121	15,177	12,624	10,661	11,019	12,052	12,317	13,125	13,478	13,170	13,183	12,915	14,681	16,778	18,611	20,311
Land and buildings	12,240	10,800	9,560	8,040	8,160	8,400	8,520	9,000	9,120	9,000	9,075	8,470	9,516	10,284	11,224	12,078
Machinery and equipment	1,087	1,051	966	875	875	831	856	948	1,123	1,228	1,216	1,228	1,348	1,394	1,418	1,582
Livestock	2,890	1,706	1,161	910	920	1,050	1,890	1,823	1,935	1,897	1,900	2,036	2,785	3,847	3,770	3,771
Crops on hand	1,504	1,620	1,135	1,036	1,104	1,771	1,051	1,554	1,300	1,045	992	1,181	1,232	1,989	2,201	2,860
Cash receipts	2,518	1,729	1,166	1,293	1,527	1,991	2,469	2,482	2,221	2,185	2,313	3,339	4,314	5,740	6,021	6,281
Cash expenditures	1,366	1,045	820	778	918	1,105	1,265	1,500	1,438	1,293	1,334	1,558	1,604	2,111	2,420	2,575
Net cash farm income	1,152	684	346	515	609	886	1,204	982	783	892	979	1,781	2,510	3,629	3,601	3,666
Value of perquisites	416	338	286	298	306	365	381	353	350	342	343	409	487	587	594	633
Net change in inventory	-34	-840	-108	-274	-311	495	-305	348	224	-145	267	294	682	-66	426	291
Net farm income	1,514	482	524	539	604	1,666	1,280	1,713	1,357	1,089	1,589	2,444	3,679	4,150	4,621	4,990
Rent and interest paid by operator	320	198	198	182	174	324	261	327	290	231	318	446	667	761	883	910
Operator's net farm income	1,194	284	326	357	430	1,342	1,019	1,386	1,067	858	1,271	1,998	3,012	3,389	3,738	3,680
Operator's net cash farm income	815	428	195	303	396	597	907	714	552	647	711	1,363	1,972	2,691	2,833	2,869
Land and buildings (not rental)	665	605	524	442	441	437	409	423	410	396	390	396	400	441	463	519
Working assets (current interest rate)	337	298	222	186	177	215	220	238	240	234	218	244	279	346	384	428
Total investment	1,022	903	746	628	618	652	629	661	650	630	608	600	679	787	867	947
Operator and family labor	492	421	-222	-89	-14	1,014	651	1,052	707	459	981	1,644	3,000	3,365	3,794	3,643
Operator's labor	104	-725	-449	-785	-226	783	362	743	412	178	685	1,472	2,521	2,775	3,082	2,904
All labor	747	-226	-78	35	124	1,169	639	1,267	907	652	1,250	2,176	3,448	3,904	4,486	4,451
Percentage return to investment	6.0	5.9	5.9	5.8	5.6	5.4	5.1	5.0	4.8	4.8	4.6	4.6	4.6	4.7	4.7	4.7
Return per hour to all labor used	.16	-.05	-.02	.01	.03	.25	.18	.27	.19	.14	.25	.43	.66	.73	.81	.81
Gross farm income	92	51	47	46	51	87	77	95	83	74	92	123	171	195	216	220
Operator's net farm income	83	20	22	25	30	93	70	96	74	59	88	136	208	235	259	255
Total production	98	83	96	86	79	98	85	100	100	94	111	103	123	119	125	121
Production per hour of man labor	103	88	100	89	81	103	87	103	105	98	107	101	116	108	111	108
Operating expense per unit of production	108	103	76	81	97	84	103	98	94	99	89	105	105	126	132	145
Total cost per unit of production	121	116	83	82	95	82	100	95	91	95	82	100	101	123	132	147
Total output per unit of production	101	117	97	107	116	94	111	98	98	104	90	98	86	92	91	86
Power and machinery used (quantity)	101	99	95	89	83	82	82	88	100	113	113	111	115	115	114	125
Prices received for products sold	108	74	55	57	64	89	100	103	86	80	84	114	140	166	178	186
Prices paid including wages to hired labor	111	92	80	77	83	90	92	98	96	93	94	102	117	134	141	145

Allocation of net farm income

Index numbers (1930-44 = 100)

1/ Preliminary.

NOTE: See text for explanation of terms.

Location and characteristics of typical family-operated cash-grain farms, Corn Belt

These farms are predominant in the deep, rich, black, productive prairie soils of east-central Illinois, north-central Iowa, and eastern Nebraska (fig. 1). They are among the larger and more productive farms in the Corn Belt, and offer considerable opportunity for the operators labor, management, and capital. The total investment per farm ranged from \$20,000 in 1933 to \$47,000 in 1945; more than 80 percent of this investment is in land and buildings. The land is comparatively level, is productive and easily worked, and presents no particular problem of soil erosion, particularly from the use of intertilled crops. A high proportion of the land is cropped and much of this is in intertilled crops.

The average size of farm in 1930 was 200 acres but was increased to 230 acres by 1944. During 1930-33 these farms produced about 85 acres of corn, 65 acres of oats, 5 acres of soybeans, and 10 acres of hay (mostly clover and timothy). The acreage of corn has remained about the same during the last 16 years but the acreage of oats has declined in favor of soybeans, and clover and timothy hay has declined in favor of a more productive hay (alfalfa). By 1942 the acreage of soybeans (the demand for which was increased during the war) had risen to 40 acres and now occupies as much acreage as oats. About 60 percent of the gross farm income on these farms is from the sale of crops.

Although operators of these farms sell considerable of their crops directly for cash, they also have substantial livestock enterprises which contribute materially to the income and utilize some family labor that would otherwise not be employed. They normally milk between 4 and 5 milk-and-beef cows, produce about 10,000 pounds of pork, and maintain a poultry flock of about 120 layers. Less than 15 percent of the total labor used on these farms is hired, mostly during the summer months.

Operators of these typical cash-grain farms have taken advantage of twentieth-century technological developments that have been adaptable to Corn Belt farming and are now making extensive use of row-crop tractors and attachments, corn pickers, combines, pick-up balers, hybrid seed corn, and improved varieties of other seeds. As a result, by 1940-44 they had increased the size of farm by 14 percent, increased the combined output of crops and livestock by 53 percent, and at the same time decreased the total hours of labor used by 11 percent compared with 1930-34. In 1940-44 the total production per hour of man labor was 72 percent above the 1930-34 average. Total costs (excluding price change) per unit of product was decreased by 36 percent during this period. Returns per hour to all labor was increased from 7 cents in 1930-34 to 82 cents in 1940-44.

INCOME AND EXPENSE, TYPICAL FAMILY-OPERATED CASH GRAIN FARMS, CORN BELT, 1930-45

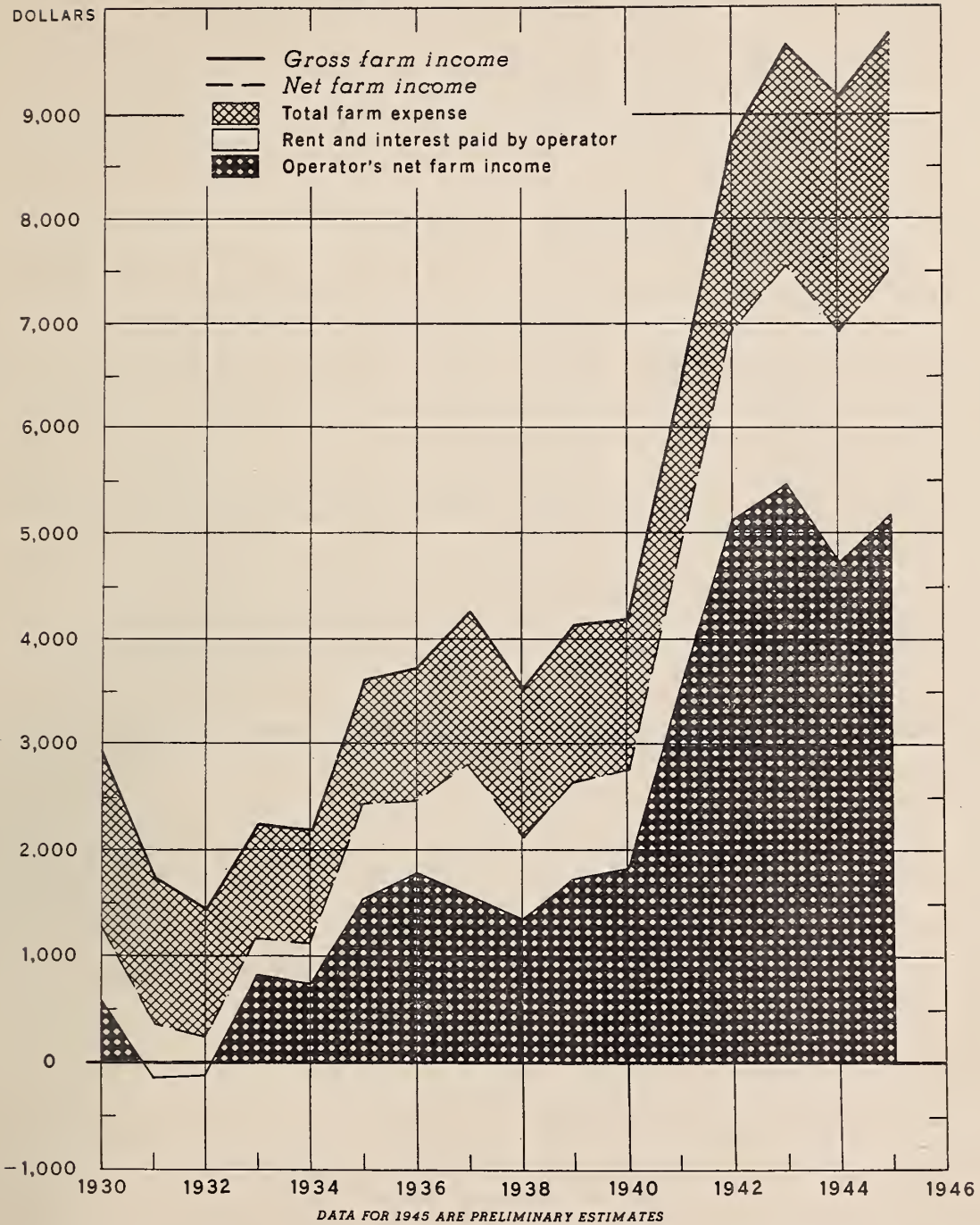


FIGURE 13

Table 10.- Land use, livestock numbers and distribution of income and expense, typical family operated cash grain farms, Corn Belt, 1930-45

Item	Unit	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total land in farm	: Acres :	200	202	202	203	204	208	209	211	214	217	220	222	223	228	230	230
Proportion of farm land in:																	
Cropland harvested	: Percent:	81	82	83	82	72	82	78	82	80	76	73	72	77	78	78	79
Idle and failure	: do. :	3	3	1	2	12	3	6	3	5	8	9	10	6	6	6	6
Pasture and other land	: do. :	16	15	16	16	16	15	16	15	15	16	18	18	17	16	16	15
Crops harvested																	
Corn	: Acres :	83.3	87.4	89.7	85.4	70.5	77.7	83.3	87.1	80.2	75.9	70.8	71.4	74.4	83.4	90.0	88.2
Small grain	: do. :	63.7	63.0	64.4	66.1	54.3	59.7	51.7	55.3	55.5	47.2	44.6	44.4	43.0	40.0	37.5	42.2
Soybeans	: do. :	5.2	5.0	4.6	5.0	10.2	19.8	17.8	20.6	21.1	27.7	29.8	29.3	39.6	40.4	39.6	38.4
Hay	: do. :	10.2	10.3	9.6	10.2	11.2	11.8	11.9	10.5	13.1	13.0	16.3	14.5	14.4	13.4	13.4	12.9
Crop yield (per harvested acre):																	
Corn	: Bushels:	29.5	34.8	42.1	31.8	21.6	39.4	21.6	46.0	45.5	50.1	42.0	52.4	59.1	52.9	50.0	51.3
Oats	: do. :	53.6	52.1	55.2	56.3	47.3	51.1	42.8	45.0	44.9	38.3	37.4	39.0	36.0	33.9	31.3	35.1
All crops (index 1930-44 = 100)	: Percent:	86	93	109	74	60	96	70	113	109	108	111	120	128	115	108	116
Livestock on farm January 1:																	
All cattle	: Number :	12.6	12.7	13.3	14.2	15.2	13.9	14.9	13.7	14.0	14.6	15.8	17.4	18.0	19.8	19.1	19.1
Milk cows	: do. :	4.0	4.0	4.2	4.4	4.7	4.6	4.4	4.3	4.3	4.3	4.9	5.3	5.5	6.1	5.9	5.9
Hogs, all ages	: do. :	28.7	28.3	31.0	35.6	35.0	21.9	24.0	25.1	26.3	28.7	30.2	27.6	32.9	40.9	45.4	31.1
Poultry	: do. :	122	122	117	118	123	117	117	114	108	109	110	116	121	134	143	127
Workstock	: do. :	5.6	5.3	5.0	4.7	4.4	3.0	2.6	2.2	2.1	2.0	2.0	1.9	1.9	1.8	1.8	1.7
Farms with tractors	: Percent:	53	53	47	47	50	58	68	78	84	87	89	92	94	95	95	96
Proportion of cash receipts from:																	
Corn	: Percent:	41	33	30	40	40	31	39	29	36	37	44	30	31	33	38	40
Soybeans	: do. :	3	3	3	1	6	10	7	11	9	13	9	15	18	17	18	18
Other crops	: do. :	15	15	18	21	4	8	12	15	11	10	9	12	8	8	6	6
Hogs	: do. :	21	25	22	19	19	20	19	23	21	15	13	17	21	21	20	16
Cattle	: do. :	7	8	10	6	9	6	6	7	7	6	7	8	5	7	6	7
Other livestock	: do. :	3	4	4	3	3	4	3	3	2	2	1	2	2	2	2	2
Livestock products	: do. :	10	12	13	10	12	12	8	10	9	7	8	9	9	9	9	10
Government payments	: do. :	--	--	--	0	7	9	6	2	5	10	9	7	6	3	1	1
Proportion of cash expenditures for:																	
Feed	: do. :	5	4	4	7	7	6	6	6	5	7	6	6	8	9	8	7
Labor	: do. :	15	15	15	14	9	10	8	8	8	7	6	7	9	16	14	14
Power and machinery	: do. :	35	36	36	36	43	44	48	51	50	42	44	48	45	39	45	47
General farm	: do. :	37	37	37	34	32	31	30	27	28	32	32	29	27	25	22	21
Miscellaneous	: do. :	8	8	8	9	9	9	8	8	9	12	12	10	11	11	11	11

Table 11.- Investment, income and related factors, typical family operated oash grain farms, Oorn Belt, 1930-45

Item	Unit	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945 1/2
Total land in farm	Acres	200	202	202	203	204	206	209	211	214	217	220	222	223	228	230	230
Proportion rented	Percent	70	70	69	69	69	68	68	68	68	68	67	67	67	67	67	67
Cropland harvested	Acres	162	166	166	167	166	169	165	174	170	164	182	160	171	177	180	182
Total labor used	Hour	4,599	4,605	4,626	4,642	4,279	4,300	4,233	4,204	4,127	4,094	3,946	3,938	4,110	4,290	4,128	4,025
Labor hired	do.	920	927	942	918	633	713	642	627	555	501	456	443	585	814	764	683
Total investment	Dollars	35,049	30,665	25,230	20,416	22,185	23,660	29,577	26,954	28,321	28,710	29,055	29,445	32,001	31,826	34,572	41,557
Land and buildings	do.	29,326	26,084	22,252	17,670	19,000	19,939	21,927	22,669	24,137	23,914	24,178	24,365	25,021	29,868	34,960	37,720
Machinery and equipment	do.	1,597	1,542	1,405	1,252	1,187	1,209	1,254	1,406	1,593	1,639	1,581	1,611	1,815	1,997	2,096	2,403
Livestock	do.	1,767	1,373	970	816	812	824	1,276	1,186	1,207	1,290	1,202	1,313	1,868	2,867	2,737	2,432
Crops on hand	do.	2,359	1,666	902	678	1,186	1,679	1,680	1,751	1,984	1,907	2,094	2,166	3,279	4,094	4,786	4,602
Cash receipts	do.	3,435	2,015	1,334	1,869	2,105	2,622	3,958	3,097	3,159	3,729	3,749	4,793	6,924	9,126	9,085	9,193
Cash expenditures	do.	1,632	1,322	991	886	983	1,193	1,417	1,610	1,517	1,428	1,446	1,709	1,971	2,186	2,465	2,439
Net cash farm income	do.	1,803	693	343	1,003	1,122	1,429	2,541	1,487	1,642	2,301	2,303	3,084	4,953	6,940	6,622	6,754
Value of perquisites	do.	343	315	258	262	334	334	346	350	318	308	311	376	444	538	537	577
Net change in inventory	do.	-681	-686	-389	-88	-285	685	-429	988	149	43	141	1,391	1,537	74	-233	171
Net farm income	do.	1,305	322	212	1,177	1,117	2,448	2,456	2,825	2,109	2,652	2,755	4,451	6,934	7,552	6,926	7,502
Rent and interest paid by operator	Dollars	707	467	324	334	372	918	650	1,261	743	929	914	1,311	1,768	2,056	2,206	2,307
Operator's net farm income	do.	598	-145	-112	843	745	1,530	1,808	1,564	1,366	1,723	1,841	3,140	5,146	5,494	4,720	5,195
Operator's net cash farm income	do.	1,032	139	-91	559	698	1,692	1,650	1,853	855	1,327	1,345	1,723	3,111	4,866	4,331	4,331
Land and buildings (net rental)	Dollars	600	456	253	276	351	1,156	779	1,660	921	1,169	1,182	1,769	2,478	2,895	3,095	3,246
Working assets (current interest rate)	do.	395	312	223	181	197	219	241	239	263	269	258	280	365	475	500	491
Total investment	do.	1,195	770	476	457	548	1,377	1,020	1,919	1,184	1,438	1,440	2,049	2,841	3,360	3,595	3,737
Operator and family labor	do.	110	-444	-264	720	569	1,071	1,436	906	995	1,194	1,315	2,802	4,093	4,192	3,331	3,165
Operator's labor	do.	-246	-726	-447	546	368	869	1,209	649	666	930	1,070	2,499	3,740	3,798	2,934	3,347
All labor	do.	357	-253	-128	837	657	1,187	1,596	1,038	1,042	1,300	1,414	2,919	4,277	4,533	3,661	4,102
Percentage return to investment	Percent	3.4	2.5	1.9	2.2	2.5	5.6	4.0	7.1	4.1	5.1	5.0	7.0	8.9	8.7	8.1	7.9
Return per hour to all labor used	Dollars	.08	-.09	-.03	.18	.15	.28	.37	.25	.25	.32	.36	.74	1.04	1.07	.89	1.02
Gross farm income	Percent	65	39	31	51	48	80	82	93	78	91	93	142	193	213	201	214
Operator's net farm income	do.	29	-7	-5	41	37	75	86	77	66	84	90	173	252	269	231	294
Total production	do.	75	88	105	71	55	96	67	121	109	109	100	114	130	130	128	129
Production per hour of man labor	do.	69	80	96	65	55	97	67	121	111	113	106	123	134	130	131	135
Operating expense per unit of production	do.	157	114	78	104	135	76	122	75	83	83	89	66	87	101	108	109
Total cost per unit of production	do.	145	94	58	77	108	84	113	66	78	84	91	99	110	132	141	147
Total input per unit of production	do.	136	111	89	129	166	91	134	75	84	84	91	60	75	77	78	79
Fuel and machinery used (quantity)	do.	111	108	101	93	86	82	83	90	99	103	102	101	108	115	118	133
Prices received for products sold	do.	109	69	43	53	71	97	106	110	80	82	88	115	142	164	171	123
Prices paid including wages to hired labor	do.	117	104	89	82	87	90	94	98	97	96	95	100	108	120	123	124

Allocation of net farm income

Index numbers (1930-44 = 100)

1/ Preliminary.

NOTE: See text for explanation of terms.

Location and general characteristics of typical family-operated hog-beef fattening farms, Corn Belt

These farms are found all along the broad fertile valleys of the Big Sioux and the Missouri Rivers beginning some 30 miles north of Sioux Falls, S. Dak., and extending on both sides of these rivers almost to Topeka, Kans. and Kansas City, Mo., and in the fertile rolling loess prairies along the Mississippi River in east-central Iowa and west-central Illinois. Adjacent to the areas of these farms are the cash-grain farms which supply much of the grains for fattening the livestock on the hog-beef fattening farms. Local markets in Omaha, Davenport, and Ottumwa, as well as the central markets in Chicago take the livestock from these farms.

About 80 percent of the income on these farms is from the sale of fat cattle and hogs. These farmers breed and raise a few cattle of their own selection to be fattened along with a few feeders of the same breed, which they buy from nearby markets. Hogs are run with the cattle during the fattening period, utilizing feeds that would otherwise go to waste. Between 17,000 and 18,000 pounds of hogs and 15,000 pounds of cattle are sold annually.

Although the land is somewhat rolling it is managed and cropped in such a way that erosion is not a serious problem and the productivity of the soil is maintained. About 28 percent of the farm land is in fairly productive permanent pasture and 16 percent is in hay. Approximately one-third of the land is in intertilled crops—51 percent corn and 2 percent soybeans. Extensive use of hybrid seed corn together with well-planned crop rotation and intensive livestock programs have maintained crop yields at a comparatively high level.

These farms are large enough and grow a large enough acreage of intertilled crops to make fairly effective use of mechanical equipment; 90 percent of the farms are operated with row-crop tractors and attachments. Extensive use is also made of corn pickers, combines, and other labor-saving equipment. Expenditures for power and machinery constitute the largest single item of expense on these farms.

With the increased use of these labor-saving devices, together with extensive use of hybrid-seed corn and improved varieties of other crops, with good management and production practices and favorable weather, operators of these farms increased their total combined output of crops and livestock in 1940-44 by 46 percent above that of 1930-34, with a decrease of 9 percent in labor used. The total output per hour of man labor in 1940-44 was 67 percent more than the output in 1930-34. Operating expense (total production expense excluding return to operator and family labor and investment) per dollar of gross income was 77 cents in 1930-34 compared with 30 cents in 1940-44.

INCOME AND EXPENSE, TYPICAL FAMILY-OPERATED HOG-BEEF FATTENING FARMS, CORN BELT, 1930-45

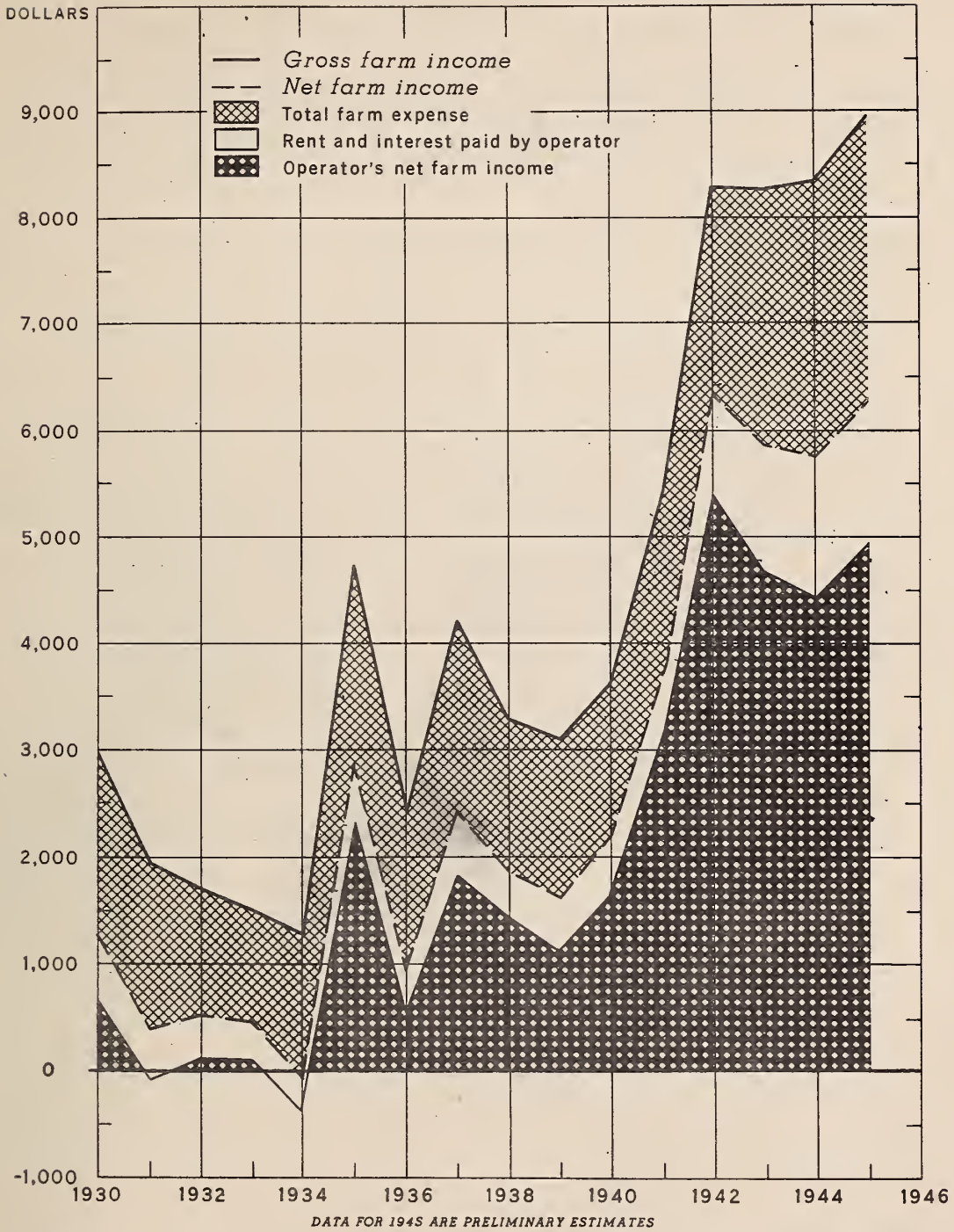


FIGURE 14

Table 12.- Land use, livestock numbers and distribution of income and expense, typical family operated hog-beef fattening farms, Corn Belt 1930-45

Item	Unit	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total land in farm	Acre	186	186	187	187	187	186	189	192	193	195	196	200	204	207	210	210
Proportion of farm land in:																	
Crop land harvested	Percent	70	69	70	69	58	67	67	69	67	64	63	63	65	66	66	67
Idle, and failure	do.	2	2	2	3	10	3	3	2	4	5	6	6	4	4	5	4
Pasture and other land	do.	28	29	28	28	32	30	30	29	29	31	31	31	31	30	29	29
Crops harvested:																	
Corn	Acre	66.3	68.1	68.6	66.8	55.8	60.6	63.3	66.7	62.5	58.5	56.1	57.7	62.5	70.9	75.0	75.8
Small grain	do.	36.5	35.0	35.2	34.4	25.7	35.3	34.0	39.6	37.4	33.7	32.8	32.9	32.7	30.6	29.0	32.0
Soybeans	do.	.7	.9	.7	.7	1.0	1.9	1.5	1.8	1.9	3.0	3.4	3.5	5.4	5.4	5.2	4.9
Hay	do.	26.2	25.4	26.2	27.1	25.5	25.6	27.3	24.1	26.3	28.6	31.5	31.4	31.9	28.9	29.9	29.3
Crop yield (per harvested acre):																	
Corn	Bushels	33.2	32.6	42.1	35.7	14.6	34.4	16.9	40.3	38.4	42.5	45.9	47.3	60.6	54.2	54.2	52.4
Oats	do.	34.8	31.2	34.6	19.7	9.1	30.9	22.7	42.2	32.5	25.3	39.2	34.9	38.0	42.4	31.6	37.2
All crops (index 1930-44 = 100)	Percent	96	88	104	84	46	98	63	104	101	100	116	109	130	133	128	121
Livestock on farm January 1:																	
All cattle	Number	33.9	33.3	33.3	36.0	38.4	36.9	40.5	33.8	35.0	37.1	37.0	41.1	42.6	45.3	47.3	50.0
Milk cows	do.	2.9	2.9	3.0	3.1	3.3	3.9	3.9	3.1	3.2	3.4	3.5	3.9	4.1	4.3	4.5	4.8
Hogs, all ages	do.	62.4	56.3	55.5	59.7	56.2	37.5	42.5	38.9	42.2	47.9	53.3	54.2	56.0	71.1	75.3	55.3
Poultry	do.	129	124	120	119	117	113	111	108	110	111	112	117	123	137	145	129
Workstock	do.	5.5	5.3	5.2	5.1	5.0	4.8	4.7	4.5	4.3	4.2	4.1	4.0	3.9	3.6	3.2	3.0
Farms with tractors	Percent	40	37	34	33	36	42	51	59	66	71	76	81	85	87	87	90
Proportion of cash receipts from:																	
Corn	Percent	1	0	0	3	0	0	0	0	1	0	1	1	3	10	14	17
Soybeans	do.	0	0	0	0	0	0	0	0	1	1	1	2	3	2	2	2
Other crops	do.	2	0	0	3	0	0	0	0	3	1	5	2	2	2	4	4
Hogs	do.	43	39	32	37	29	30	35	34	37	33	29	40	41	43	40	33
Cattle	do.	43	49	55	44	50	48	46	52	42	45	47	40	36	31	29	33
Other livestock	do.	4	4	5	4	3	4	3	4	4	4	2	2	2	2	2	2
Livestock products	do.	7	8	8	9	9	9	7	8	8	7	7	8	8	7	8	8
Government payments	do.	--	--	--	0	9	9	7	2	4	9	8	5	5	3	1	1
Proportion of cash expenditures for:																	
Feed	do.	8	14	10	8	33	42	15	24	7	9	9	9	11	11	9	9
Labor	do.	22	20	18	20	11	8	15	12	15	17	13	13	17	25	24	25
Power and machinery	do.	28	24	27	27	23	23	33	32	39	33	35	39	35	28	34	34
General farm	do.	27	27	26	26	18	16	22	19	23	25	26	23	22	20	17	16
Miscellaneous	do.	15	15	17	19	15	11	15	13	16	16	17	16	15	16	16	16

Table 13.- Investment, income and related factors, typical family operated hog-beef fattening farms, Corn Belt, 1930-45

Item	Unit	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total land in farm	Acres	186	187	187	187	187	186	189	192	193	195	196	200	204	207	210	210
Proportion rented	Percent	56	56	56	56	56	56	56	57	57	57	57	57	57	57	57	57
Cropland harvested	Acres	130	129	108	129	108	124	126	128	128	124	124	126	126	136	139	142
Total labor used	Hours	5,256	5,232	5,183	4,901	4,866	5,084	4,955	4,935	4,955	5,088	5,566	4,667	4,782	4,962	4,915	4,486
Labor hired	do.	1,340	1,270	1,340	1,020	1,040	1,250	1,250	1,100	1,140	1,240	840	910	1,110	1,440	1,440	1,416
Total investment	Dollars	29,609	29,666	20,718	16,253	17,551	16,136	15,183	20,361	21,000	20,689	20,520	21,455	25,094	29,733	31,016	35,196
Land and buildings	do.	23,089	20,515	17,195	13,264	14,204	14,547	15,333	15,769	16,011	15,771	15,516	15,768	17,748	19,665	21,440	23,940
Machinery and equipment	do.	1,439	1,385	1,248	1,107	1,035	1,022	1,058	1,167	1,309	1,357	1,325	1,331	1,513	1,674	1,757	2,017
Livestock	do.	3,315	2,442	1,606	1,342	1,316	1,557	2,597	2,243	2,320	2,487	2,305	2,640	3,578	5,300	5,151	4,911
Crops on hand	do.	1,966	1,524	669	526	1,008	1,012	1,195	1,182	1,360	1,274	1,344	1,716	2,215	3,160	4,268	4,328
Cash receipts	do.	3,618	2,555	1,645	1,634	2,144	3,029	3,765	3,244	2,846	3,016	2,928	4,413	5,931	6,098	6,123	6,530
Cash expenditures	do.	1,635	1,552	1,082	938	1,342	1,977	1,748	2,077	1,673	1,627	1,955	1,917	2,262	2,650	2,949	3,042
Net cash farm income	do.	1,983	1,003	563	696	802	1,052	2,015	1,171	1,389	1,389	1,273	2,496	3,669	5,448	5,174	5,488
Value of perquisites	do.	393	322	265	268	264	337	352	356	327	314	316	364	480	530	530	569
Net change in inventory	do.	-1,096	-926	-310	-511	-1,174	1,493	-1,402	943	351	-81	519	927	2,198	-104	62	227
Net farm income	do.	1,278	399	518	493	-64	2,482	965	2,436	1,851	1,622	2,208	3,807	6,347	5,874	5,766	6,284
Rent and interest paid by operator	Dollars	612	471	391	343	300	513	408	606	422	490	576	647	948	1,196	1,345	1,353
Operator's net farm income	do.	666	-72	127	110	-384	2,339	557	1,830	1,429	1,132	1,632	3,160	5,399	4,676	4,421	4,931
Operator's net cash farm income	do.	1,319	462	90	266	419	454	1,575	1,495	715	855	749	1,799	2,674	4,204	3,760	4,041
Land and buildings (net rental)	Dollars	789	546	410	336	292	741	512	857	595	656	817	935	1,461	1,904	2,156	2,153
Working assets (current interest rate)	do.	464	364	241	196	208	212	281	253	274	287	266	313	360	537	581	585
Total investment	do.	1,253	910	651	532	500	953	793	1,110	819	945	1,083	1,248	1,841	2,441	2,737	2,738
Operator and family labor	do.	25	-511	-133	-79	-584	1,929	172	1,326	1,032	677	1,125	2,559	4,506	3,433	3,029	3,946
Operator's labor	do.	-592	-533	-354	-273	-792	1,697	-91	1,030	737	377	405	2,206	4,120	3,012	2,591	3,075
All labor	do.	343	-238	47	87	-445	2,093	394	1,546	1,262	926	1,296	2,768	4,846	4,026	3,691	4,250
Percentage return to investment	Percent	4.2	3.5	3.1	3.3	2.8	5.3	3.9	5.5	3.9	4.5	5.3	5.8	7.3	8.2	8.3	7.8
Return per hour to all labor used	Dollars	.07	-.05	.01	.02	-.09	.43	.08	.31	.25	.18	.28	.60	1.01	.81	.75	.87
Grass farm income	Percent	73	48	42	37	31	116	59	103	81	77	69	133	203	203	205	220
Operator's net farm income	do.	36	-4	7	6	20	127	30	99	77	61	86	171	292	252	238	266
Total production	do.	89	86	101	85	94	89	110	99	93	88	98	105	124	138	141	144
Production per hour of man labor	do.	84	82	97	80	94	90	107	100	92	86	107	111	129	137	144	146
Operating expense per unit of production	do.	123	107	72	60	118	110	80	102	96	102	86	92	92	102	106	109
Total cost per unit of production	do.	133	104	66	71	117	92	74	96	93	101	92	100	107	124	130	133
Total input per unit of production	do.	113	111	90	105	160	100	86	96	103	108	94	96	82	78	78	78
Power and machinery used (quantity)	do.	112	109	103	95	86	64	85	90	97	103	102	100	106	114	114	126
Prices received for products sold	do.	111	79	56	50	61	106	99	116	92	87	85	113	146	153	146	154
Prices paid including wages to hired labor	do.	114	94	77	78	64	92	94	98	97	96	95	102	114	130	135	137

Allocation of Net Farm Income

Item	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Land and buildings (net rental)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Working assets (current interest rate)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Total investment	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Operator and family labor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Operator's labor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
All labor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Percentage return to investment	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Return per hour to all labor used	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Index numbers (1930=100)

Item	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Grass farm income	73	48	42	37	31	116	59	103	81	77	69	133	203	203	205	220
Operator's net farm income	36	-4	7	6	20	127	30	99	77	61	86	171	292	252	238	266
Total production	89	86	101	85	94	89	110	99	93	88	98	105	124	138	141	144
Production per hour of man labor	84	82	97	80	94	90	107	100	92	86	107	111	129	137	144	146
Operating expense per unit of production	123	107	72	60	118	110	80	102	96	102	86	92	92	102	106	109
Total cost per unit of production	133	104	66	71	117	92	74	96	93	101	92	100	107	124	130	133
Total input per unit of production	113	111	90	105	160	100	86	96	103	108	94	96	82	78	78	78
Power and machinery used (quantity)	112	109	103	95	86	64	85	90	97	103	102	100	106	114	114	126
Prices received for products sold	111	79	56	50	61	106	99	116	92	87	85	113	146	153	146	154
Prices paid including wages to hired labor	114	94	77	78	64	92	94	98	97	96	95	102	114	130	135	137

1/ Preliminary.

NOTE: See text for explanation of terms.

Location and characteristics of typical family-operated hog-beef raising farms, Corn Belt

These farms are found mostly in the rolling terrain of the drift hills and flats along the southern border of the Corn Belt proper. They are situated in the silty lands of west-central Ohio, and central Indiana, and in the loess flats and drift hills of southern Iowa, and northeastern Missouri, and extending into central Illinois. They are in one of the more hazardous and less productive areas in the Corn Belt and have neither offered the farm operators the opportunity for their labor and capital nor yielded the returns that many other Corn Belt farms have. In 1934 average crop production per farm was as follows: Corn, 248 bushels; oats, 96 bushels; and hay only 16 tons, with a reduction of pasture and of acreage of new seedings. This production represents about 20 percent of the normal grain production and about 60 percent of the normal hay production on these farms. Production in 1936 was only slightly better.

As a result, these farmers were forced to liquidate much of their livestock enterprises. Hog numbers in 1935, 1936, and 1937 were about half of normal. Milk cows were fed less and production was reduced. It has taken the operators of these farms a long time to overcome the drastic effects of these droughts and the forced liquidation of livestock. It was not until 1943 that livestock enterprises resumed pre-drought proportions. Total production in 1934-39 was 74 percent of the 1940-44 production and 87 percent of the 1950-44 production. The production in 1934 and 1936 was just half of the 1940-44 production.

The farms, although not so small in total acres are small in many respects, when compared with many other Corn Belt farms. A little over half of the farm land is cropped. Of this about 45 percent is in intertilled crops. The remainder is divided equally between small grains and hay. Yields of corn and oats are about 80 percent of the average for the Corn Belt.

Because relatively few acres are in cultivation and few acres (about 20 percent of the total farm land) are in intertilled crops, and perhaps because income has been comparatively erratic and uncertain on these farms, the operators have not been in a position to obtain and make effective use of mechanical power and equipment. Only 1 in 5 of these farmers had tractors in 1930. Half of them had tractors in 1944. Extensive use has not been made of corn pickers, pick-up balers, combines, and other labor-saving equipment. Labor requirements have changed very little on these farms.

The income is obtained almost equally from 4 sources with hogs having a slight advantage. Hogs contribute about 28 percent of the gross income with cattle, livestock products, and crops each contributing about 20 percent.

INCOME AND EXPENSE, TYPICAL FAMILY-OPERATED HOG-BEEF RAISING FARMS, CORN BELT, 1930-45

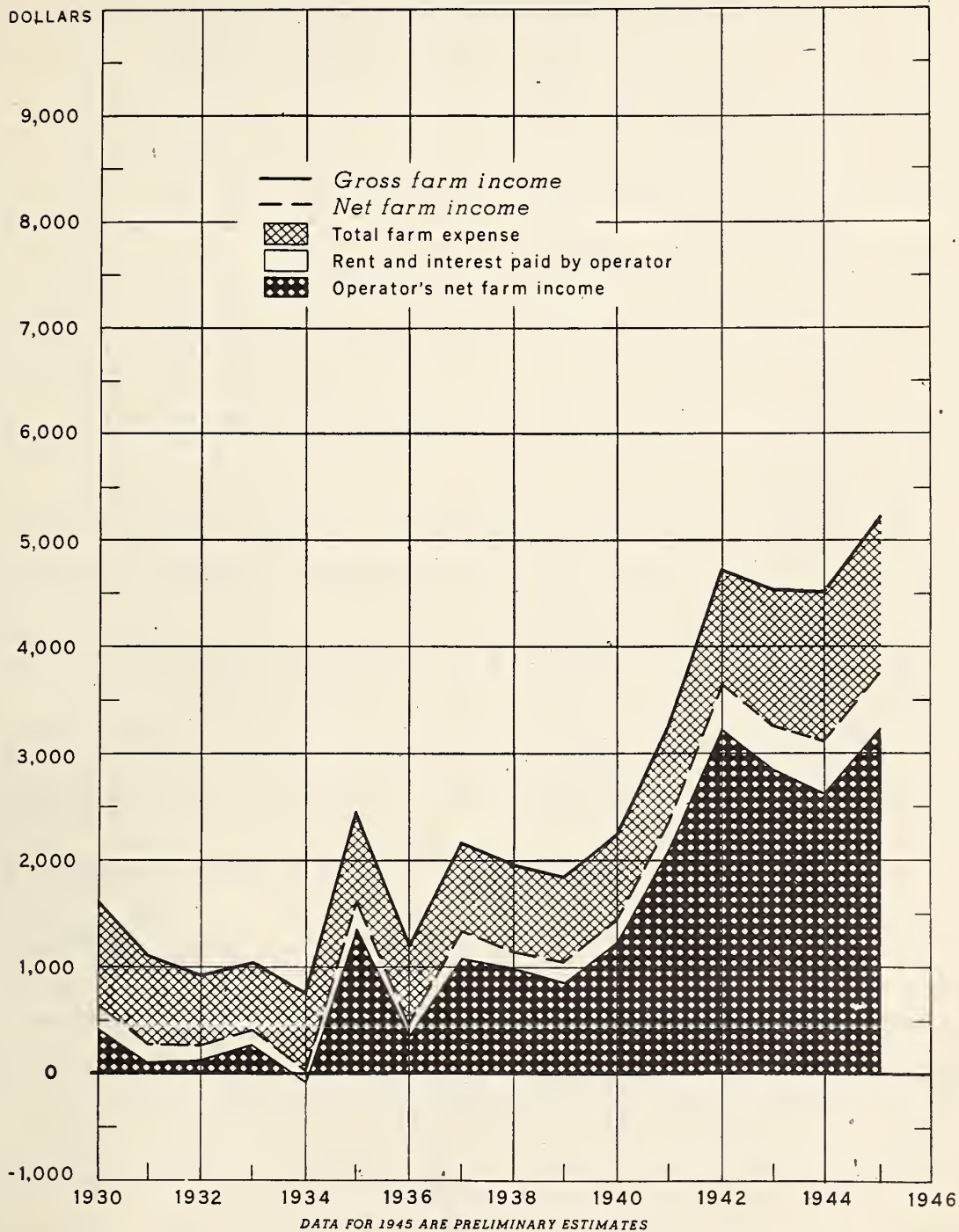


FIGURE 15

Table 14.- Land use, livestock numbers and distribution of income and expense, typical family operated hog-beef raising farms, Corn Belt 1930-45

Item	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945 1/
Total land in farm	154	154	154	154	156	156	160	162	164	163	171	168	174	173	177	177
Proportion of farm land in:																
Cropland harvested	57	58	57	58	50	53	54	53	52	51	48	50	51	52	52	54
Idle, and failure	3	2	3	4	9	7	6	6	6	7	7	7	5	4	5	4
Pasture and other land	40	40	40	38	41	40	40	41	42	42	45	43	44	44	43	42
Crops harvested:																
Corn	39.4	41.4	40.4	39.2	31.5	35.4	37.2	36.4	35.3	34.4	32.4	32.8	35.3	39.6	44.0	42.8
Small grain	25.2	26.6	25.4	23.7	16.7	22.7	22.6	28.6	28.0	24.2	22.2	22.8	22.4	22.1	18.9	23.0
Soybeans	1.6	1.5	1.2	1.9	2.9	3.2	1.8	1.8	2.6	3.7	4.5	5.1	6.9	7.7	6.8	6.7
Hay	21.1	20.3	21.1	24.3	26.2	22.1	24.1	19.0	20.3	21.1	23.6	22.4	24.0	21.5	23.3	22.4
Crop yield (per harvested acre):																
Corn	24.4	29.3	35.7	29.7	7.9	29.4	9.6	37.0	32.7	34.7	38.4	38.7	49.1	39.8	42.3	41.6
Oats	28.7	31.1	31.1	14.7	8.6	27.5	18.1	36.3	33.3	21.6	32.5	31.0	32.3	33.0	26.0	31.0
All crops (index 1930-44 = 100)	91	98	105	81	41	100	53	114	107	98	120	115	133	124	120	120
Livestock on farm January 1:																
All cattle	25.0	23.0	23.2	25.4	28.0	25.4	26.7	23.5	24.5	24.8	25.9	27.5	28.2	28.5	31.1	32.3
Milk cows	4.4	4.2	4.5	4.5	4.8	4.9	4.7	4.7	4.5	4.7	4.8	5.2	5.3	5.4	5.9	6.1
Hogs, all ages	35.2	31.7	33.6	35.1	34.4	16.0	19.0	16.2	18.5	22.2	23.1	21.5	25.4	28.4	28.3	23.6
Poultry	118	111	105	104	103	90	89	89	86	95	99	105	110	122	130	115
Workstock	4.1	4.0	3.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7	3.6	3.5	3.5	3.5	3.3	3.0
Farms with tractors	20	19	17	17	19	21	23	28	31	35	37	39	46	50	50	54
Proportion of cash receipts from:																
Corn	1	0	0	4	0	0	0	0	9	5	9	10	8	13	16	21
Soybeans	1	1	1	2	2	3	1	2	2	4	3	4	5	5	4	5
Other crops	3	0	4	7	0	0	6	0	5	5	6	6	5	5	6	4
Hogs	44	45	39	38	33	28	33	33	29	27	22	25	32	33	28	25
Cattle	27	25	25	22	30	27	27	28	26	27	26	24	23	16	20	19
Other livestock	7	9	10	8	7	8	7	9	7	7	7	6	6	6	5	5
Livestock products	17	20	21	19	19	23	17	23	16	15	18	18	16	18	19	20
Government payments	--	--	--	0	9	11	9	5	6	10	9	7	5	4	2	1
Proportion of cash expenditures for:																
Feed	8	6	6	8	27	33	7	13	6	8	8	8	10	10	8	8
Labor	13	14	12	11	6	6	8	7	7	9	7	6	10	18	20	19
Power and machinery	30	29	28	32	27	27	39	43	48	39	42	50	45	32	40	44
General farm	33	35	37	33	24	21	30	24	25	30	28	23	22	23	18	16
Miscellaneous	16	16	17	16	16	13	16	13	14	14	15	13	13	17	14	13

1/ Preliminary.

Table 15.- Investments, income and related factors, typical family operated hog-beef raising farms, Conn. Belt, 1930-45

Item	Unit	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total land in farm	Acres	154	154	154	154	156	156	160	162	164	163	171	166	174	173	177	177
Proportion rented	Percent	47	48	49	49	50	51	51	51	50	50	50	50	50	49	49	49
Cropland harvested	Acres	87	90	88	89	77	83	86	86	86	83	83	83	89	91	91	93
Total labor used	Hours	4,118	4,068	4,043	4,108	3,693	3,754	3,882	3,771	3,818	3,898	3,692	3,767	3,850	3,929	4,000	3,957
Labor hired	do.	470	450	430	470	300	270	360	290	320	350	260	290	380	390	4,000	600
Total investment	Dollars	18,402	13,666	10,628	8,871	9,026	9,184	10,012	9,885	10,416	10,290	10,608	11,038	13,032	15,678	17,112	18,721
Land and buildings	do.	12,012	10,318	8,470	6,314	6,864	7,020	7,040	7,128	7,216	7,009	7,353	7,392	8,330	9,915	11,151	12,036
Machinery and equipment	do.	890	852	753	663	626	608	611	670	791	868	856	868	1,015	1,121	1,179	1,333
Livestock	do.	2,452	1,733	1,179	983	997	1,097	1,737	1,571	1,687	1,734	1,694	1,897	2,462	3,341	3,342	3,236
Crops on hand	do.	1,048	765	426	291	539	459	631	516	762	679	705	921	1,212	1,701	2,060	2,116
Cash receipts	do.	2,042	1,206	802	912	1,128	1,314	1,697	1,300	1,544	1,600	1,629	2,391	3,297	4,147	4,100	4,573
Cash expenditures	do.	918	719	525	503	667	821	767	930	792	792	792	1,035	1,170	1,238	1,501	1,567
Net cash farm income	do.	1,124	487	277	409	461	493	930	808	653	808	837	1,356	2,127	2,909	2,599	2,986
Value of purchases	do.	351	284	230	233	250	308	317	320	287	278	264	346	427	494	492	531
Net change in inventory	do.	-836	-478	-237	-215	-688	808	-768	667	210	-42	341	666	1,097	-116	37	285
Net farm income	do.	639	293	270	427	23	1,609	1,479	1,357	1,150	1,044	1,462	2,368	3,651	3,287	3,128	3,782
Rent and interest paid by operator	Dollars	235	191	141	134	97	248	132	271	165	181	227	255	391	439	499	518
Operator's net farm income	do.	404	102	129	293	-74	1,361	347	1,086	985	863	1,235	2,113	3,260	2,848	2,629	3,264
Operator's net cash farm income	do.	899	260	161	312	367	212	777	77	466	605	595	1,075	1,708	2,441	2,061	2,419
Allocation of net farm income																	
Land and buildings (net rental)	Dollars	268	188	95	95	46	395	141	422	222	295	350	409	680	792	923	961
Working assets (current interest rate)	do.	303	228	160	128	134	128	173	152	176	184	173	201	244	327	342	348
Total investment	do.	571	416	255	223	180	443	314	574	398	439	523	610	924	1,119	1,265	1,309
Operator and family labor	do.	68	-123	15	204	-157	1,126	165	783	752	605	939	1,758	2,727	2,166	1,463	2,473
Operator's labor	do.	-271	-379	-162	46	-324	990	-59	960	525	369	721	1,480	2,409	1,818	1,490	2,070
All labor	do.	191	-32	76	262	-117	1,168	228	840	816	674	992	1,830	2,641	2,387	2,157	2,771
Percentage return to investment	Percent	3.5	3.0	2.4	2.7	2.0	5.3	3.1	5.8	3.8	4.3	4.9	5.5	7.1	7.1	7.0	7.0
Return per hour to all labor used	Dollars	.05	-.01	.02	.06	-.03	.31	.06	.22	.21	.17	.27	.49	.74	.61	.54	.70
Index numbers (1930-44 = 100)																	
Gross farm income	Percent	70	48	40	45	33	107	52	95	85	80	99	143	206	199	198	229
Operator's net farm income	do.	34	9	11	25	-6	116	30	93	84	74	105	180	278	243	224	278
Total production	do.	90	102	108	92	59	103	60	107	98	94	107	108	127	120	125	124
Production per hour of man labor	do.	86	98	104	88	59	106	60	110	100	94	113	111	129	119	123	122
Operating expense per unit of production	do.	122	89	67	76	149	93	140	87	89	93	82	51	91	113	118	124
Total cost per unit of production	do.	127	89	60	63	115	83	130	89	88	92	84	97	104	136	143	150
Total input per unit of production	do.	113	95	84	96	192	83	157	85	95	101	88	91	81	91	88	90
Power and machinery used (quantity)	do.	110	106	99	90	84	61	80	85	95	105	105	104	113	120	123	135
Prices received for products sold	do.	107	74	50	51	58	97	100	107	90	84	86	115	147	167	167	182
Prices paid including wages to hired labor	do.	115	102	87	80	87	90	94	99	97	95	94	99	109	124	128	129

J/ Preliminary.

NOTE: See text for explanation of terms.

Location and general characteristics of typical family-operated hog-dairy farms, Corn Belt

The hog-dairy combination is common in the rolling Dubuque Hills along the Mississippi River in northeastern Iowa and northwestern Illinois; the Drift Prairies of northern Illinois, northern Indiana and southern Michigan and in the Maumee lands of northwestern Ohio. The terrain on these farms ranges from level to comparatively rough. A considerable portion of the land is in grass and hay.

These hog-dairy farms average about 140 acres, of which about 45 percent is in hay and pasture, 25 percent in small grains, and 25 percent in intertilled crops (31 acres of corn for grain and 4 acres of corn for silage). The operators of these farms milk about 12 fairly high producing cows, raise their replacements for the dairy herd, and market between 10 and 14 thousand pounds of hogs each year. A poultry enterprise of approximately 120 layers supplements these enterprises and contributes materially to the income.

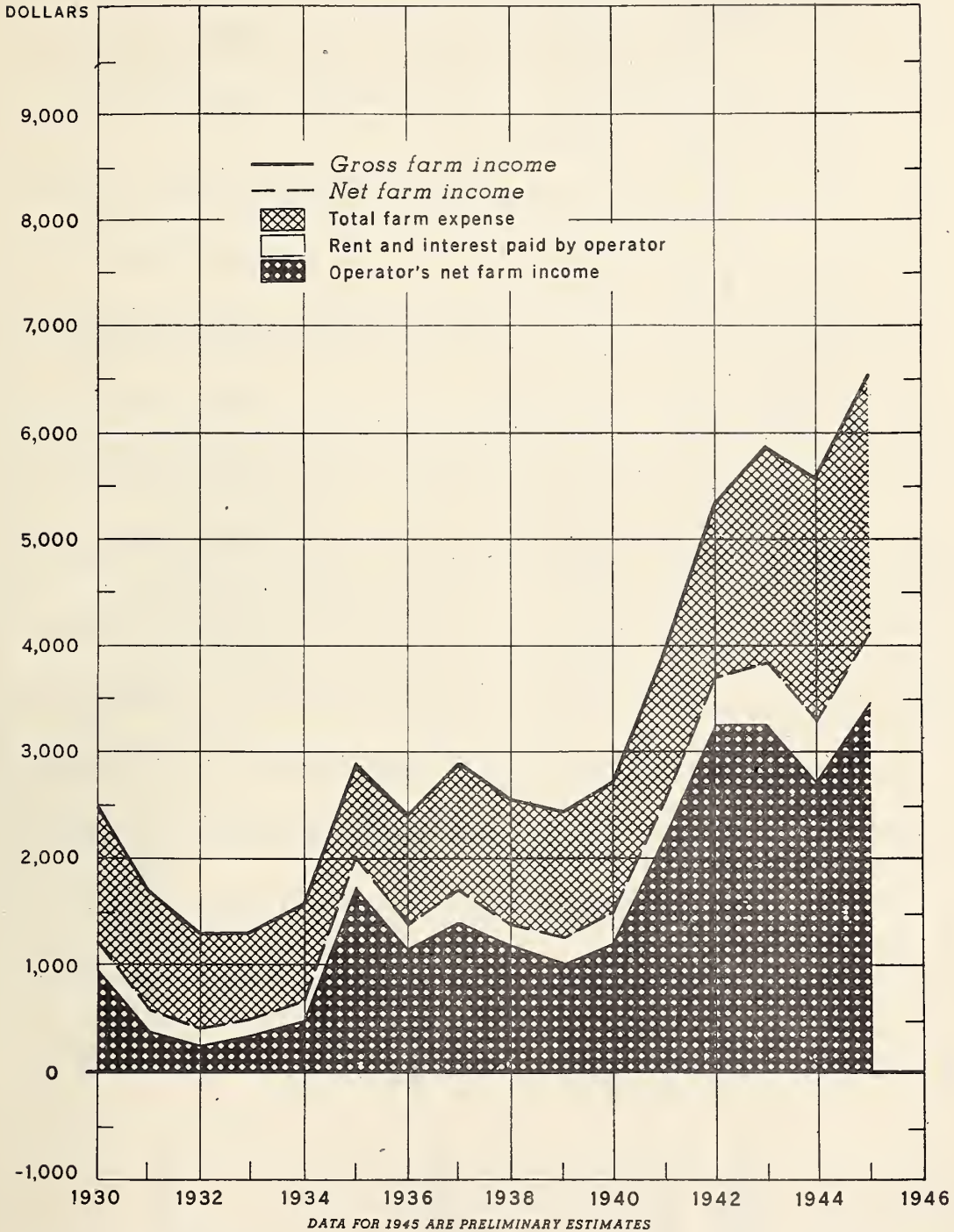
Hogs and dairy, of course, are the two important enterprises and each contribute between 35 and 40 percent of the income. Some hay and grains have been sold in recent years, but this is not a common practice. Recent years have been exceptionally good crop years and then crop production outran the rather stable livestock enterprises.

These farms are among the best balanced farms in the Corn Belt so far as feed, livestock, and labor are concerned. Crop and livestock production is well balanced and the operator's time and family labor are well utilized throughout the year. About 20 percent of the labor used on these farms is hired. Increased efficiencies in the use of labor have not been nearly so pronounced in the livestock enterprises (particularly the dairy) as in the crop enterprises. Therefore, these farmers have not materially reduced labor requirements and cut the amount of hired labor so much as the grain farmers.

Because of the favorable location, relative to precipitation and the well adapted system of farming, the crop yields have been maintained. Crop yields on these farms are among the highest in the Corn Belt. The droughts of 1934 and 1936 had much less effect on the operations than on most farms throughout the Corn Belt. Corn production on these farms in 1934 and 1936 was about 80 percent of normal, production of hay and silage was nearly normal, and small-grain production, though reduced in 1934, was near normal in 1936.

With increased use of hybrid-seed corn and improved varieties of other crops, together with more abundant rain and better growing weather and improved management practices, production on these farms has been increased during recent years. Production in 1940-44 was 24 percent above that of 1930-34. But hog-dairy farmers obtained this increased production only with increased labor. Under present conditions these farmers have too few acres of intertilled crops to make the most effective use of labor-saving equipment. Production per hour of man labor in 1940-44 was about 15 percent more than that of 1930-34.

INCOME AND EXPENSE, TYPICAL FAMILY-OPERATED HOG-DAIRY FARMS, CORN BELT, 1930-45



DATA FOR 1945 ARE PRELIMINARY ESTIMATES

FIGURE 16

Table 16.- Land use, livestock numbers and distribution of income and expenses, typical family operated hog-dairy farms, Corn Belt 1930-45

Item	Unit	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total land in farm	Acres	130	131	131	131	132	133	133	132	134	134	136	134	138	138	140	140
Proportion of farm land in:																	
Cropland harvested	Percent	61	63	63	62	55	61	62	60	61	59	60	60	61	62	64	65
Idle, and fallow	do.	7	6	6	7	13	7	6	7	6	7	6	5	5	4	3	2
Pasture and other land	do.	32	31	31	31	32	32	32	33	33	34	34	35	34	34	33	33
Crops harvested:																	
Corn (all purpose)	Acres	34.5	36.5	36.7	35.6	30.5	33.9	36.2	35.0	34.7	32.8	32.5	32.5	34.8	37.7	41.0	41.0
Small grain	do.	27.2	27.8	28.1	27.8	24.7	27.9	26.5	28.6	27.3	24.9	25.1	24.9	24.1	23.1	24.0	26.1
Soybeans	do.	.8	1.0	1.1	.7	1.0	1.4	1.2	1.3	1.4	2.4	2.9	3.0	5.0	4.8	5.2	4.7
Hay	do.	16.9	16.9	15.8	17.2	16.1	17.6	18.5	15.2	17.8	18.9	20.8	19.3	19.8	20.1	19.6	19.4
Crop yield (per harvested acre):																	
Corn	Bushels	36.1	39.3	41.4	36.4	32.5	42.0	28.8	45.7	46.4	54.7	48.9	51.6	56.2	56.1	48.1	53.0
Oats	do.	38.6	32.2	35.7	22.6	13.7	32.1	30.6	39.4	29.8	29.0	42.6	35.4	36.5	32.8	24.4	34.7
All crops (index 1930-44 = 100)	Percent	97	94	99	80	67	102	80	104	103	105	116	113	123	113	104	114
Livestock on farm January 1:																	
All cattle	Number	17.1	17.0	17.7	17.3	17.7	17.2	17.8	17.7	18.1	18.3	18.9	19.1	19.5	20.1	20.6	21.6
Milk cows	do.	10.7	10.6	11.0	10.8	11.0	10.8	11.1	11.0	11.3	11.4	11.8	11.9	12.2	12.6	12.9	13.4
Hogs, all ages	do.	37.6	38.2	39.0	42.1	39.4	26.6	28.8	28.9	30.5	34.5	35.4	34.4	38.4	39.7	46.3	34.9
Poultry	do.	121	121	115	112	110	115	114	111	110	110	112	118	127	141	150	133
Workstock	do.	4.0	4.0	3.9	3.9	3.9	3.7	3.5	3.3	3.2	3.2	3.1	3.0	2.9	2.7	2.5	2.3
Farms with tractors	Percent	28	28	24	22	26	29	33	39	45	51	56	58	63	67	67	70
Proportion of cash receipts from:																	
Corn	Percent	0	0	0	0	0	0	6	0	0	6	7	3	3	7	8	8
Soybeans	do.	1	0	1	1	1	1	1	1	1	1	1	2	3	4	3	3
Other crops	do.	1	0	0	2	0	0	5	0	3	3	6	6	4	4	6	6
Hogs	do.	42	44	36	39	32	34	34	39	38	34	26	33	39	33	35	29
Cattle	do.	11	9	12	9	10	10	8	10	11	11	11	10	9	8	7	8
Other livestock	do.	5	6	7	6	6	5	5	6	5	5	4	4	4	5	4	5
Livestock products	do.	40	41	44	43	44	41	36	42	38	32	38	37	34	36	36	40
Government payments	do.	--	--	--	0	7	9	5	2	4	8	7	5	4	3	1	1
Proportion of cash expenditures for:																	
Feed	do.	8	10	10	8	24	9	8	14	6	8	7	7	8	8	7	7
Labor	do.	24	23	22	22	16	20	20	17	20	22	28	27	31	40	40	40
Power and machinery	do.	26	25	27	30	25	32	36	39	42	36	31	35	31	22	28	31
General farm	do.	29	28	28	26	21	24	23	19	21	22	22	19	19	17	14	12
Miscellaneous	do.	13	14	13	14	14	15	13	11	11	12	12	12	11	13	11	10

1 Preliminary.

Table 17.- Investment, income and related factors, typical family operated hog-dairy farms, Corn Belt, 1930-45

Item	Unit	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945 1/
Total land in farm	Acres	130	131	131	131	132	133	134	134	134	134	136	134	136	138	140	140
Proportion rented	Percent	47	47	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Cropland harvested	Acres	79	82	82	81	80	81	81	79	80	80	81	80	84	86	90	91
Total labor used	Hours	5,064	5,135	5,171	5,141	4,911	4,968	5,092	4,996	5,121	5,334	5,447	5,342	5,447	5,583	5,969	5,992
Labor hired	do.	1,090	1,145	1,140	1,153	938	1,059	1,176	1,084	1,180	1,567	1,721	1,514	1,721	2,033	2,090	2,093
Total investment	Dollars	16,656	14,601	11,607	9,235	10,211	11,398	12,358	12,874	11,328	13,552	13,726	14,186	16,099	18,931	21,554	22,501
Land and buildings	do.	12,090	10,742	8,908	7,074	7,788	8,246	8,911	9,108	9,514	9,648	9,792	10,090	10,720	12,144	14,000	15,260
Machinery and equipment	do.	1,055	995	892	800	766	752	765	870	1,046	1,151	1,159	1,154	1,273	1,391	1,413	1,588
Livestock	do.	2,328	1,768	1,214	965	941	1,115	1,133	1,701	1,748	1,812	1,697	1,741	2,448	3,341	3,366	3,146
Crops on hand	do.	1,183	1,076	593	398	716	1,285	949	1,195	1,020	941	1,078	1,243	1,658	2,057	2,175	2,509
Cash receipts	do.	2,436	1,653	1,138	1,177	1,427	1,993	2,648	2,184	2,084	2,162	2,312	3,095	4,220	5,285	5,465	5,636
Cash expenditures	do.	1,218	1,015	759	677	820	856	1,085	1,138	1,290	1,197	1,194	1,455	1,712	2,017	2,394	2,571
Net cash farm income	do.	1,218	638	379	500	607	1,137	1,563	846	794	965	1,118	1,640	2,508	3,268	3,071	3,065
Value of perquisites	do.	368	301	246	249	368	319	333	337	307	293	296	357	435	527	512	590
Net change in inventory	do.	-384	-371	-233	-272	-218	551	-512	521	286	-12	76	551	753	44	-292	504
Net farm income	do.	1,202	568	392	477	651	2,007	1,384	1,704	1,387	1,246	1,490	2,498	3,696	3,839	3,291	4,119
Rent and interest paid by operator	Dollars	252	187	134	142	177	291	241	311	212	251	282	324	416	519	571	640
Operator's net farm income	do.	950	381	258	335	474	1,716	1,143	1,393	1,175	995	1,208	2,224	3,280	3,290	2,720	3,479
Operator's net cash farm income	do.	927	405	274	302	377	809	1,308	510	556	666	604	1,284	2,060	2,685	2,452	2,369
Land and buildings (net rental)	Dollars	337	200	94	119	209	454	364	515	312	391	456	543	735	1,014	1,069	1,203
Working assets (current interest rate)	do.	315	262	184	143	150	186	200	207	210	249	289	228	280	360	393	377
Total investment	do.	652	462	278	282	359	640	564	722	522	610	665	771	1,015	1,374	1,462	1,580
Operator and family labor	do.	590	106	114	215	292	1,367	820	982	865	636	825	1,777	2,681	2,465	1,829	2,539
Operator's labor	do.	121	-229	-124	11	67	1,117	536	652	538	309	514	1,398	2,276	2,044	1,392	2,067
All labor	do.	639	342	276	359	423	1,558	1,035	1,211	1,113	890	1,152	2,171	3,211	3,279	2,790	3,576
Percentage return to investment	Percent	3.9	3.2	2.4	2.8	3.5	5.6	1.6	5.6	3.9	4.5	4.8	5.4	6.3	7.3	6.8	7.0
Return per hour to all labor used	Dollars	.17	.07	.05	.07	.09	.20	.24	.24	.22	.17	.22	.41	.59	.59	.50	.64
Cross farm income	Percent	83	56	43	43	52	97	80	96	85	81	91	131	179	197	186	219
Operator's net farm income	do.	66	27	18	23	33	120	80	97	82	69	84	155	228	229	189	242
Total production	do.	93	98	102	86	77	94	82	100	100	104	107	105	117	121	114	120
Production per hour of man labor	do.	96	99	103	87	82	98	84	105	103	106	105	103	111	112	106	112
Operating expense per unit of production	do.	114	94	72	78	100	77	100	94	92	90	90	103	110	131	155	156
Total cost per unit of production	do.	119	90	63	61	89	84	102	98	90	89	90	105	114	139	161	163
Total input per unit of production	do.	109	100	92	108	118	98	116	95	97	95	93	97	91	90	101	97
Power and machinery used (quantity)	do.	106	101	95	89	83	80	80	86	99	110	112	109	113	119	118	128
Prices received for products sold	do.	109	76	51	52	63	99	106	109	90	79	82	110	143	166	165	182
Prices paid including wages to hired labor	do.	114	98	81	75	82	86	91	96	95	94	95	102	115	134	142	145

Allocation of net farm income

Index numbers (1930=100)

1/ Preliminary.

NOTE: See text for explanation of terms.

Location and general characteristics of typical family-operated
spring wheat-corn-livestock farms, Northern Plains

These farms are located in the Black Prairie lands of northeastern South Dakota and southeastern North Dakota (fig. 1). As they lie in a transition area between the Corn Belt on the south and the wheat area on the north, they are naturally a combination of these two types of farming.

The farms average about 400 acres, which is somewhat larger in total acres than typical Corn Belt farms but smaller than the more specialized wheat farms. About 70 percent of the farm land is cultivated; the remainder is in open pasture.

Although wheat is their major enterprise considerable emphasis is placed on other cropping programs and on livestock production.

About one-third of the cultivated land (exclusive of summer fallow) is devoted to the production of wheat, one-third to other small grains, and one-third is divided equally between corn and hay.

Crops and livestock each contribute about 50 percent to total income. Wheat contributes between 25 and 35 percent—more than any other single enterprise. Feed demands are first made on corn and small grains other than wheat. If these requirements are not met, then wheat is fed. This accounts for the fact that more cash receipts are from wheat than from other grains, even though the acreage and production of other grains exceed those of wheat.

Operators of these farms generally keep about 20 head of cattle including a milking herd of about 8 cows each producing about 140 pounds of butterfat annually. Between 25 and 30 percent of the total cash receipts comes from this enterprise. The normal inventory of hogs is about 20 head, but the drought in this area during the middle 1930's practically liquidated this enterprise. The lack of feed (particularly grain) not only forced these farmers to buy considerable feeds and to reduce hog numbers, but also forced them to sell their hogs at light weights. Many hogs were sold as feeders in 1934 and 1935. Only 4 percent of the cash receipts came from hogs in 1935. In 1934 about 35 percent of the total cash expenditure was for feed. It was not until several years later that these farmers were able to rebuild their hog enterprises.

These factors, together with comparatively low prices, kept returns on these farms at an extremely low figure all during the 1930's. During the entire period from 1930 to 1940 returns to all labor on these farms averaged less than 13 cents per hour.

INCOME AND EXPENSE, TYPICAL FAMILY-OPERATED SPRING WHEAT-CORN - LIVESTOCK FARMS, NORTHERN PLAINS, 1930-45

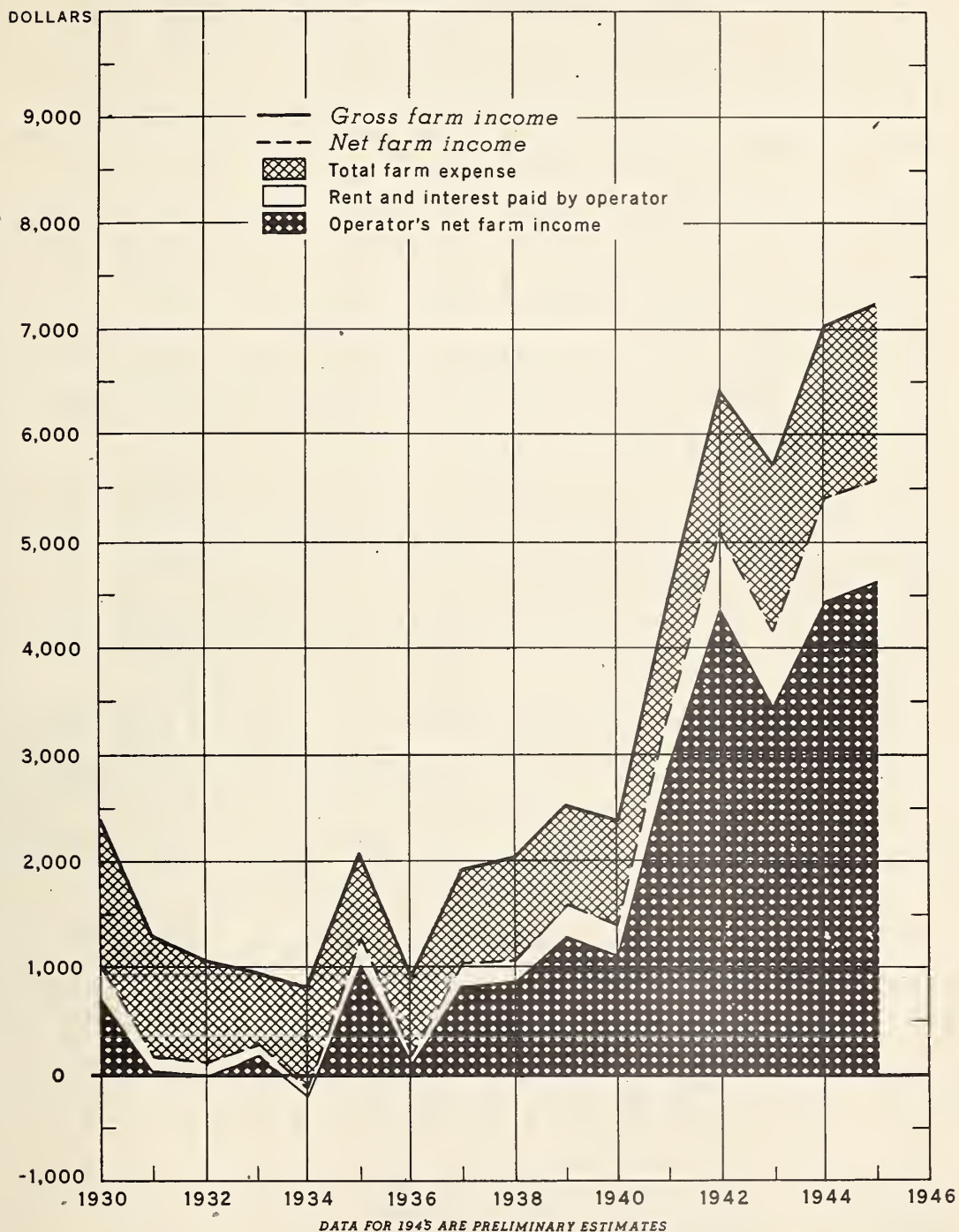


FIGURE 17

Table 18.- Land use, livestock numbers and distribution of income and expense, typical family operated spring wheat-corn-livestock farms, Northern Plains 1930-45

Item	Unit	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945 1/2
Total land in farm	Acres	378	375	372	369	366	362	366	378	387	392	393	394	399	401	401	408
Proportion of land in:																	
Cropland harvested	Percent	64	63	62	38	22	57	29	48	52	53	53	56	57	57	60	63
Idle, fallow and failure	do.	8	10	8	32	45	14	44	22	19	19	13	14	12	12	10	8
Pasture and other land	do.	28	27	30	30	33	29	27	30	29	28	34	30	31	31	30	29
Crops harvested:																	
Wheat	Acres	64	78	89	48	17	69	39	76	87	67	73	77	69	78	94	94
Corn (all purposes)	do.	45	47	43	41	32	34	25	30	33	36	35	37	39	40	42	44
Other small grain	do.	98	90	86	41	18	90	23	60	64	83	83	89	104	99	94	110
Hay	do.	32	39	30	31	26	36	35	40	39	38	34	38	36	37	37	37
Forage sorghum	do.	--	--	--	--	1	1	1	2	5	8	6	5	4	3	2	2
Crop yield (per harvested acre):																	
Wheat	Bushels	13.5	9.6	12.2	7.1	9.0	7.1	3.9	5.1	10.8	11.3	12.3	15.5	20.8	12.9	14.2	16.5
Corn	do.	16.8	13.4	14.7	9.9	3.1	14.9	4.3	19.7	15.9	22.3	21.0	22.4	27.8	25.2	33.0	22.8
All crops (index 1930-44=100)	Percent	118	83	107	57	64	81	33	70	100	114	107	136	174	119	137	131
Livestock on farm January 1:																	
All cattle	Number	17.2	17.6	18.3	20.1	20.9	14.7	17.5	16.2	17.8	18.1	18.6	21.0	22.7	24.3	26.7	27.1
Milk cows	do.	7.7	7.6	7.9	8.2	8.5	7.3	7.5	7.0	7.6	7.7	7.5	8.2	8.6	8.6	8.4	8.0
Hogs, all ages	do.	21.8	23.0	18.6	17.3	11.4	5.2	8.4	5.7	8.1	9.2	13.6	13.5	16.6	23.8	29.1	18.0
Poultry	do.	112	105	92	95	86	62	70	68	68	79	85	91	110	136	145	130
Workstock	do.	7.1	6.6	6.3	5.9	5.6	5.1	5.2	5.4	4.3	4.1	3.8	3.9	3.7	3.7	3.3	3.0
Farms with tractors	Percent	46	49	49	49	49	49	56	60	69	74	77	89	99	100	100	100
Proportion of cash receipts from:																	
Wheat	Percent	28	24	30	29	9	21	10	17	19	23	25	25	23	24	23	25
Other crops	do.	19	12	22	15	2	12	8	13	14	18	23	18	23	25	23	33
Hogs	do.	24	30	15	17	15	4	26	15	14	10	12	16	20	20	20	13
Cattle	do.	10	11	11	10	23	10	14	12	15	14	9	10	10	8	9	8
Other livestock	do.	3	4	4	4	5	4	5	6	5	3	3	4	5	5	6	4
Livestock products	do.	16	19	18	15	20	24	19	24	18	14	16	17	14	14	15	13
Government payments	do.	--	--	--	10	26	25	18	13	15	18	12	10	5	4	4	4
Proportion of cash expenditures for:																	
Feed	do.	11	11	8	9	41	6	9	7	7	8	6	9	12	14	13	9
Labor	do.	9	10	8	4	1	5	2	3	3	3	3	5	7	16	15	19
Power and machinery	do.	43	38	45	47	30	56	52	55	55	54	60	58	51	43	44	44
General farm	do.	28	31	30	31	23	25	31	28	27	28	24	23	23	20	20	20
Miscellaneous	do.	9	10	9	9	5	8	6	7	8	7	7	5	7	7	8	8

1/ Preliminary.

Table 19.- Investment, income and related factors, typical family operated spring wheat-corn-livestock farms, Northern Plains, 1930-45

Item	Unit	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total land in farm	Acres	378	375	372	369	366	362	366	378	387	392	393	394	399	401	401	408
Proportion rented	Percent	60	60	60	60	60	60	62	63	64	66	67	66	65	61	61	60
Crop land harvested	Acres	241	234	230	141	141	205	105	180	202	206	207	220	227	230	243	259
Total labor used	Hours	4,242	4,227	4,059	3,760	3,363	3,327	3,468	3,468	3,517	3,596	3,593	3,748	3,970	4,187	4,066	4,039
Labor hired	do.	472	453	351	155	76	227	76	166	190	175	169	254	311	351	447	477
Total investment	Dollars	14,324	15,622	12,246	11,376	11,008	11,447	12,337	11,127	11,307	10,680	10,593	11,226	11,517	16,142	11,927	16,690
Land and buildings	do.	14,477	12,071	10,170	9,251	8,993	9,361	9,368	9,348	8,559	7,938	7,487	7,612	8,068	9,215	10,787	11,300
Machinery and equipment	do.	1,360	1,284	1,139	992	919	881	918	966	1,082	1,105	1,128	1,289	1,491	1,569	1,639	1,646
Livestock	do.	1,850	1,365	654	729	713	639	1,598	1,087	1,137	1,210	1,264	1,466	2,116	2,946	2,943	2,708
Crops on hand	do.	1,254	902	763	404	393	566	593	396	559	647	1,114	659	1,852	2,372	2,558	2,934
Cash receipts	do.	2,333	1,407	938	1,164	1,070	991	1,558	1,256	1,525	1,660	2,090	2,799	4,407	6,189	6,077	6,452
Cash expenditures	do.	1,304	977	730	533	432	796	760	994	1,021	1,004	1,130	1,247	1,346	1,628	1,597	1,673
Net cash farm income	do.	1,029	430	208	631	238	195	798	262	504	656	960	1,552	3,461	4,561	4,480	4,779
Value of perquisites	do.	376	305	230	218	236	273	288	293	277	258	249	346	396	442	467	501
Net change in inventory	do.	-401	-596	-322	-602	-621	775	-921	469	281	448	175	1,424	1,215	-651	456	276
Net farm income	do.	1,004	139	116	267	-147	1,243	165	1,024	1,062	1,562	1,384	3,202	5,072	4,152	5,403	5,558
Rent and interest paid by operator	Dollars	318	122	124	105	63	237	64	219	199	285	276	447	707	709	973	942
Operator's net farm income	do.	686	17	-8	162	-210	1,006	81	805	863	1,277	1,108	2,895	4,365	3,443	4,430	4,616
Operator's net cash farm income	do.	661	251	19	446	119	-86	679	19	279	946	687	1,075	2,723	3,420	3,473	3,603
Allocation of net farm income																	
Land and buildings (net rental)	Dollars	390	32	40	15	-35	253	14	239	217	352	342	612	1,049	1,084	1,550	1,495
Working assets (current interest rate)	do.	342	273	217	155	132	129	169	142	164	177	203	286	306	395	346	395
Total investment	do.	692	305	257	168	97	342	183	361	361	529	545	818	1,355	1,479	1,906	1,890
Operator and family labor	do.	312	-166	-141	99	-244	661	-18	643	661	1,033	879	2,484	3,717	2,673	3,497	3,668
Operator's labor	do.	-44	-442	-354	-76	-385	687	-186	443	471	807	607	2,168	3,223	2,015	2,740	2,802
All labor	do.	435	-70	-89	119	-233	898	-5	677	720	1,068	873	2,546	3,611	2,930	3,737	3,977
Percentage return to investment	Percent	3.7	2.0	2.0	1.5	.9	3.3	1.5	3.2	3.4	4.9	5.0	7.3	10.0	9.2	10.6	10.1
Return per hour to all labor used	Dollars	.10	-.02	-.02	.03	-.07	.26	0	.20	.20	.30	.24	.67	.96	.70	.92	.98
Index numbers (1930-44 = 100)																	
Gross farm income	Percent	85	46	37	35	29	73	32	69	73	90	85	199	230	286	251	259
Operator's net farm income	do.	49	1	-1	12	-15	72	6	58	62	92	80	205	314	247	318	332
Total production	do.	121	98	107	62	52	86	40	76	92	109	98	127	162	121	149	143
Production per hour of man labor	do.	109	89	101	63	60	93	46	84	100	116	104	128	155	111	141	135
Operating expense per unit of production	do.	100	101	75	107	178	83	183	104	88	71	83	72	67	103	85	92
Total cost per unit of production	do.	100	90	64	92	127	80	165	101	82	74	83	81	68	141	132	148
Total input per unit of production	do.	64	96	64	138	153	90	218	107	89	75	86	68	59	64	67	70
Power and machinery used (quantity)	do.	120	115	105	95	86	81	83	85	89	93	96	106	114	115	117	115
Prices received for products sold	do.	98	66	49	58	59	95	101	114	85	83	84	116	142	174	176	187
Prices paid including wages to hired labor	do.	116	103	90	82	90	91	93	97	97	95	94	96	108	121	125	131

1/ Preliminary.

NOTE: See text for explanation of terms.

Location and general characteristics of typical family-operated
spring wheat-small grain-livestock farms, Northern Plains

These farms are situated in the Black Prairie lands of northeast and north-central North Dakota. In 1930 they averaged about 475 acres. During the depression and droughts that followed some farm land was abandoned, and the average size of farm was reduced by about 40 acres. Through the influence of better cropping weather, more appropriate farm equipment, and higher prices, during the last few years the average size of these farms increased and in 1945 was 525 acres, 85 acres larger than 10 years earlier. Approximately 70 percent of the land is tilled; the remainder is mostly open pasture. Between 40 and 50 percent of the harvested acreage is devoted to wheat. From 40 to 50 percent of cash farm receipts, (exclusive of Government payments which during the droughts contributed about 25 percent of the cash farm income) comes from wheat. About 10 acres of corn and 80 acres of small grains other than wheat are normally produced. All the corn and considerable of the small grains (mostly oats and barley) are fed to the livestock.

Operators of these farms have never kept many hogs. Total production per farm has ranged from 736 pounds in 1935 to 4,150 pounds in 1944. The average has been about 1,800. The normal inventory of cattle is about 18 head on a farm of which 7 or 8 milk-and-beef type cows are milked. This limited dairy enterprise has yielded a small but comparatively constant and certain income. About 35 percent of total cash receipts comes from the livestock enterprises.

In 1950 tractors were operated on about half of these farms. Because of the droughts and depression in the early 1930's and the resulting low incomes, purchases of tractors and other power equipment were retarded. With improved conditions such purchases were increased. By 1944 practically all of the farms were operated with tractors. About 12 percent of the total farm investment is in machinery and equipment; 75 percent is in land and buildings and 10 percent is in livestock.

The total amount of labor used each year on these farms has varied between 3,000 and 4,000 hours. Part of this variation has been due to droughts and crop failures and part to labor saving through mechanization. A little more than 3,000 hours of labor were used in 1954 and in 1956. Less than 4 percent of this was hired. In 1952 and in 1943 about 4000 hours of labor were used but total production in 1943 was 50 percent above that of 1952. Each year about 16 percent was hired labor.

Income and costs have varied as much as the amount of labor used. In 1940-44 operator's net farm income averaged \$5,100 compared with \$57 in 1950-54. Cost of production including price change in 1950-54, however, was 3 percent above that of 1940-44. Excluding price change, cost of production in 1950-54 was 115 percent above 1940-44.

INCOME AND EXPENSE, TYPICAL FAMILY-OPERATED SPRING WHEAT- SMALL GRAIN-LIVESTOCK FARMS, NORTHERN PLAINS, 1930-45

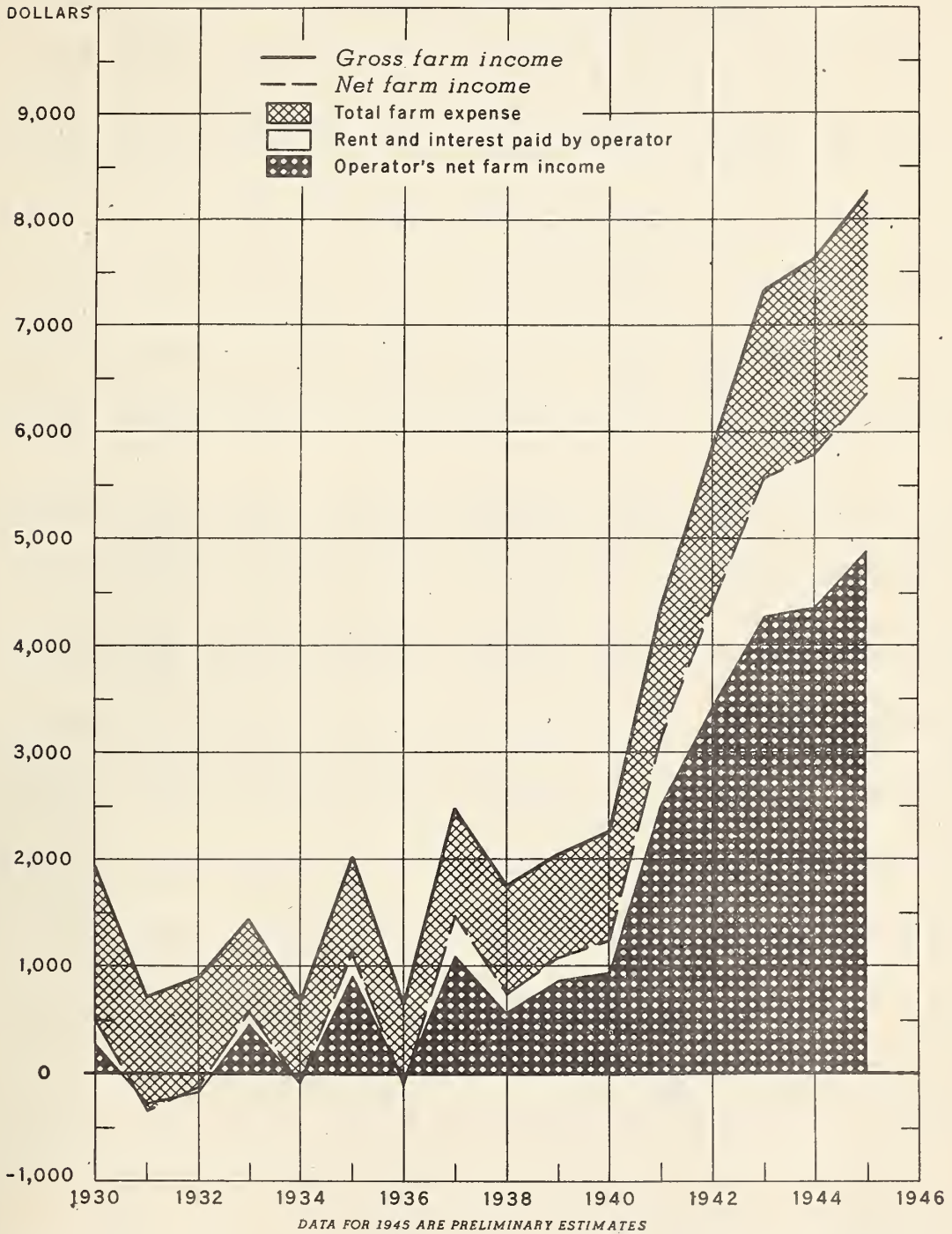


FIGURE 18

Table 20.- Land use, livestock numbers and distribution of income and expenses, typical family operated spring wheat-livestock farms, Northern Plains 1930-45

Item	Unit	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945 1/2
Total land in farm	Acres	473	466	459	453	446	440	448	457	466	475	485	493	501	504	518	525
Proportion of land in:																	
Cropland harvested	Percent	58	46	57	52	28	48	29	45	48	43	44	47	48	52	55	57
Idle, fallow and fallure	do.	11	25	13	16	40	21	46	22	18	24	22	20	19	16	15	13
Pasture and other land	do.	31	23	30	32	32	31	26	33	34	33	34	33	33	32	30	30
Crops harvested:																	
Wheat	Acres	141	104	148	140	66	105	74	128	132	110	118	123	112	130	156	155
Corn (all purposes)	do.	8	8	12	13	14	12	7	9	9	9	9	10	10	9	10	11
Other small grain	do.	110	77	81	63	28	87	27	60	67	69	71	83	105	114	108	119
Hay	do.	40	52	47	48	37	37	47	41	44	40	43	49	46	47	47	48
Crop yield (per harvested acre):																	
Wheat	Bushels	11.7	6.1	9.7	7.6	5.4	7.9	4.4	11.7	10.2	10.7	11.3	16.5	20.6	18.8	16.3	17.3
Barley	do.	17.8	8.5	14.6	10.2	7.1	17.4	6.4	15.3	15.6	14.6	14.9	21.9	28.9	24.2	21.5	23.0
All crops (index 1930=100)	Percent	107	61	91	72	46	88	35	99	90	94	101	139	173	159	145	154
Livestock on farm January 1:																	
All cattle	Number	15.4	16.2	17.5	19.3	20.4	14.1	15.6	15.4	16.3	16.6	17.8	19.2	21.3	22.5	24.3	24.5
Milk cows	do.	6.9	7.3	7.8	8.1	8.3	7.3	7.4	6.9	6.8	6.8	7.4	8.1	8.6	8.9	9.0	8.7
Hogs, all ages	do.	7.0	7.2	7.0	6.0	4.8	2.3	3.4	2.7	3.4	3.8	4.9	4.5	6.5	10.7	12.5	7.8
Poultry	do.	72	68	61	63	59	42	47	68	43	50	56	59	71	87	94	85
Workstock	do.	7.6	7.3	6.3	6.1	5.6	5.3	5.0	4.6	4.3	4.3	4.2	4.1	4.1	4.0	3.7	3.5
Farms with tractors	Percent	49	50	51	51	50	49	54	57	63	68	73	81	92	97	100	100
Proportion of cash receipts from:																	
Wheat	Percent	51	40	45	51	31	38	14	46	42	37	45	42	44	45	46	48
Other crops	do.	14	6	2	6	0	8	13	4	9	3	4	8	16	21	22	22
Hogs	do.	7	10	6	3	4	2	9	3	4	4	4	5	6	7	6	4
Cattle	do.	9	13	16	7	19	9	15	12	11	10	10	10	9	6	6	7
Other livestock	do.	3	7	6	3	5	3	2	5	5	4	3	4	4	4	4	3
Livestock products	do.	16	24	25	14	18	19	23	19	15	15	17	18	14	12	12	12
Government payments	do.	—	—	—	16	23	21	24	11	14	27	17	13	7	5	4	4
Proportion of cash expenditures for:																	
Feed	do.	6	8	10	5	13	5	6	6	4	6	4	4	7	7	6	6
Labor	do.	14	11	11	10	4	8	2	7	6	4	6	9	8	17	21	22
Power and machinery	do.	45	39	44	45	45	56	54	56	55	57	58	60	58	51	47	47
General farm	do.	26	32	27	30	31	23	31	24	26	26	26	21	21	18	18	18
Miscellaneous	do.	9	10	8	10	7	8	7	7	8	7	6	6	6	7	8	7

1/ Preliminary.

Table 21.- Investment, income and related factors, typical family operated spring wheat-small grain-livestock farms, Northern Plains, 1930-45

Item	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total land in farm	473	466	459	453	446	440	448	457	466	475	485	493	501	504	518	525
Proportion rented	60	60	60	60	60	60	62	63	64	66	67	66	63	61	61	60
Acres harvested	274	234	260	235	127	234	130	207	223	203	211	232	239	264	285	297
Total labor used	3,977	3,686	4,033	3,626	3,371	3,473	3,164	3,390	3,325	3,229	3,325	3,490	3,667	3,867	3,763	3,763
Labor hired	681	490	644	524	140	437	96	356	342	253	288	398	383	640	658	623
Total investment	11,269	14,531	12,028	11,208	11,098	11,144	11,434	11,004	11,012	10,045	9,898	10,055	12,345	14,046	17,052	18,223
Land and buildings	13,372	11,296	9,665	8,992	8,094	8,976	8,386	7,606	7,006	6,703	6,187	6,734	7,184	8,022	9,187	10,500
Machinery and equipment	1,538	1,419	1,248	1,122	1,041	1,091	1,162	1,243	1,243	1,260	1,301	1,408	1,634	1,634	1,662	1,685
Livestock	1,468	1,093	774	682	672	598	1,060	951	1,064	1,026	1,125	1,299	1,696	2,418	2,363	2,234
Crops on hand	991	723	381	412	562	559	608	595	866	567	769	664	1,893	2,572	3,840	3,804
Cash receipts	1,846	941	601	1,260	1,041	1,124	1,152	1,473	1,601	1,513	1,925	2,576	4,388	6,533	7,216	7,494
Cash expenditures	1,322	644	776	659	661	879	773	1,080	1,069	1,005	1,084	1,303	1,466	1,752	1,830	1,862
Net cash farm income	524	297	-175	601	380	275	379	393	532	508	841	1,273	1,922	4,781	5,386	5,292
Value of perquisites	363	282	232	285	253	293	291	321	287	255	277	341	406	452	465	483
Net change in inventory	-396	-710	-183	-249	-707	945	-759	761	-81	325	114	1,540	1,070	333	-58	286
Net farm income	491	-331	-126	577	-74	1,113	-89	1,445	738	1,068	1,232	3,124	4,398	5,566	5,793	6,363
Heat and interest paid by operator	238	-56	39	131	1	211	-66	385	184	233	290	656	960	1,292	1,439	1,477
Operator's net farm income	253	-273	-165	446	-75	902	-21	1,090	554	855	942	2,468	3,438	4,274	4,354	4,886
Operator's net cash farm income	230	90	-221	409	329	20	414	-20	320	245	541	585	1,929	3,453	3,909	4,075
Land and buildings (net rental)	225	-295	-82	65	-114	230	-149	545	202	282	338	930	1,453	2,043	2,286	2,389
Working assets (current interest rate)	308	249	187	160	149	134	167	152	190	171	185	190	289	378	425	417
Total investment	533	-6	105	245	35	364	18	687	392	453	523	1,120	1,742	2,421	2,711	2,806
Operator and family labor	-42	-325	-231	332	-109	749	-107	808	346	635	709	2,034	2,656	3,145	3,082	3,557
Operator's labor	-318	-530	-392	194	-246	620	-246	698	295	497	551	1,821	2,276	2,646	2,530	2,939
All labor	146	-232	-142	398	-86	824	-90	883	430	684	771	2,138	2,783	3,453	3,453	3,977
Percentage return to investment	3.1	-1.1	.9	2.2	.3	3.3	.2	6.1	3.6	4.5	5.3	11.1	14.1	16.5	15.9	15.4
Return per hour to all labor used	.04	-.06	-.04	.10	-.03	.24	-.03	.26	.13	.21	.23	.61	.76	.89	.89	1.06
Gross farm income	69	25	32	50	24	72	23	86	63	73	80	156	210	282	273	295
Operator's net farm income	20	-21	413	35	-6	71	-2	86	44	67	74	196	270	336	343	384
Total production	118	56	106	74	37	91	30	95	91	77	95	144	164	159	161	168
Production per hour of man labor	108	54	95	70	40	95	34	102	100	86	104	150	162	149	151	162
Operating expense per unit of production	93	156	71	90	192	73	236	75	80	88	75	57	61	75	76	75
Total cost per unit of production	69	123	54	79	154	69	200	63	74	90	77	71	69	119	123	133
Total input per unit of production	73	156	73	104	214	75	276	73	77	88	74	51	52	57	57	53
Power and machinery used (quantity)	122	114	104	96	88	85	86	88	91	95	99	104	109	109	108	108
Prices received for products sold	92	66	46	67	71	94	100	116	79	80	87	115	134	169	184	190
Prices paid including wages to hired labor	118	102	87	83	90	91	92	96	97	94	95	99	105	120	131	137

Allocation of net farm income

Index numbers (1930-44 = 100)

Preliminary.

NOTE: See text for explanation of terms.

Location and general characteristics of typical family-operated
spring wheat-roughage-livestock farms, Northern Plains

These farms are located in the northeastern Missouri Plateau in south-central North Dakota and north-central South Dakota. This is one of the more hazardous farming areas in the Northern Plains. Abandonment of parcels of land and of entire farms was prevalent among these farms during the early 1930's and the average size of farm declined from 575 acres in 1930 to 546 acres in 1935. Soon after 1935 the average size of farm was gradually increased. By 1945 it was 650 acres. This meant an increase of more than 100 acres over 1935.

The topography of these farms is considerably more uneven than that of the farms in the plains immediately to the east. More than half of the farm land is in pasture. Hay and pasture together utilize about two-thirds of the farm land. Wheat occupies about 40 percent of the harvested acreage, corn and small grains (other than wheat) 35 percent, and hay about 25 percent.

The major livestock enterprise is naturally cattle to consume the roughages grown on the farm. Between 25 and 30 head of cattle are usually kept. About 10 of these animals are milked, each producing about 140 pounds of butterfat annually. Approximately two-fifths of the cash receipts are obtained from the cattle enterprise and around half of this is from the sale of livestock products.

The effects of the droughts and depression were more drastic and prolonged on these farms than on any others under consideration. Net cash farm income for the 10-year period 1931-40 averaged only \$215, and much of this is attributed to a liquidation of livestock (because of feed shortages) and to Government payments. About 24 percent of the cash receipts was from Government payments during the first 8 years (1933-40) of the Agricultural Adjustment program. About 40 percent of total cash receipts is normally from wheat, but in 1937 no wheat was sold. A little over 4 percent of cash receipts was obtained from wheat during the 5 year period (1934-38). Wheat yields during this period averaged 3.5 bushels which is about 30 percent of normal. About 14 percent of cash receipts are normally obtained from the cattle enterprise exclusive of livestock products, but through liquidation of livestock (because of inadequate feed supplies during the period 1934-38) money from cattle sales made up 24 percent of the total cash receipts. Feed purchases, which generally make up about 8 percent of total cash expenditures, amounted to more than 20 percent during 1934-38 and were more than 35 percent in 1934 and 1937. Operator's net farm income for the period 1931-38 averaged only \$208 but it was \$4,000 in 1944.

INCOME AND EXPENSE, TYPICAL FAMILY-OPERATED SPRING WHEAT-ROUGHAGE-LIVESTOCK FARMS, NORTHERN PLAINS, 1930-45

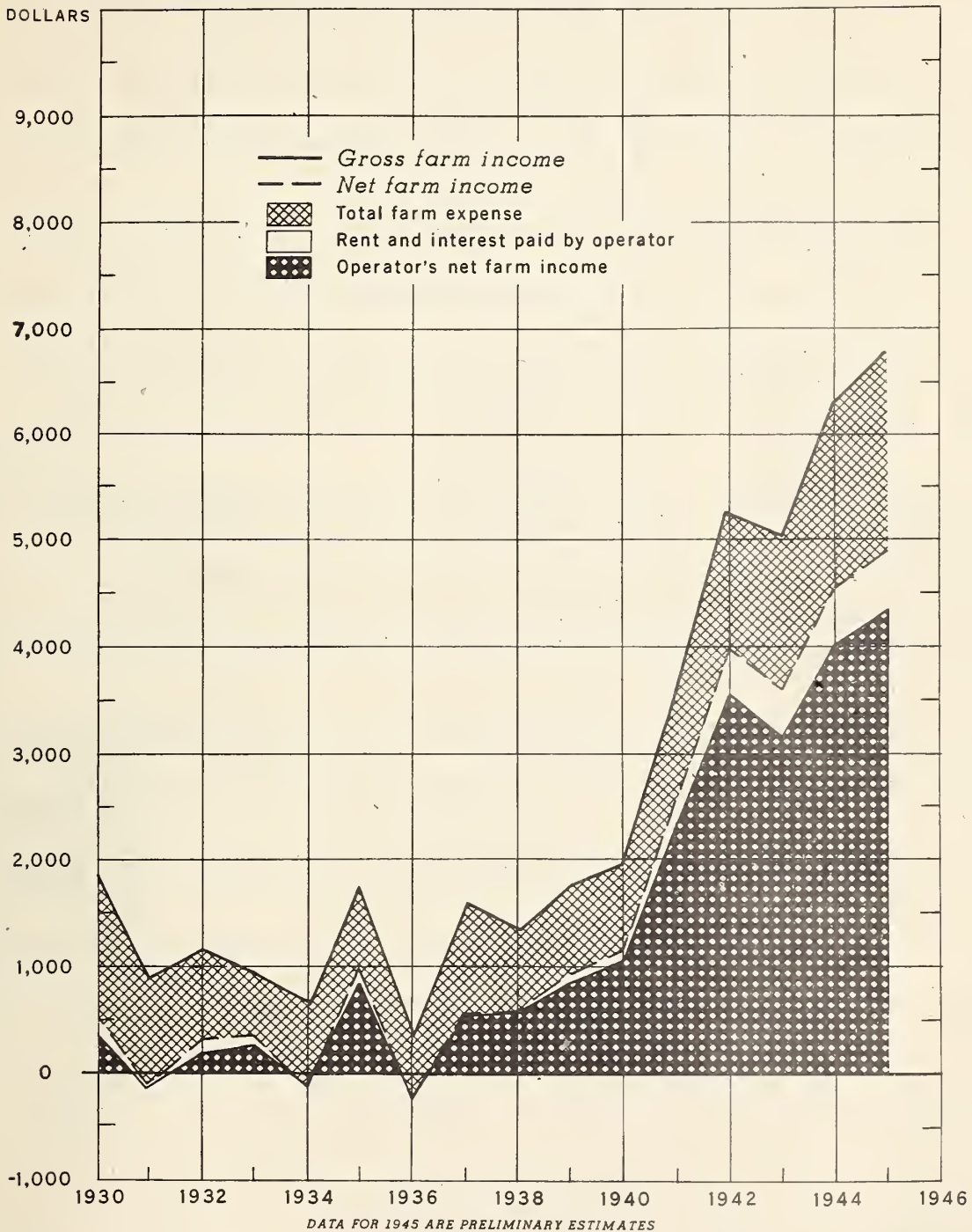


FIGURE 19

Table 22.- Land use, livestock numbers and distribution of income and expense, typical family operated spring wheat-roughage-livestock farms, Northern Plains 1930-45

Item	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total land in farm	575	569	563	557	551	546	551	558	570	584	589	612	631	636	644	650
Proportion of land in:																
Cropland harvested	45	41	46	33	5	34	2	20	23	28	33	32	34	36	39	41
Idle, fallow and failure	7	11	7	20	44	16	49	29	24	19	14	14	12	10	10	7
Pasture and other land	48	48	47	47	51	50	49	51	53	53	53	54	54	54	51	52
Crops harvested:																
Wheat	140	119	144	104	10	88	3	55	68	82	103	104	94	118	136	141
Corn (all purposes)	24	25	26	25	13	21	3	10	15	19	19	16	19	19	21	23
Other small grain	91	78	79	44	3	68	0	29	32	44	53	59	87	77	80	92
Hay	61	72	73	49	39	53	40	65	60	56	58	44	58	63	64	66
Forage sorghum	--	--	--	--	--	--	--	1	3	5	6	6	4	2	3	3
Crop yield (per harvested acre):																
Wheat	10.2	6.6	11.5	4.1	2.2	5.5	1.4	3.1	4.4	7.6	6.8	13.1	17.9	11.5	13.9	14.2
All crops (index 1930-44=100)	121	81	142	53	26	86	12	42	55	96	102	158	210	156	160	161
Livestock on farm January 1:																
All cattle	22.8	24.5	27.3	29.3	30.4	15.9	18.2	17.5	18.0	19.3	22.0	24.8	27.6	31.0	35.4	36.0
Milk cows	9.2	9.2	10.3	11.3	11.8	9.5	9.2	9.1	8.9	8.6	9.4	9.9	10.5	11.4	11.6	11.3
Hogs, all ages	12.5	15.8	15.1	12.0	7.9	3.3	5.0	4.0	4.3	4.4	6.0	6.0	7.6	13.3	17.6	10.9
Poultry	88	81	88	72	64	42	47	46	45	53	60	62	73	91	98	88
Horses	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Workstock	8.3	8.1	7.8	7.2	7.1	6.4	6.0	5.9	5.6	5.6	5.7	5.7	5.9	5.8	5.9	5.5
Farms with tractors	50	51	51	52	51	51	52	56	58	61	61	66	73	77	84	90
Proportion of cash receipts from:																
Wheat	42	32	38	37	2	10	6	0	4	13	28	31	38	38	41	40
Other crops	10	5	5	3	0	5	2	0	0	0	2	6	10	14	8	15
Hogs	12	19	12	10	9	2	18	16	13	9	6	8	8	12	9	8
Cattle	13	14	16	13	36	15	19	23	24	17	17	14	12	8	13	13
Other livestock	2	3	6	3	5	3	4	5	5	4	4	4	5	5	4	4
Livestock products	21	27	23	19	23	12	26	35	30	26	25	25	20	18	21	16
Government payments	--	--	--	15	25	33	25	21	24	31	18	12	7	5	4	4
Proportion of cash expenditures for:																
Feed	9	12	7	9	42	9	9	39	17	12	6	8	9	10	8	7
Labor	15	14	13	7	2	10	1	2	2	3	5	5	14	21	31	34
Power and machinery	46	41	49	50	31	51	57	36	49	51	56	58	52	45	39	38
General farm	25	26	24	26	22	23	29	19	26	28	26	23	19	18	15	14
Miscellaneous	5	7	7	8	3	7	4	4	6	6	7	6	6	6	7	7

1/ Preliminary.

Table 23.- Investment, income and related factors, typical family operated spring-roughage-livestock farms, Northern Plains, 1930-45

Item	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945 1/2
Total land in farm	475	569	563	557	551	546	551	556	570	584	589	612	611	636	644	650
Proportion rented	56	56	57	57	57	57	57	57	58	58	58	61	58	54	49	48
Acres	261	235	259	182	30	186	9	110	132	162	194	198	215	226	290	270
Total labor used	4,376	4,599	4,228	4,228	3,606	4,101	2,982	3,274	3,273	3,395	3,701	3,747	4,103	4,391	4,497	4,448
Labor hired	6.8	580	699	353	106	421	56	97	101	141	242	241	534	702	1,032	1,008
Total investment	17,533	14,325	11,776	10,553	2,992	2,484	10,376	9,226	8,574	7,897	7,634	5,042	10,172	13,192	15,027	16,946
Land and buildings	12,999	10,822	9,115	8,216	7,912	8,119	7,747	7,159	6,298	5,466	4,771	4,890	5,534	6,653	7,896	9,269
Machinery and equipment	1,307	1,222	1,059	945	885	864	849	884	926	512	862	958	1,097	1,155	1,263	1,331
Livestock	2,035	1,959	1,076	902	897	714	1,308	1,125	1,162	1,294	1,423	1,598	2,141	3,201	3,509	3,123
Crops on hand	1,162	724	538	520	520	207	472	58	268	265	556	596	1,400	2,190	2,559	3,223
Cash receipts	1,546	1,075	891	1,297	1,170	836	1,165	947	935	1,027	1,467	2,116	3,363	4,994	5,206	6,151
Cash expenditures	1,201	850	755	943	746	690	602	994	760	754	876	1,045	1,271	1,580	1,811	1,856
Net cash farm income	745	225	136	714	424	146	563	-47	175	273	589	1,071	2,092	3,474	3,395	4,295
Value of perquisite	343	267	226	213	237	267	278	288	299	233	373	307	373	431	470	497
Net change in inventory	-523	-597	-102	-624	-800	572	-1,096	293	130	432	281	1,204	1,504	-323	659	74
Net farm income	565	-105	260	303	-149	995	-295	534	564	936	1,123	2,582	3,969	3,582	4,524	4,866
Rent and interest paid by operator	174	67	109	74	6	148	13	29	24	97	112	245	415	442	523	546
Operator's net farm income	391	-172	151	229	-155	837	-268	505	640	841	1,011	2,337	3,554	3,140	4,001	4,320
Operator's net cash farm income	541	119	-14	602	384	-34	520	-99	123	148	456	895	1,694	3,009	2,869	3,725
Lead and buildings (net rental)	160	-23	56	10	-103	145	-82	-48	-45	89	119	341	646	739	970	1,039
Working assets (current interest rate)	347	270	208	170	135	111	158	120	140	146	166	180	260	373	385	415
Total investment	507	247	284	180	32	296	76	72	95	235	295	521	906	1,112	1,355	1,454
Operator and family labor	58	-352	-4	123	-181	729	-331	462	469	703	838	2,061	3,063	2,470	3,169	3,412
Operator's labor	-132	-673	-245	-87	-352	491	-444	286	280	510	599	1,752	2,601	1,786	2,499	2,628
All labor	232	-432	97	169	-166	799	-321	481	489	731	888	2,122	3,234	2,782	3,726	4,051
Percentage return to investment	2.9	1.7	2.2	1.7	.3	2.6	.7	.8	1.1	3.0	3.7	6.5	8.9	8.4	9.0	8.6
Return per hour to all labor used	.05	-.05	.02	.04	-.05	.19	-.11	.15	.15	.22	.24	.57	.79	.63	.83	.91
Operator's net farm income	61	39	51	42	30	76	15	67	58	75	85	155	229	221	276	295
Operator's net cash income	35	-15	13	20	-14	74	-24	45	48	74	90	207	315	278	354	382
Total production	128	95	148	66	52	88	30	62	62	82	95	125	171	136	160	171
Production per hour of main labor	118	88	129	63	57	85	40	76	77	97	103	134	167	124	142	155
Operating expense per unit of production	88	94	51	99	144	74	269	125	105	80	74	63	59	86	89	86
Total cost per unit of production	89	91	46	96	111	76	251	100	96	81	76	71	75	121	120	122
Total input per unit of production	74	96	57	127	142	42	306	105	107	83	77	60	51	70	63	59
Power and machinery used (quantity)	130	123	113	103	95	91	87	88	89	90	89	93	100	101	108	111
Prices received for products sold	96	68	48	59	58	96	101	110	92	85	92	117	135	167	176	185
Prices paid including wages to hired labor	114	99	86	79	97	89	90	101	93	93	95	96	106	122	136	147

Allocation of net farm income

Index numbers (1939=100)

1/ Preliminary.

NOTE: See text for explanation of terms.

Location and general characteristics of typical family-operated winter-wheat farms, Southern Plains

Large-scale methods of production and a high degree of mechanization characterize these winter-wheat farms that stretch some 450 miles through the Platte-Republican High Plains of southwestern Nebraska and western Kansas and the northern portion of the Canadian-Cimaron High Plains in southwestern Kansas (fig. 1). Because these farms are comparatively large and level and have a high proportion of grain crops they encourage the use of mechanical power and equipment. In 1945 these farms averaged about 600 acres in size. About 65 percent of the farm land is cultivated; the remainder is in open pasture. About 200 acres of wheat are normally grown. This is the most important crop in terms of acreage and income; about 60 percent of the income is from the wheat enterprise. Some corn, barley, oats, grain sorghum, and hay are produced, but with the exception of grain sorghum these crops are mostly fed.

Cattle is the most important livestock enterprise (20 to 25 head are usually kept), and because this has been a rather hazardous cropping area the cattle enterprise has been an important source of income. Around 20 percent of the cash receipts comes from the livestock enterprise. Before the droughts in the early 1930's about 3,000 pounds of hogs were sold annually. Droughts and liquidation of hog numbers reduced sales by half, and it was not until 1942 that sales of hogs reached the proportions that prevailed before the drought.

Because this is a rather hazardous area, subjected to frequent harsh winds that impair crop growth, and at times lacking sufficient precipitation to produce a crop, the operators of these farms have had varying experiences. Although they plant and hope to harvest about 200 acres of wheat each year they are frequently disappointed. In 1935 they harvested only 33 percent of the acreage of wheat planted. The yield was one of the lowest in years—they produced only 366 bushels of wheat per farm. On the other hand, the acreage seeded for 1942 was one of the lowest in the entire 16-year period yet the harvest was nearly the largest on record. The yield per acre was the highest and the abandonment was the lowest on record, and the harvest was nearly 11 times that of 1935.

Prices have naturally influenced the economic well-being of these farmers. In 1932 they received only 32 cents a bushel for their wheat and 20 cents a bushel for their corn; other prices were also low. In 1945, a record production year, they received \$1.45 a bushel for their wheat and comparable prices for other commodities. Returns per hour to all labor in 1945 was \$2.05. In 1932, on the other hand, the farms suffered an actual loss.

INCOME AND EXPENSE, TYPICAL FAMILY-OPERATED WINTER WHEAT FARMS, SOUTHERN PLAINS, 1930-45

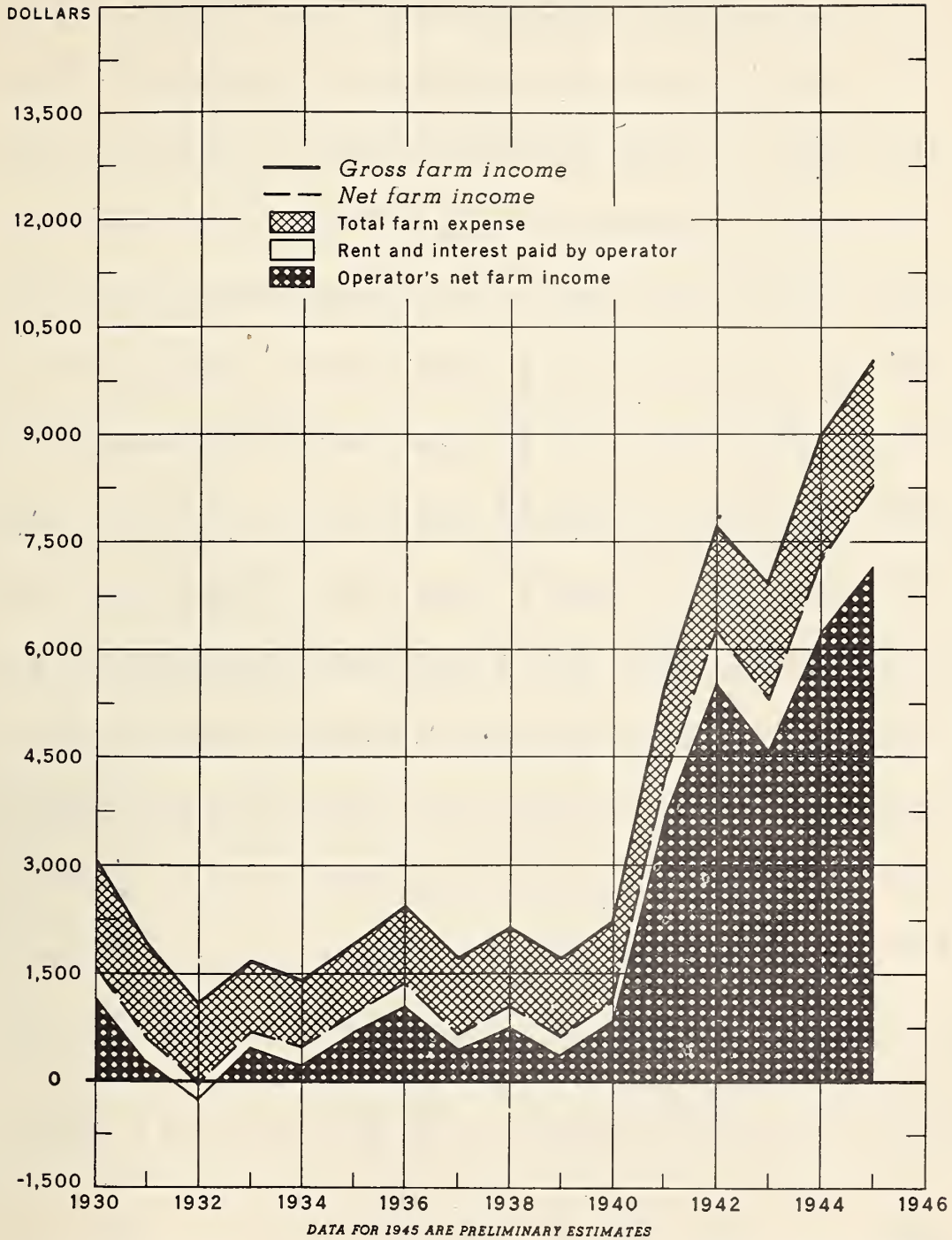


FIGURE 20

Table 24.- Land use, livestock numbers and distribution of income and expense, typical family operated winter wheat farms, Southern Plains 1930-44

Item	Unit	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945 1/
Total land in farm	: Acres	532	537	541	543	544	545	547	555	560	565	571	578	585	590	595	600
Proportion of land in:																	
Cropland harvested	:Percent	59	58	56	49	40	31	46	40	45	29	37	45	45	43	45	48
Idle, fallow, and failure	: do.	10	11	12	20	28	35	18	25	20	36	30	21	20	22	20	17
Pasture and other land	: do.	31	31	32	31	32	34	36	35	35	35	33	34	35	35	35	35
Crops harvested:																	
Wheat	: Acres	218.0	204.0	146.0	98.0	125.0	60.0	153.0	161.0	190.0	96.0	103.0	162.0	176.0	165.0	167.0	198.0
Grain sorghum	: do.	13.8	10.7	23.8	30.4	14.7	26.2	15.3	17.8	22.4	27.7	44.5	30.6	18.1	22.4	33.3	31.2
Hay	: do.	8.5	8.6	9.2	8.6	8.8	11.4	11.5	8.4	6.1	6.3	6.3	3.4	6.4	5.3	6.6	6.0
Forage sorghum	: do.	2.7	3.2	3.8	5.4	4.4	5.4	3.8	4.4	7.3	8.5	12.6	12.7	11.7	13.0	13.1	10.8
Other crops	: do.	71.3	84.9	121.8	123.3	63.2	65.4	70.6	28.9	27.5	27.2	42.8	52.0	51.5	49.0	29.0	40.2
Crop yield (per harvested acre):																	
Wheat	:Bushels	15.1	17.1	11.1	7.0	7.3	6.1	9.1	6.1	9.9	7.3	10.7	18.2	22.0	15.7	17.9	19.7
Grain sorghum	: do.	16.5	18.5	10.3	10.5	4.8	6.6	5.9	6.7	9.4	6.5	9.6	18.7	15.2	12.3	32.4	21.7
All crops (index 1930-44=100)	:Percent	128	144	91	65	51	52	66	49	83	59	86	154	171	123	178	170
Livestock on farm January 1:																	
All cattle	:Number	19.3	22.6	23.8	24.6	28.3	21.3	19.1	20.2	17.2	17.5	18.8	22.9	28.6	34.0	33.1	36.6
Milk cows	: do.	4.1	4.5	3.7	3.9	4.7	3.9	3.6	5.7	5.5	5.5	5.6	5.4	6.0	6.5	6.6	6.2
Hogs, all ages	: do.	11.3	12.9	17.8	14.3	12.2	5.1	4.6	5.9	4.7	6.0	8.2	6.8	11.8	19.2	19.2	7.6
Poultry	: do.	115	112	103	100	102	23	71	96	84	96	108	94	126	155	160	134
Workstock	: do.	4.2	3.7	3.6	3.5	3.4	3.1	2.7	3.7	2.4	2.1	2.0	1.9	1.9	1.9	1.8	1.7
Farms with tractors	:Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Proportion of cash receipts from:																	
Wheat	:Percent	63	52	52	29	32	15	48	28	18	25	31	53	56	54	50	53
Grain sorghum	: do.	5	4	5	7	2	0	3	0	0	0	4	7	3	3	20	13
Other crops	: do.	9	9	7	8	1	0	1	0	0	0	0	4	4	4	1	8
Hogs	: do.	6	7	8	6	4	5	5	9	5	6	6	4	8	10	8	2
Cattle	: do.	7	15	17	9	23	26	10	29	16	17	11	6	7	15	9	14
Other livestock	: do.	2	3	3	1	1	3	1	2	2	2	2	2	2	2	1	1
Livestock products	: do.	8	10	8	8	7	12	6	17	13	13	15	10	10	10	9	8
Government payments	: do.	--	--	--	32	30	39	26	15	16	37	31	14	10	6	2	1
Proportion of cash expenditures for:																	
Feed	:Percent	2	1	1	1	2	2	2	2	2	2	2	3	4	5	5	4
Labor	: do.	2	2	3	3	0	0	0	0	0	0	1	0	1	7	9	6
Power and machinery	: do.	66	62	64	64	65	66	72	72	73	70	71	73	70	61	65	70
General farm	: do.	25	28	27	27	25	25	22	23	21	23	23	21	18	18	15	15
Miscellaneous	: do.	5	7	5	5	8	7	4	3	4	5	3	3	7	9	6	5

1/ Preliminary.

Table 25.—Investment, income and related factors, typical family operated wheat farms, Southern Plains, 1930-45

Item	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total land in farms	532	537	541	543	544	545	547	555	560	565	571	578	585	590	595	600
Proportion rented	56	56	56	56	56	56	56	56	57	57	57	57	57	57	57	57
Cropland harvested	314	312	305	266	216	168	254	280	293	166	209	261	264	255	266	266
Total labor used	3,082	3,172	3,314	3,259	2,977	2,742	2,728	2,745	2,659	2,566	2,742	2,539	2,671	3,142	3,152	3,055
Labor hired	91	113	130	157	1	4	3		18		38	20	56	218	275	209
Total investment	26,616	23,983	20,652	16,045	16,710	17,049	17,311	18,357	17,900	17,184	16,742	17,178	20,375	24,646	26,060	29,655
Land and buildings	21,622	19,869	17,312	13,575	14,144	14,715	14,769	15,540	15,120	14,125	13,704	13,872	14,825	16,560	19,040	22,200
Machinery and equipment	2,164	2,059	1,801	1,534	1,397	1,362	1,393	1,521	1,701	1,789	1,619	1,667	2,174	2,427	2,516	2,720
Livestock	1,360	1,077	760	640	664	586	655	681	789	693	943	1,141	1,804	2,489	2,954	2,532
Crops on hand	1,280	978	779	296	595	366	294	445	290	377	276	478	1,772	2,410	1,920	2,403
Cash receipts	3,122	1,920	1,390	1,466	2,055	1,505	2,212	1,608	1,718	1,966	1,616	3,497	5,523	8,024	8,042	9,400
Cash expenditures	1,402	1,099	653	791	609	975	1,132	1,222	1,230	1,161	1,146	1,485	1,605	1,648	1,855	1,956
Net cash farm income	1,719	821	497	695	1,206	530	1,080	386	488	805	470	1,972	3,918	6,376	6,187	7,444
Value of perquisites	286	223	172	179	185	234	236	237	214	234	204	294	313	401	378	380
Net change in inventory	-431	-445	-696	-175	-921	157	77	39	326	-15	426	2,000	2,043	-1,464	680	447
Net farm income	1,574	599	-27	699	470	941	1,393	662	1,028	611	1,100	4,226	6,274	5,293	7,245	8,271
Rent and interest paid by operator	460	312	226	241	261	252	324	230	295	229	275	546	762	709	1,015	1,086
Operator's net farm income	1,114	287	-253	458	209	689	1,069	432	733	382	825	3,680	5,512	4,584	6,230	7,185
Operator's net cash farm income	1,295	466	226	410	902	265	725	189	161	164	163	1,395	3,121	5,631	5,127	6,304
Land and buildings (net rental)	624	345	176	202	325	324	399	296	352	236	318	786	1,173	1,097	1,655	1,778
Working assets (current interest rate)	371	317	261	178	167	145	153	163	164	184	176	200	322	463	379	413
Total investment	995	662	437	380	492	469	552	399	516	420	494	986	1,495	1,560	2,034	2,191
Operator and family labor	579	-65	-464	319	-22	472	641	263	512	191	666	3,240	4,779	3,733	5,211	6,080
Operator's labor	395	-215	-581	220	-114	412	777	187	450	148	539	3,201	4,650	3,460	4,941	5,794
All labor	607	-40	-437	341	-22	472	641	263	516	191	615	3,246	4,801	3,442	5,369	6,206
Percentage return to investment	3.7	2.8	2.1	2.4	2.9	2.8	3.2	2.2	2.9	2.4	3.0	5.7	7.3	6.3	7.8	7.3
Return per hour to all labor used	.20	-.01	-.13	.10	-.01	.17	.31	.10	.19	.07	.22	1.28	1.67	1.22	1.70	2.03
Oreos farm income	91	57	32	50	42	57	72	51	64	51	66	164	230	205	268	299
Operator's net farm income	64	17	-15	26	12	40	62	25	42	22	48	213	319	265	360	445
Total production	143	158	99	87	49	39	63	47	79	43	70	151	166	127	179	183
Production per hour of man labor	137	146	88	78	49	49	66	50	67	49	75	175	170	119	167	176
Operating expense per unit of production	70	56	77	80	137	179	111	159	94	171	107	56	56	83	64	63
Total cost per unit of production	77	54	67	69	132	167	108	144	89	153	101	61	74	111	93	98
Total input per unit of production	65	53	65	91	151	187	112	156	92	170	108	50	52	75	53	53
Power and machinery used (quantity)	121	116	106	93	82	79	79	83	91	98	100	101	110	119	122	129
Prices received for products sold	91	53	43	55	76	104	113	120	87	66	84	102	137	172	175	185
Prices paid including wages to hired labor	109	101	87	84	94	98	97	101	100	99	97	104	105	109	115	115

Allocation of net farm income

Index numbers (1930-44 = 100)

1/ Preliminary.

Location and general characteristics of typical family-operated winter wheat-grain sorghum farms, Southern Plains

These farms cover some 50,000 square miles of level to rolling terrain in the Canadian-Cimaron High Plains of southwestern Kansas and the Panhandles of Oklahoma and Texas. They are among the larger and more mechanized wheat farms in the plains areas. Although all had tractors and considerable mechanical equipment as early as 1930, many new items have been added and new and improved tractors and equipment have replaced the older models. As a result, the size of farm and the output per man have been increasing. During the 16-year period, 1930 to 1945, the size of farm increased from 600 to 700 acres and the output per hour of man labor (although it had its ups and downs because of the droughts during the early 1930's) almost doubled. The output per hour of man labor in 1940-44 was 59 percent more than that of 1930-34. About 3,000 hours of labor are used on each of these farms each year. Over 95 percent of this is performed by the operator and his family. Practically all of the hired labor is employed during the harvesting season—July, August, and October.

Nearly 80 percent of the land is cultivated. Wheat is by far the most important enterprise; nearly 300 acres are seeded to wheat each year. Wheat and grain sorghum are the only two crops that are normally sold. More than half of the total farm receipts comes from wheat; grain sorghums contributed materially during the war. During the period 1930-39 about 55 acres were devoted to grain sorghum exclusive of forage sorghums. In 1940-44 approximately 85 acres were devoted to this crop. (The increase in forage sorghums was even more pronounced.) The price of grain sorghums averaged 44 cents per bushel in 1930-39 and 74 cents in 1940-44. Nearly 1,800 bushels were sold in 1940-44 compared with 320 bushels in 1930-39.

These farms are located in a rather hazardous area and the operators have had serious reverses and many disappointments. Although they seed nearly 300 acres to wheat each year they sometimes harvest as little as 75 acres. In 1933 and 1935 more than 70 percent of the acreage in wheat was abandoned before harvest. In 1931, 1942, 1943, and 1945 less than 5 percent was abandoned. An index of total production for these farms based on 1930-44 = 100 averaged 125 during 1930-31, dropped to 45 in 1933, and remained well below 70 during the next 7 years (until 1940) after which it began to rise, and it averaged over 170 during the years 1941-45. Returns per hour of labor averaged 6 cents during 1930-34 compared with \$1.45 during 1940-44.

INCOME AND EXPENSE, TYPICAL FAMILY-OPERATED WHEAT- GRAIN SORGHUM FARMS, SOUTHERN PLAINS, 1930-45

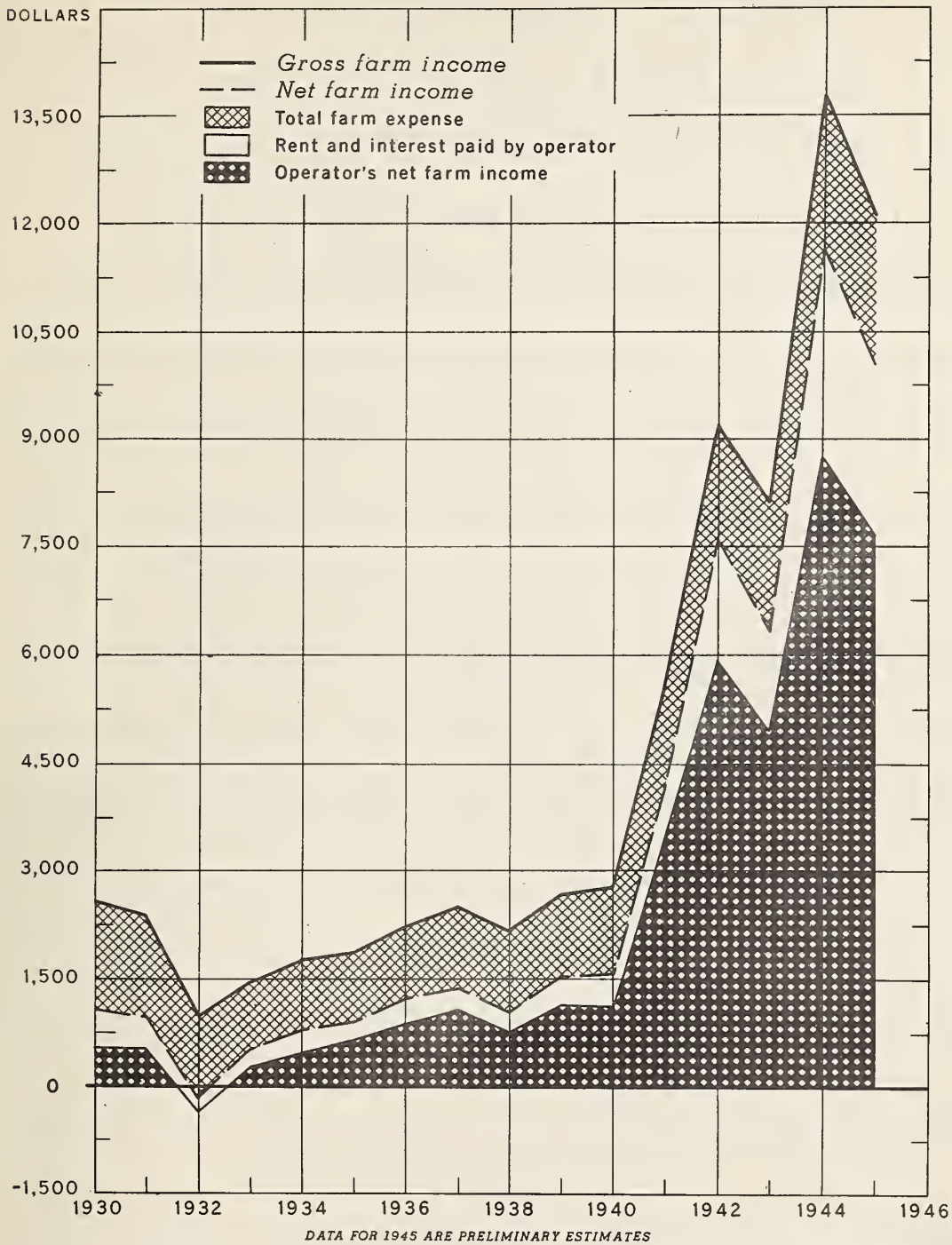


FIGURE 21

Table 26.- Land use, livestock numbers and distribution of income and expense, typical family operated winter wheat-grain sorghum farms, Southern Plains 1930-45

Item	Unit	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945 1/2
Total land in farm	Acres	589	590	591	591	591	591	595	605	620	635	655	665	675	680	685	690
Proportion of land in:																	
Cropland harvested	Percent	60	65	55	34	42	30	35	40	41	37	41	46	54	55	63	65
Idle, fallow and failure	do.	18	13	24	45	35	46	43	39	37	42	37	30	24	23	15	13
Pasture and other land	do.	22	22	21	21	23	24	22	21	22	21	22	22	22	22	22	22
Crops harvested:																	
Wheat	Acres	266.0	296.0	210.0	85.0	164.0	73.0	123.0	164.0	169.0	146.0	133.0	166.0	220.0	219.0	264.0	317.0
Grain sorghum	do.	48.3	54.3	62.6	62.6	55.0	76.2	56.3	50.8	52.1	50.2	71.4	59.6	77.6	95.9	113.0	85.6
Hay	do.	7.7	7.7	7.7	7.7	7.7	8.9	9.5	8.5	9.3	9.5	9.9	10.7	11.5	10.8	12.3	12.5
Forage sorghum	do.	6.5	7.7	6.3	11.8	8.3	10.0	7.7	9.1	15.5	17.7	25.6	25.9	21.6	18.4	19.9	15.2
Other crops	do.	23.0	20.7	37.8	33.7	14.7	10.6	10.8	6.6	6.7	8.2	27.5	32.0	31.8	29.2	23.9	19.3
Crop yield (per harvested acre):																	
Wheat	Bushels	11.4	17.2	8.0	5.7	7.1	5.8	7.0	6.6	8.4	6.1	9.8	13.1	20.8	10.5	18.6	13.0
Grain sorghum	do.	12.2	19.3	11.6	9.9	4.3	7.9	5.8	11.1	11.1	9.0	12.6	23.4	23.9	18.1	26.9	20.2
All crops (index 1930-44=100)	Percent	101	155	80	59	57	58	61	68	62	74	94	139	166	107	179	128
Livestock on farm January 1:																	
All cattle	Number	22.2	20.4	21.1	21.6	23.4	16.4	15.0	17.8	14.1	16.5	14.2	18.0	24.0	30.5	29.7	35.2
Milk cows	do.	3.2	3.1	2.8	3.2	4.0	3.7	2.8	5.0	4.5	4.3	4.3	3.8	4.4	4.8	4.8	4.3
Hogs, all ages	do.	5.2	5.3	8.3	8.1	6.1	3.5	3.2	3.7	3.1	4.2	6.0	6.7	11.5	16.9	16.8	6.6
Poultry	do.	118.0	105.0	96.0	99.0	103.0	81.0	74.0	106.0	87.0	104.0	116.0	102.0	135.0	169.0	177.0	154.0
Workstock	do.	4.1	3.5	3.2	3.1	2.9	2.5	2.0	2.0	1.6	1.3	1.4	1.1	1.1	1.1	1.0	1.0
Farms with tractors	Percent	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Proportion of cash receipts from:																	
Wheat	Percent	66	67	66	27	35	23	32	36	40	27	29	42	49	47	47	49
Grain sorghum	do.	5	12	8	12	0	9	6	3	6	5	17	16	14	18	34	26
Other crops	do.	0	0	0	0	0	0	0	0	0	0	2	8	5	1	1	4
Hogs	do.	2	2	3	3	2	2	3	3	3	3	3	4	4	6	7	5
Cattle	do.	16	11	14	11	22	16	5	19	7	16	4	2	4	10	4	10
Other livestock	do.	3	2	2	2	2	3	2	3	3	2	1	2	2	2	1	1
Livestock products	do.	8	6	7	8	8	11	7	12	12	8	10	8	8	8	6	6
Government payments	do.	--	--	--	37	31	36	45	24	29	39	34	18	12	7	2	2
Proportion of cash expenditures for:																	
Feed	Percent	1	1	1	1	3	2	1	2	1	2	2	2	4	5	4	3
Labor	do.	4	4	3	3	1	2	1	1	1	1	2	2	5	11	13	12
Power and machinery	do.	69	69	71	68	70	71	76	75	77	75	76	77	73	64	66	69
General farm	do.	20	21	21	22	20	19	17	17	16	18	17	15	14	13	10	10
Miscellaneous	do.	6	5	4	6	6	6	5	5	5	4	4	4	4	4	7	6

1/ Preliminary.

Table 27.- Investment, income and related factors, typical family operated winter wheat-grain sorghum farms, Southern Plains, 1930-45

Item	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945 1/
Total land in farm	569	590	591	591	591	591	595	605	620	635	655	665	675	680	685	690
Proportion rented	54	56	62	66	70	74	75	76	77	78	79	79	79	80	80	80
Cropland barreled	352	366	366	366	366	366	366	366	366	366	366	366	366	366	366	366
Total labor used	3,088	3,095	3,038	2,895	2,889	2,728	2,940	2,762	2,686	2,692	2,789	2,800	3,068	3,296	3,326	3,291
Labor hired	182	223	186	121	98	137	54	56	66	59	144	129	243	379	516	498
Total investment	26,692	23,741	20,475	16,043	15,916	16,525	16,625	17,123	16,221	16,237	17,457	18,166	21,025	20,933	21,208	21,661
Land and buildings	22,382	20,060	17,139	13,593	13,593	14,461	14,280	15,125	15,500	15,240	14,410	14,650	15,585	17,680	20,590	23,460
Machinery and equipment	2,266	2,163	1,911	1,656	1,502	1,446	1,467	1,576	1,765	1,891	1,923	2,032	2,324	2,551	2,670	2,865
Livestock	1,393	897	629	548	545	471	670	741	627	773	704	691	1,513	2,532	2,232	2,351
Crops on hand	856	621	796	246	276	424	218	291	339	333	420	613	1,693	3,150	1,756	2,985
Cash receipts	2,892	2,139	1,372	1,370	1,766	1,684	1,956	2,270	1,795	2,449	2,201	3,772	6,602	9,753	11,904	12,235
Cash expenditures	1,467	1,215	892	741	851	987	1,103	1,272	1,324	1,236	1,303	1,969	1,754	1,636	2,229	2,295
Net cash farm income	1,425	924	480	629	935	697	853	998	471	1,213	898	2,183	4,848	7,917	9,675	9,940
Value of perquisites	281	221	167	176	184	229	234	235	213	208	198	252	312	404	376	392
Net change in inventory	-651	-174	-603	-296	-349	-46	127	160	344	85	465	1,727	2,426	-1,989	1,576	-296
Net farm income	1,095	971	-156	509	774	680	1,214	1,393	1,028	1,506	1,561	4,162	7,586	6,332	11,629	10,036
Rent and interest paid by operator	506	463	193	228	300	237	361	351	300	367	440	664	1,664	1,365	2,697	2,376
Operator's net farm income	549	508	-349	281	474	643	853	1,042	728	1,139	1,121	3,278	5,922	4,967	8,732	7,660
Operator's net cash farm income	687	422	246	394	547	417	454	611	435	809	421	1,258	3,137	6,502	6,718	7,494
Land and buildings (cost rental)	560	479	116	164	290	266	393	375	349	420	504	972	1,794	1,517	3,100	2,577
Working assets (current interest rate)	348	283	260	176	151	145	141	151	161	180	177	202	310	469	360	443
Total investment	908	762	376	340	441	413	534	526	510	600	681	1,174	2,104	1,986	3,460	3,020
Operator and family labor	147	209	-532	169	333	467	680	667	518	906	680	2,986	5,462	4,346	8,169	7,016
Operator's labor	-12	97	-608	114	268	430	657	795	468	861	824	2,913	5,329	4,096	7,933	6,773
All labor	200	295	-505	186	348	490	669	860	532	918	910	3,025	5,574	4,534	8,464	7,492
Percentage return to investment	3.4	3.2	1.8	2.1	2.8	2.5	3.2	3.0	2.8	3.3	3.9	6.5	10.0	7.7	12.7	9.5
Return per hour to all labor used	.06	.08	-.17	.06	.12	.16	.27	.32	.20	.35	.33	1.08	1.62	1.36	2.54	2.26
Gross farm income	65	60	24	37	44	47	56	62	54	66	70	139	230	203	343	303
Operator's net farm income	28	25	-17	14	24	32	43	52	37	57	56	165	297	249	436	364
Total production	115	181	78	46	53	37	42	57	67	62	80	136	195	125	277	178
Production per hour of man labor	111	175	77	46	55	40	50	62	75	70	66	145	191	113	204	164
Operating expense per unit of production	85	48	92	142	120	178	152	120	104	114	92	61	49	87	96	69
Total cost per unit of production	89	47	77	119	111	158	145	115	96	107	89	68	70	118	91	112
Total output per unit of production	74	45	99	163	133	166	156	121	103	113	91	57	44	74	41	53
Power and machinery used (quantity)	121	116	107	95	84	79	78	61	89	97	100	103	111	118	121	128
Prices received for products sold	92	52	44	64	75	103	114	114	80	84	62	102	128	171	195	205
Prices paid including wages to hired labor	110	101	90	87	93	95	96	98	98	97	95	100	104	114	123	122

Allocation of net farm income

Index numbers (1930-44 = 100)

1/ Preliminary.

NOTE: See text for explanation of terms.

Location and general characteristics of typical family-operated cotton-grain sorghum farms, Southern Plains

Large-scale methods of production and a high degree of mechanization characterize cotton-grain sorghum farms in the southern Great Plains region. In virtually every respect, these farms are an extreme departure from the scale and methods of production typifying family-operated cotton farms in the Old South. The smooth surface of this area is conducive to the use of multi-row planting and cultivating equipment. Average annual rainfall of about 20 inches makes weed control a minor problem and chopping has become the exception rather than the rule. These farmers generally depend upon migratory workers for harvesting the cotton crop; more than three-fourths of the harvest labor is normally hired. This combination of conditions results in these family-operated farms being large by cotton-farm standards. Families here typically handle 50 to 60 acres of cotton which produce some 20 to 30 bales of lint.

Virtually all of the cotton in the Plains area is harvested by "snapping," that is, by removing the entire boll from the plant. Only 12 to 14 hours of hand labor are required for harvesting an acre in this way, about two-thirds as much as for picking. Efficient production and harvesting methods make this the lowest labor-cost cotton-producing area. Widespread use of combines in harvesting grain sorghums has further reduced the labor costs.

Typical cotton-grain sorghum farms account for the bulk of the 2.5-3.0 million acres of cotton grown in the High Plains and in the Low or Rolling Plains at the southern end of the Texas Panhandle. They are mostly restricted to the sandy loam soils, for wheat is of considerable importance on the so-called tight lands, particularly in seasons when weather and price conditions are favorable for wheat production. About three-fourths of the total land on these farms is cultivated, some 80 percent of it is planted to cotton and grain sorghums. From 1938 to 1941 forage sorghums achieved a measure of importance at the expense of the grain-producing varieties as a result of AAA's conservation efforts and programs. Unusually favorable prices for grain sorghum during the war stimulated substantial increases in the production of this crop and it now occupies about as large an acreage as does cotton. The sales of cotton and cotton seed, however, still account for about half the cash farm receipts. Livestock and livestock products usually contribute 20 to 30 percent of the cash income on these farms and add further to the diversification of the farming system.

Operators of Plains cotton farms, like other farmers in regions of low rainfall, are constantly faced with the threat of crop failure. Actual abandonment is not usually high but crop yields and total production fluctuate widely from year to year so annual earnings of the families on cotton-grain sorghum farms in this area are far from stable.

INCOME AND EXPENSE, TYPICAL FAMILY-OPERATED COTTON-GRAIN SORGHUM FARMS, SOUTHERN PLAINS, 1930-45

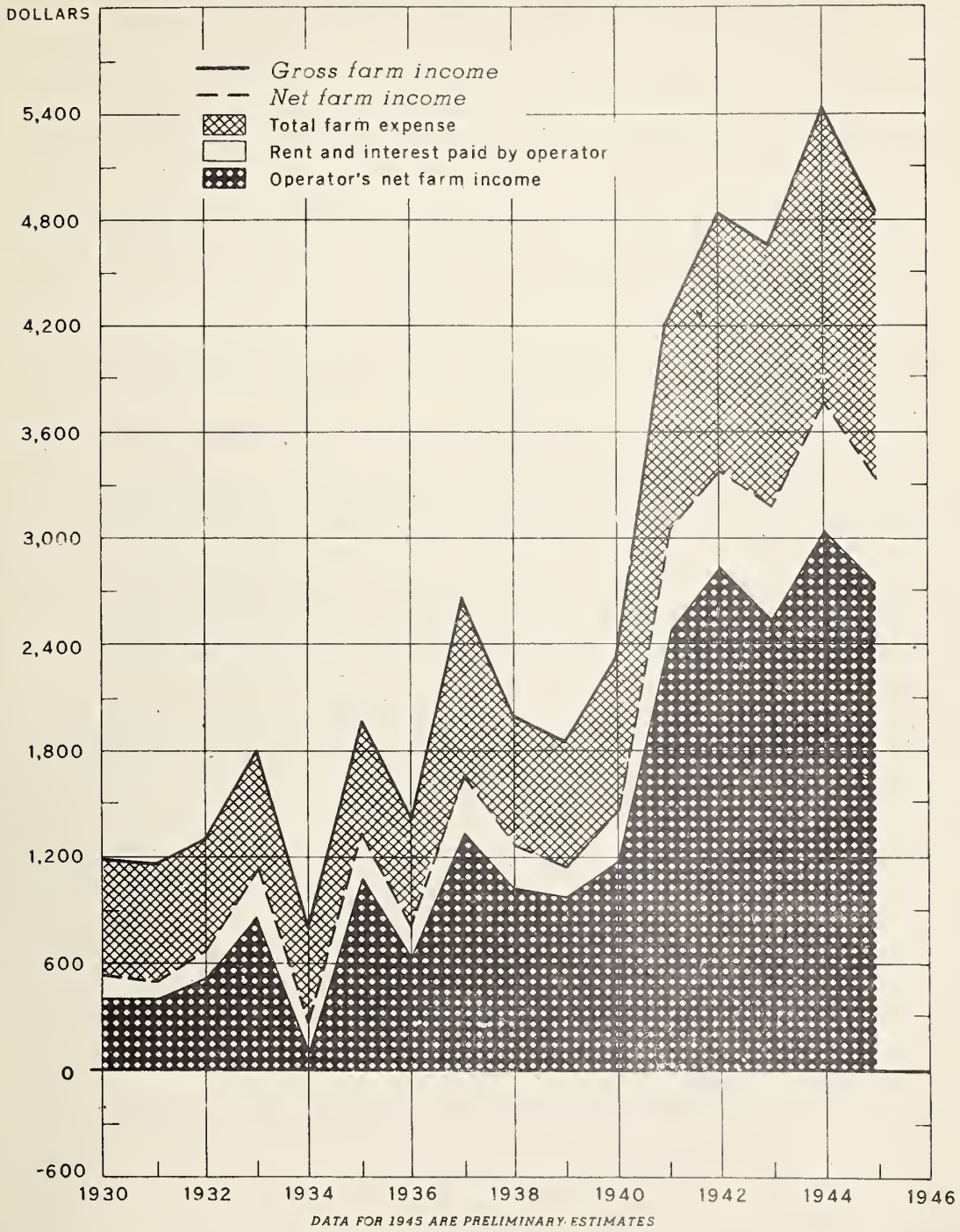


FIGURE 22

Table 26.— Land use, livestock numbers and distribution of income and expense, typical family operated cotton-grain sorghum farms, Southern Plains 1930-45

Item	Unit	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945 1/
Total land in farm	: Acres	180	181	182	186	188	190	196	201	205	206	212	215	217	219	221	221
Proportion of land in:																	
Croyland harvested	:Percent	66	66	69	58	56	62	56	67	61	55	60	61	59	67	69	61
Falls and failure	: do.	6	4	3	16	11	4	6	3	7	13	9	6	8	5	2	9
Pasture and other land	: do.	28	30	28	26	33	34	38	30	32	32	31	33	33	28	29	30
Crops harvested																	
Cotton	: Acres	62.9	60.7	64.6	52.4	46.0	47.9	59.0	76.0	53.0	48.2	51.5	51.4	53.9	57.1	54.5	46.7
Grain sorghum	: do.	23.1	22.8	25.3	18.3	23.0	26.4	13.4	25.0	30.7	30.0	35.8	41.2	47.9	52.2	69.0	65.3
Forage sorghum	: do.	19.2	19.5	17.1	24.4	21.6	26.3	24.7	19.7	24.2	23.7	26.1	23.3	13.1	21.8	16.2	16.3
Other crops	: do.	12.8	16.0	18.9	13.4	15.0	16.3	13.2	13.7	18.1	12.0	13.9	15.4	12.0	14.8	13.3	11.8
Crop yield (per harvested acre):																	
Cotton	:Pounds	74	159	205	229	58	148	99	209	150	134	179	238	224	153	204	200
Grain sorghum	:Bushels	10.6	18.3	18.3	17.1	7.2	16.4	11.6	19.5	17.1	11.5	14.3	22.3	21.1	18.9	20.0	19.3
All crops (index 1930=100)	:Percent	62	101	117	118	40	99	69	121	96	77	100	143	133	97	127	120
Livestock on farm January 1:																	
All cattle	:Number	8.3	8.7	9.1	10.1	10.1	8.6	9.4	11.0	10.6	11.0	10.7	11.6	12.7	12.8	11.3	11.5
Milk cows	: do.	3.7	3.9	4.2	4.4	4.1	3.9	3.8	4.0	4.7	4.8	4.8	5.0	5.3	5.6	5.8	6.3
Hogs, all ages	: do.	7.7	11.2	15.4	14.8	10.8	6.1	4.8	6.0	5.2	8.0	10.7	6.8	7.2	13.5	12.5	7.0
Poultry	: do.	100	115	105	105	100	90	90	95	100	105	110	105	115	150	155	140
Workstock	: do.	6.0	6.2	5.7	5.8	5.4	5.3	5.3	4.9	4.4	3.9	3.1	2.6	2.3	1.9	1.9	1.9
Farms with tractors	:Percent	13	16	16	16	17	29	36	48	52	57	64	72	78	81	81	87
Proportion of cash receipts from:																	
Cotton, lint	:Percent	47	55	68	62	40	51	50	50	35	32	39	47	50	37	43	41
Cottonseed	: do.	5	6	6	6	2	9	7	10	6	4	6	9	8	4	7	6
Grain sorghum	: do.	0	0	0	0	0	2	0	3	5	0	3	9	7	8	16	16
Other crops	: do.	0	0	1	1	0	4	3	2	6	3	5	4	2	3	4	3
Livestock	: do.	28	24	15	7	16	10	12	12	15	18	15	11	16	27	15	14
Livestock products	: do.	20	15	10	8	19	11	15	9	13	13	10	8	11	15	12	16
Government payments	: do.	--	--	--	16	23	13	13	14	20	30	22	12	6	6	3	4
Proportion of cash expenditures for:																	
Ginning	: do.	11	22	27	20	6	13	11	19	13	11	13	15	13	11	11	8
Labor	: do.	21	21	26	34	7	17	13	30	15	15	22	29	36	44	39	34
Power and machinery	: do.	38	21	24	24	54	47	54	36	50	51	47	42	37	29	36	43
General farm	: do.	17	16	13	15	13	12	13	8	13	13	11	9	8	8	7	8
Miscellaneous	: do.	13	20	10	7	20	11	9	7	9	10	7	5	6	8	7	7

1/ Preliminary.
2/ Includes 10.4 acres of sorghum planted on land removed from cotton.

3/ Includes 15.0 acres of cotton plowed up in cooperation with the 1933 acreage reduction program which were not planted to other crops. In all 25.4 acres of cotton were plowed up.

Table 29.- Investment, income and related factors, typical family operated cotton-grain sorghum farms, Southern Plains, 1930-45

Item	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total land in farm	180	181	182	185	188	190	196	201	209	208	212	215	217	219	221	222
Proportion rented	69	69	70	70	70	70	70	71	71	71	71	71	70	69	69	69
Cropland harvested	116	119	126	108	106	117	110	134	176	114	127	131	127	146	153	134
Total labor used	3,985	4,203	4,422	4,601	3,372	3,476	3,468	4,007	3,757	3,880	3,863	3,624	4,017	4,302	3,706	3,417
Labor hired	685	975	1,170	1,387	399	625	643	1,086	712	718	612	1,014	1,233	1,399	999	721
Total investment	10,656	9,671	7,686	6,567	7,652	7,666	8,444	9,022	9,278	9,116	9,477	9,622	10,484	11,292	12,973	14,063
Land and buildings	6,820	7,954	6,370	5,980	6,016	6,270	6,664	7,035	7,380	7,280	7,632	7,740	8,246	8,979	9,945	11,100
Machinery and equipment	562	586	447	395	395	557	612	739	805	838	836	915	1,040	1,157	1,150	1,289
Livestock	691	732	653	596	513	653	632	862	801	770	707	866	915	1,090	1,118	1,091
Crops on hand	983	495	273	179	309	436	306	386	282	228	302	281	283	373	760	683
Cash receipts	903	936	1,143	1,690	809	1,528	1,420	2,396	1,736	1,647	2,083	3,730	4,158	4,193	5,071	4,288
Cash expenditures	621	566	565	648	672	604	726	1,084	780	729	920	1,248	1,530	1,424	1,752	1,625
Net cash farm income	282	370	578	1,042	137	924	694	1,312	956	918	1,163	2,482	2,628	2,769	3,319	2,663
Value of perquisites	341	261	205	202	246	286	295	285	266	294	262	326	400	472	444	527
Net change in inventory	-95	-126	-110	-109	-114	200	26	62	39	-24	48	246	356	-64	-31	141
Net farm income	528	903	673	1,135	269	1,330	615	1,699	1,261	1,148	1,473	3,054	3,384	3,177	3,772	3,331
Rent and interest paid by operator	116	106	153	272	163	251	164	322	239	176	305	576	544	610	730	546
Operator's net farm income	412	395	520	863	106	1,079	631	1,377	1,022	972	1,168	2,478	2,840	2,537	3,042	2,785
Operator's net cash farm income	140	236	404	748	-46	569	292	972	699	721	837	1,866	2,062	2,106	2,959	2,040
Allocation of net farm income																
Land and buildings (net rental)	105	97	162	334	163	311	220	445	300	213	397	776	783	693	1,023	814
Working assets (current interest rate)	175	140	106	82	92	113	116	123	120	116	114	113	132	175	165	161
Total investment	280	237	270	416	275	424	336	536	420	331	511	891	875	1,068	1,208	995
Operator and family labor	248	266	403	719	-6	906	479	1,121	841	617	962	2,165	2,909	2,109	2,564	2,336
Operator's labor	109	155	317	641	-73	846	480	1,081	746	737	675	2,087	2,413	1,935	2,361	2,139
All labor	374	364	590	946	43	1,025	579	1,432	984	932	1,159	2,523	3,062	2,733	3,290	2,469
Percentage return in investment	2.6	2.4	3.5	6.2	3.8	5.4	4.0	6.0	4.5	3.6	5.4	9.3	8.3	9.1	9.3	7.1
Return per hour to all labor used	.09	.09	.12	.21	.01	.29	.17	.36	.26	.25	.30	.66	.76	.64	.86	.64
Index numbers (1937-44 = 100)																
Gross farm income	47	46	92	72	32	79	56	106	79	74	93	166	193	166	217	193
Operator's net farm income	32	31	40	67	8	63	49	103	79	75	90	192	220	196	295	212
Total production	67	100	124	106	44	69	66	135	96	77	96	128	130	113	127	109
Promotion per hour of man labor	67	94	110	91	50	100	77	132	100	63	99	131	128	104	134	126
Operating expense per unit of production	123	76	56	71	150	64	106	62	64	102	94	93	114	133	132	141
Total cost per unit of production	128	70	50	67	146	65	106	72	64	95	90	94	107	143	161	172
Total input per unit of production	137	92	75	67	198	94	130	72	96	116	96	74	74	64	75	65
Power and machinery used (quantity)	92	90	81	76	73	69	94	104	109	111	107	112	116	124	120	132
Prices received for products sold	94	56	52	71	62	96	99	77	79	61	64	126	149	175	177	163
Prices paid including wages to hired labor	107	85	70	63	65	92	92	96	92	92	94	105	122	141	144	140

/ Preliminary.

NOTE: See text for explanation of terms.

Location and general characteristics of typical family-operated cotton farms, Black Prairie Area, Texas

Cotton farms are about the only kind found in the Black Prairie area which extends finger-like some 300 miles from the border of Oklahoma through east-central Texas to the vicinity of San Antonio (Fig. 1). Unusual uniformity in the farming system characterizes cotton farms in this area. The usual enterprises are cotton, corn, hay, and a little livestock. A high percentage of tenancy prevails. As in other highly specialized cotton-producing sections, cotton has given way somewhat to corn, hay crops, and pasture since the governmental cotton acreage-reduction programs were inaugurated in 1953. With the increase in feed production, livestock has gained in relative importance but the increases have come slowly owing to lack of facilities on the one hand, and to lack of management knowledge on the other. Cotton still occupies nearly half of the cultivated land and contributes more than two-thirds of the cash farm income.

Black Prairie cotton farms are in many respects a transition from the small-farm type of organization to the east to the large-scale mechanized cotton farms of the Southern Plains. In their dependence upon migratory workers for picking half or more of the cotton, these farms are a step away from the method of cotton production characterizing the Old South in which even seasonal peak requirements are met largely with resident labor. Consequently, family-operated farms here are typically larger and have a considerably bigger acreage in cotton than do similar farms in the eastern cotton areas. Their shift from mule-drawn to tractor-drawn equipment has progressed more rapidly than on family-operated cotton farms in sections where the scale of operation is limited by the size of the resident labor force. In the past decade, tractors have replaced mules as the principal source of power on about three-fourths of these Black Prairie farms.

Production on these farms is fairly stable. Fluctuations in operator's earnings result largely from shifts in price-cost relationships. Cotton yields on Black Prairie farms are relatively low and have improved far less during the past decade than have those in most other major cotton areas. Yet, operators of these cotton farms find themselves in the unique and unfortunate position of having few satisfactory alternatives to the cotton enterprise. Yields of corn are comparatively low and land at its present value is too expensive to shift to a materially lower intensity of use. On the brighter side, however, the topography makes this area well adapted to the use of mechanical equipment for cotton harvesting and production.

INCOME AND EXPENSE, TYPICAL FAMILY-OPERATED COTTON FARMS, BLACK PRAIRIE AREA, TEXAS, 1930-45

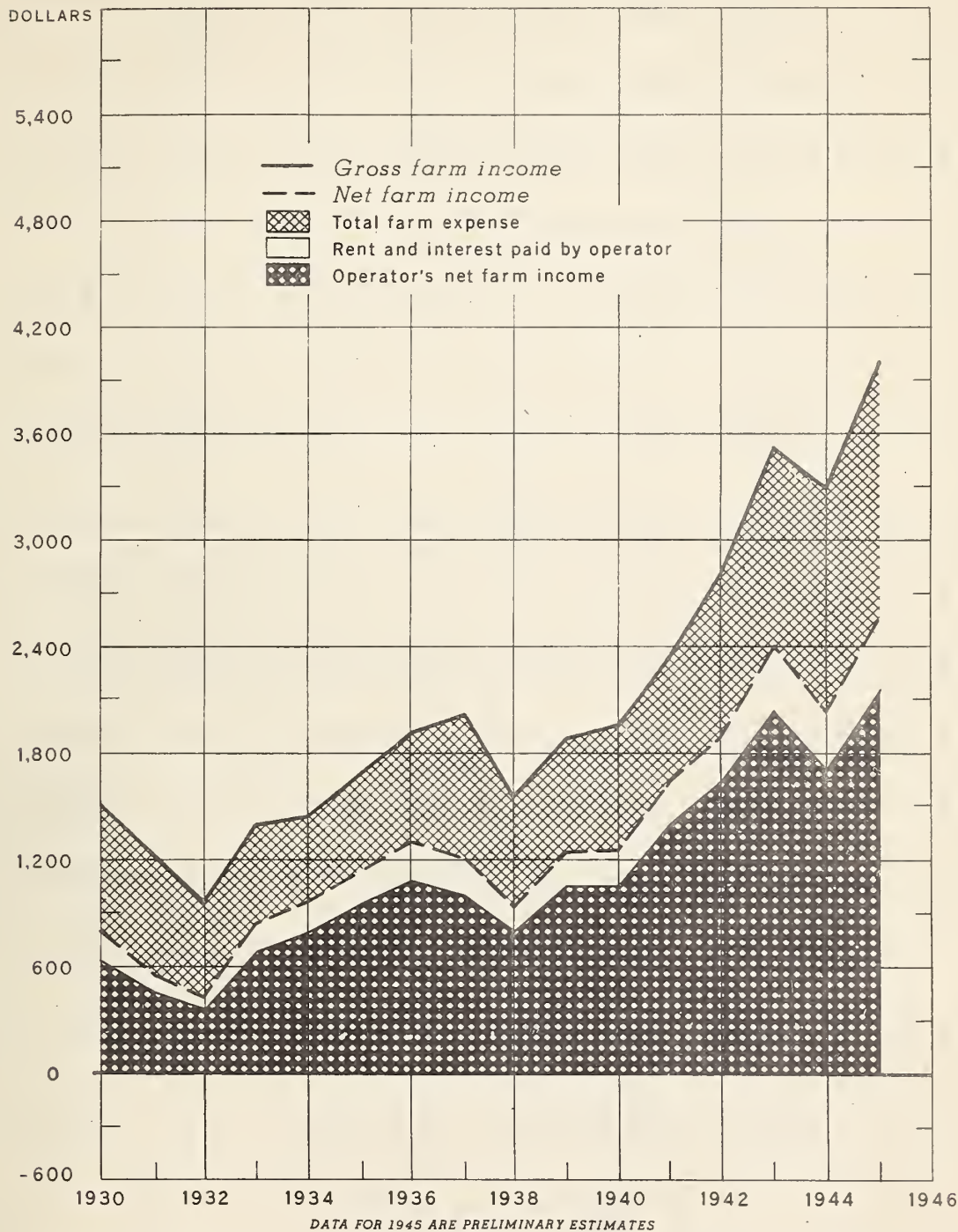


FIGURE 23

Table 30.- Land use, livestock numbers and distribution of income and expense, typical family operated cotton farms, Black Prairie area, Texas 1930-45

Unit	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total land in farm	125	125	125	126	127	128	130	132	133	134	136	137	139	142	142	142
Proportion of land in:																
Crop land harvested	80	81	81	87	69	71	68	74	66	66	66	65	65	70	70	69
Idle and fallow	3	2	2	2/16	8	6	7	5	10	7	6	7	8	5	4	4
Pasture and other land	17	17	17	17	23	23	25	21	24	27	28	28	27	25	26	27
Crops harvested:																
Cotton	61.7	59.4	58.0	46.7	42.4	44.8	50.1	61.5	42.1	42.5	42.8	41.2	41.0	46.7	46.7	51.1
Corn	16.7	18.9	18.9	19.7	21.4	21.6	19.9	21.3	23.3	27.0	27.3	28.6	33.2	34.9	33.5	28.2
Oats	7.5	8.7	8.9	5.8	8.3	8.9	6.9	6.6	7.4	7.0	6.8	6.5	1.3	4.8	5.6	6.1
Other crops	13.7	14.3	15.3	11.8	15.2	15.7	12.1	8.6	15.2	11.9	12.9	12.6	11.2	12.9	13.1	13.0
Crop yield (per harvested acre):																
Cotton	132	206	154	204	150	128	169	198	168	192	196	144	166	170	164	171
Corn	19.5	19.2	20.4	12.3	9.3	24.2	16.2	19.4	19.7	23.5	25.7	15.4	14.4	17.4	15.4	17.7
All crops (index 1930=100)	91	115	98	100	77	96	94	113	111	119	126	84	87	96	93	101
Livestock on farm January 1:																
All cattle	4.1	4.2	5.0	5.8	6.7	6.2	6.1	6.6	6.5	7.0	7.7	8.5	9.3	10.3	11.7	11.3
Milk cows	3.1	3.2	3.5	3.8	3.9	3.8	3.5	3.6	3.3	3.5	3.5	3.7	3.8	4.4	4.5	4.9
Hogs, all ages	3.2	3.8	4.0	4.3	4.2	3.1	3.0	3.4	3.3	3.2	4.4	4.0	4.2	5.2	6.4	4.1
Poultry	85	82	82	85	78	68	69	78	77	83	90	85	95	115	122	125
Workstock	4.8	4.8	4.8	4.7	4.3	3.9	3.8	3.4	3.3	3.2	3.3	3.5	3.0	2.9	2.5	2.3
Farms with tractors	8	10	12	15	20	27	30	36	38	40	43	54	66	70	72	78
Proportion of cash receipts from:																
Cotton, lint	68	72	75	68	64	47	63	61	49	46	45	50	57	52	44	44
Cottonseed	10	8	7	7	10	7	10	10	8	7	7	9	8	8	7	7
Other crops	3	3	3	0	0	17	3	8	8	12	15	7	6	7	8	7
Livestock	6	6	5	2	4	5	6	6	7	6	6	7	10	14	27	27
Livestock products	13	11	10	7	8	10	9	9	10	8	9	12	13	15	13	14
Government payments	--	--	--	16	14	14	9	6	18	21	18	15	6	4	1	1
Proportion of cash expenditures for:																
Dinning	8	18	18	23	15	12	15	17	13	13	11	10	10	8	7	7
Labor	34	28	25	26	17	16	20	27	15	15	14	16	27	37	34	38
Power and machinery	43	20	27	25	38	39	39	32	42	43	49	51	37	28	34	33
General farm	8	25	24	21	20	19	16	13	18	17	14	13	14	12	10	9
Miscellaneous	7	9	6	5	10	14	10	11	12	12	12	10	12	-15	15	13

1/ Preliminary.

2/ Includes 15.9 acres of cotton plowed up in cooperation with the 1933 acreage reduction program which were not planted to other crops.

Table 31.- Investment, income and related factors, typical family operated cotton farms, Black Prairie Area, Kansas, 1930-45

Item	Unit	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945 1/2
Total land in farm	Acres	125	125	125	126	127	126	130	132	133	134	136	137	139	142	142	142
Proportion rented	Percent	54	55	56	57	58	58	58	58	57	56	56	55	55	54	54	54
Crop land harvested	Acres	100	101	100	100	87	91	91	98	88	88	90	89	90	100	112	112
Total labor used	Hours	4,886	5,028	4,771	4,750	4,047	4,025	4,261	4,747	3,879	3,992	4,023	3,817	4,043	4,401	4,304	4,510
Labor hired	do.	1,497	1,625	1,313	1,334	788	831	1,040	1,577	794	872	880	817	1,130	1,390	1,286	1,519
Total investment	Dollars	11,280	11,181	9,211	7,887	5,332	5,551	5,751	9,018	5,740	5,601	5,175	8,278	9,845	11,190	12,352	13,356
Land and buildings	do.	11,875	10,000	8,250	7,095	7,365	7,425	7,940	7,655	7,450	7,370	7,480	7,535	8,060	8,945	9,940	10,934
Machinery and equipment	do.	439	428	393	356	360	399	417	471	510	511	501	607	746	788	821	909
Livestock	do.	632	472	411	363	431	457	590	595	560	590	583	621	757	1,075	1,054	983
Crops on hand	do.	334	283	163	113	176	282	206	307	220	176	211	215	282	342	547	530
Cash receipts	do.	1,250	1,018	603	1,274	1,306	1,355	1,670	1,763	1,298	1,591	1,672	1,957	2,275	3,031	2,940	3,476
Cash expenditures	do.	691	620	478	514	499	539	699	821	622	637	777	807	933	1,103	1,312	1,495
Net cash farm income	do.	559	398	325	760	807	816	1,011	962	676	954	895	1,150	1,342	1,928	1,628	1,981
Value of purchases	do.	268	207	175	183	215	244	262	249	238	237	226	284	350	429	426	472
Net change in inventory	do.	-34	-57	-67	-100	-62	84	25	-4	21	46	130	200	189	49	-20	95
Net farm income	do.	793	548	433	843	960	1,144	1,298	1,207	935	1,237	1,251	1,634	1,881	2,406	2,034	2,548
Rent and interest paid by operator	Dollars	155	90	77	158	185	195	222	218	140	166	201	230	241	365	337	389
Operator's net farm income	do.	638	458	356	685	775	949	1,076	989	795	1,071	1,050	1,404	1,640	2,040	1,697	2,159
Operator's net cash farm income	do.	379	279	221	576	601	604	773	728	521	748	677	903	1,083	1,644	1,267	1,562
Allocation of net farm income																	
Land and buildings (net rental)	Dollars	176	63	47	196	251	274	327	324	200	287	317	376	395	535	580	676
Working assets (current interest rate)	do.	121	97	79	62	70	80	80	85	61	79	60	87	105	137	148	148
Total investment	do.	297	160	126	258	321	354	407	409	281	366	397	463	500	772	728	824
Operator and family labor	do.	496	388	307	595	639	790	891	798	654	671	834	1,171	1,381	1,634	1,306	1,724
Operator's labor	do.	320	257	208	489	548	697	787	696	570	779	759	1,074	1,277	1,463	1,093	1,485
All labor	do.	701	562	423	720	724	872	1,024	1,017	743	972	962	1,304	1,639	2,046	1,747	2,209
Percentage return to investment	Percent	2.2	.4	1.4	3.3	3.9	4.1	4.6	4.5	3.2	4.3	4.5	5.2	5.1	6.9	5.9	6.2
Return per hour to all labor used	ollars	.14	.11	.09	.15	.16	.22	.24	.21	.19	.24	.24	.34	.44	.46	.41	.51
Index numbers (1930-44 = 100)																	
Gross farm income	Percent	77	62	49	71	74	85	97	102	79	96	99	119	143	180	167	203
Operator's net farm income	do.	61	44	34	66	75	91	104	95	76	101	101	135	158	196	163	207
Total production	do.	94	126	104	98	74	89	95	124	98	108	111	85	94	104	96	108
Production per hour of man labor	do.	83	108	94	89	79	95	97	113	109	117	120	96	101	102	97	103
Operating expense per unit of production	do.	111	76	72	79	97	85	89	87	65	79	84	115	131	142	168	171
Total cost per unit of production	do.	112	65	61	74	103	90	94	80	79	79	80	120	127	155	181	184
Total input per unit of production	do.	110	82	96	103	129	103	101	81	95	87	87	115	105	100	106	97
Power and machinery used (quantity)	do.	96	95	92	87	84	86	86	92	95	97	97	114	125	126	126	135
Prices received for products sold	do.	93	52	53	70	105	95	105	81	72	76	77	130	148	170	173	176
Prices paid including wages to hired labor	do.	111	92	81	84	91	94	95	97	91	89	90	98	114	130	143	149

1/ Preliminary.

NOTE: See text for explanation of terms.

Location and general characteristics of typical family-operated cotton farms, Delta Area, Mississippi

King cotton reigns supreme on the broad alluvial reaches of the Yazoo-Mississippi Delta comprising about 5 million acres of fertile land and forming one of the most highly specialized cotton-producing areas in the world. The Delta is further characterized by a dominance of the plantation system and a resulting high percentage of land worked by croppers and tenants. Before the advent of the acreage-reduction programs, cotton occupied nearly 80 percent of the cropland. Even now upward of 40 percent of the cultivated area is devoted to this high-income crop, leaving all operators, large and small, essentially "one-crop farmers."

Although numerically predominant, family-operated farms contain only 15 percent of the cropland and produce less than 20 percent of all cotton grown in this area. In the present analysis, however, the primary interest is directed to the operations and income on farms on which the labor is performed largely by the operator and his family. These family-operated farms are the ones for which the operator's earnings can be compared more directly with family-operated farms in other areas. Plantations are large-scale farms and are for later consideration.

Family-operated cotton farms in this rich Delta area are small in terms of acres, small in terms of total production, and small in terms of family income. To grow and harvest an acre of cotton by the mule-and-hand methods used on these small farms requires about 150 hours. One-fifth of this total is required for chopping in May and June and three-fifths for picking in September, October, and November—all hand labor. Depending as they do upon resident labor to meet even these peak seasonal requirements, each family's scale of operation is limited to the acreage of cotton the members can work at these times—15 to 20 acres. Lacking the diversification in their farming system to level-out these seasonal peaks, the families on typical Delta cotton farms are characteristically underemployed in all off-season months. Underemployment and hand-labor methods are largely responsible for this being an area of "rich land and poor people."

Cotton farmers in the Delta receive very little cash income from any source except cotton and cottonseed—unless Government payments for reducing cotton production are counted as a separate source. Acreages of feed grains have increased considerably during recent years largely as a result of the reduced cotton acreage. This production has gone to reduce feed purchases for the little livestock they have rather than to increase cash income directly. Many farm families do not even have enough cows, hogs, and chickens to supply the milk, meat, and eggs needed in the family diet.

With their scale of operation restricted by the hand-labor requirements of cotton chopping and picking, these small farm operators have understandably stayed with mule-drawn equipment.

INCOME AND EXPENSE, TYPICAL FAMILY-OPERATED COTTON FARMS, DELTA AREA, MISSISSIPPI, 1930-45

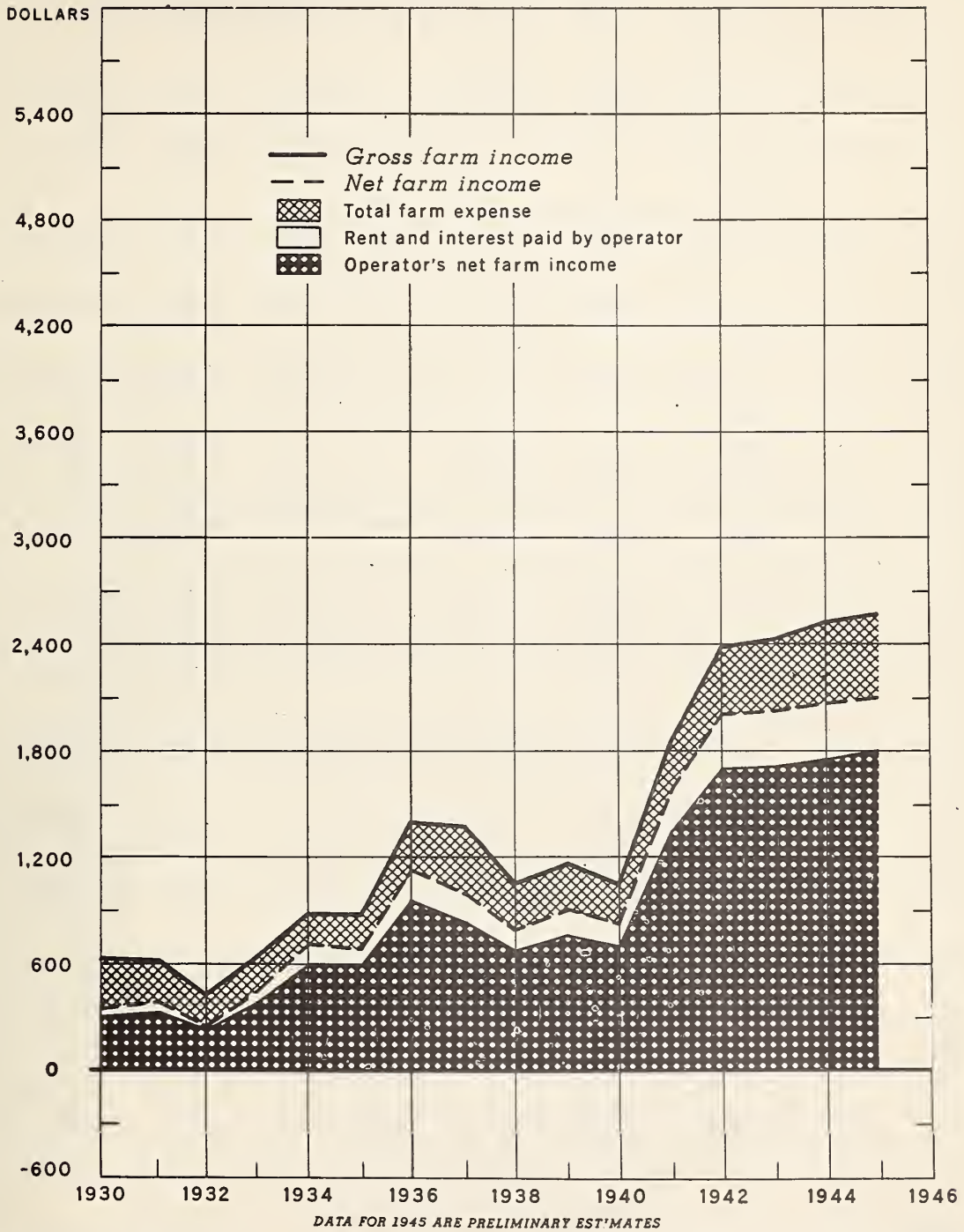


FIGURE 24

Table 32.- Land use, livestock numbers and distribution of income and expense, typical family operated cotton farms, Delta area, Mississippi 1930-45

Item	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total land in farm	37	37	36	36	38	39	40	40	41	42	43	44	44	44	44	44
Proportion of land in:																
Cropland harvested	69	72	73	60	68	70	75	79	71	72	71	72	71	73	74	76
Idle, and failure	8	5	4	2/17	9	6	2	0	7	5	7	6	7	4	4	2
Pasture and other land	23	23	23	23	23	24	23	21	22	23	22	22	22	23	22	22
Crops harvested:																
Cotton	19.7	19.4	19.0	14.2	13.3	14.5	16.6	19.0	14.0	14.2	14.3	14.0	13.8	14.3	15.0	15.2
Corn	3.4	4.7	5.3	5.7	8.8	8.5	8.1	7.8	9.4	9.7	8.5	8.2	7.9	7.7	7.9	8.0
Oats	.2	.2	.2	.2	.3	.3	.4	.6	.8	1.4	2.1	2.8	3.0	3.1	3.0	3.0
Other crops	2.2	2.5	2.7	2.6	3.6	4.0	4.7	4.3	5.0	5.0	5.4	6.5	6.6	7.3	7.0	7.1
Crop yield (per harvested acre):																
Cotton	163	257	170	208	256	254	358	457	384	421	327	356	451	428	439	412
Corn	13.2	23.0	17.4	19.6	17.6	16.6	18.8	22.4	20.8	15.9	16.2	16.8	21.9	20.1	20.7	19.9
All crops (index 1930-44=100)	60	97	72	87	85	82	103	126	111	108	98	109	128	115	119	114
Livestock on farm January 1:																
All cattle	1.8	1.8	1.8	1.8	2.1	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.4
Milk cows	1.2	1.2	1.2	1.2	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4
Hogs, all ages	2.8	2.8	2.6	3.0	3.0	2.8	2.8	3.1	3.3	3.7	3.8	2.8	3.0	3.6	4.0	4.0
Poultry	25	24	25	25	22	24	23	26	25	27	26	25	30	34	37	40
Workstock	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Farms with tractors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Proportion of cash receipts from:																
Cotton, lint	75	83	80	74	68	63	71	73	60	59	57	65	72	68	73	72
Cottonseed	17	12	14	11	18	19	19	15	15	13	11	16	15	14	13	13
Other crops	--	--	--	--	--	3	2	5	6	6	8	5	6	8	7	6
Livestock	5	4	5	2	2	3	2	2	3	3	3	2	2	4	4	5
Livestock products	3	1	1	1	1	1	1	1	2	1	0	1	1	2	2	3
Government payments	--	--	--	12	11	11	5	4	14	18	21	11	4	4	1	1
Proportion of cash expenditures for:																
Ginning	14	17	22	22	22	23	23	23	24	25	23	23	21	22	20	18
Labor	5	5	5	5	2	4	4	4	4	4	5	4	2	5	5	10
Power and machinery	14	11	16	14	25	25	25	19	24	22	24	23	18	15	17	18
General farm	33	42	44	40	37	41	41	47	39	39	37	39	48	46	46	42
Miscellaneous	34	25	13	19	14	7	7	7	9	10	11	11	11	12	12	12

1/ Preliminary.
2/ Includes 4.8 acres of cotton plowed up in cooperation with the 1935 acreage reduction program which were not planted to other crops.

Table 33.- Investment, income and related factors. Typical family operated cotton farms, Delta Area, Mississippi, 1930-45

Item	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total land in farm	37	37	36	36	36	39	40	40	41	42	43	44	44	44	44	44
Proportion fenced	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Cropland harvested	26	27	27	28	28	27	30	30	29	30	30	32	31	32	33	33
Total labor used	2,759	3,300	2,677	3,010	2,758	2,669	3,553	4,357	3,284	3,452	3,101	3,253	3,543	3,462	3,491	3,642
Labor hired	97	364	123	140	58	102	572	1,109	427	537	293	320	614	575	736	748
Total investment	3,611	3,123	2,464	1,971	2,236	2,531	2,462	2,969	3,292	3,551	3,625	3,655	4,269	4,777	5,238	5,609
Land and buildings	3,256	2,775	2,109	1,665	1,862	2,028	2,200	2,320	2,706	2,940	3,010	3,256	3,584	3,916	4,224	4,796
Machinery and equipment	130	123	106	97	92	107	107	115	137	144	147	149	165	179	182	200
Livestock	291	209	182	157	200	243	298	341	325	331	325	307	352	436	475	494
Crops on hand	134	76	65	52	82	159	144	193	131	136	143	143	166	246	357	399
Cash receipts	460	423	299	473	675	677	1,142	1,139	839	995	655	1,586	2,004	1,999	2,071	2,099
Cash expenditures	282	228	174	178	179	193	278	390	258	258	219	288	386	398	469	476
Net cash farm income	178	195	145	295	496	484	864	749	581	737	636	1,298	1,618	1,601	1,602	1,583
Value of perquisites	241	185	139	152	164	196	227	224	201	201	193	242	320	432	408	491
Net change in inventory	-76	-1	-29	-6	51	12	37	-25	25	-27	0	59	63	-5	55	24
Net farm income	343	779	495	441	711	692	1,128	998	807	911	829	1,581	2,001	2,028	2,065	2,098
Rent and interest paid by operator	46	45	27	60	107	85	167	154	130	146	134	240	297	316	315	302
Operator's net farm income	297	334	228	381	604	607	961	844	677	765	695	1,341	1,704	1,712	1,750	1,796
Operator's net cash farm income	122	140	109	217	303	392	690	588	444	583	494	1,032	1,311	1,275	1,276	1,268

Item	Allocation of net farm income															
	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Land and buildings (net rental)	28	30	11	64	147	112	247	226	184	210	189	364	499	492	493	471
Working assets (current interest rate)	41	29	25	21	24	32	33	37	34	36	35	34	36	48	57	59
Total investment	69	59	36	85	171	144	280	263	218	246	224	398	497	540	550	530
Operator and family labor	274	320	219	356	540	548	648	735	589	665	605	1,183	1,504	1,466	1,515	1,568
Operator's labor	120	202	153	231	466	465	741	592	489	560	506	1,093	1,342	1,278	1,361	1,361
All labor	288	344	227	365	945	556	902	650	622	709	629	1,240	1,612	1,610	1,679	1,740
Percentage return to investment	1.6	1.9	1.5	4.3	7.6	5.7	9.9	8.9	6.6	6.9	6.2	10.3	11.6	11.3	10.5	9.1
Return per hour to all labor used	.10	.10	.08	.12	.20	.19	.25	.20	.19	.21	.20	.36	.45	.46	.48	.48

Item	Index numbers (1930=100)															
	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Gross farm income	49	46	33	49	69	68	109	106	82	90	82	145	185	189	196	199
Operator's net farm income	34	39	26	44	70	71	112	98	79	69	81	156	198	199	204	209
Total production	72	99	75	76	79	82	109	142	103	107	122	109	122	114	120	117
Production per hour of man labor	87	99	86	86	95	93	101	108	103	101	99	106	113	109	114	105
Operating expense per unit of production	161	89	89	94	85	88	88	88	86	86	87	96	109	122	132	138
Total cost per unit of production	133	69	68	78	91	88	90	77	87	87	96	116	126	153	141	151
Total output per unit of production	135	69	118	110	108	114	88	74	95	93	107	95	85	95	94	101
Power and machinery used (quantity)	100	96	95	94	91	93	95	95	101	103	104	104	107	110	110	114
Prices received for products sold	83	51	54	71	105	92	108	73	74	75	79	141	159	166	169	172
Prices paid including wages to hired labor	103	87	80	86	90	94	96	99	88	88	89	102	122	135	141	143

1/ Preliminary.

NOTE: See to for explanation of terms.

INDEX NUMBERS, 1935-39 = 100

To aid those who might prefer index number of farm income, production, prices, and related items based on 1935-39 = 100 rather than 1930-44 = 100 and to facilitate comparisons of some items, all index numbers except the combined index of yields of major crops presented before in this report and based on 1930-44 = 100 were also computed on 1935-39 = 100 and are presented in the following tables. Because unsatisfactory weather and growing conditions reduced the crop yields to such extremely low levels on most farms during the middle 1950's, it seemed unnecessary to compute index numbers of crop yields on 1935-39 = 100.

Table 34.- Gross farm income and operator's net farm income, typical family operated farms, by type, 1930-45
Index numbers (1935-39 = 100)

Calendar year	Dairy farms		Corn Belt farms		Spring wheat farms (Northern Plains)		Winter wheat farms (Southern Plains)		Cotton farms				
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent			
1930	119	110	84	83	95	127	109	139	154	113	60	64	54
1931	97	61	55	57	64	66	40	67	97	104	59	66	53
1932	67	57	48	48	49	55	50	88	55	42	66	53	36
1933	71	56	43	54	49	51	79	73	86	64	91	77	54
1934	84	61	36	40	60	43	38	51	72	76	40	80	75
1935	96	105	133	128	110	109	113	131	96	82	100	93	75
1936	95	93	66	62	91	48	36	26	123	98	72	106	119
1937	111	114	118	113	110	102	139	114	87	109	134	111	117
1938	101	99	93	101	97	107	98	100	108	95	100	86	90
1939	97	89	88	96	92	134	114	129	86	116	94	104	99
1940	116	111	102	118	104	126	126	147	112	121	118	108	89
1941	140	148	153	171	150	236	245	267	279	243	212	130	158
1942	186	205	233	246	204	341	330	393	390	402	244	156	203
1943	205	235	233	237	224	305	411	380	349	355	235	196	207
1944	248	260	235	235	212	372	429	475	454	599	274	182	215
1945 $\frac{1}{2}$	274	265	253	273	250	364	464	508	507	529	245	221	218
Gross farm income													
Operator's net farm income													
1930	116	105	46	44	74	85	37	80	169	62	41	66	39
1931	99	25	5	11	30	2	40	35	43	58	39	47	43
1932	44	29	9	14	20	1	24	31	38	40	52	37	30
1933	57	31	8	31	26	20	66	47	69	32	86	71	50
1934	72	38	26	8	37	26	11	32	32	54	10	80	78
1935	111	118	160	147	134	125	134	170	104	73	107	97	79
1936	96	90	38	37	89	10	4	54	162	97	63	111	125
1937	99	122	126	117	108	100	161	103	65	118	133	102	109
1938	107	94	98	106	91	107	82	110	111	83	101	82	88
1939	87	76	78	93	78	158	127	171	58	129	96	108	99
1940	118	112	112	133	94	138	140	206	125	127	116	108	90
1941	153	175	221	227	173	394	370	475	557	372	246	144	174
1942	221	266	371	351	253	542	509	723	834	672	282	169	221
1943	240	299	321	307	256	427	632	639	693	563	252	210	222
1944	304	330	303	283	212	549	645	614	943	990	302	175	227
1945 $\frac{1}{2}$	346	324	338	351	271	573	723	879	1,087	869	272	222	233

$\frac{1}{2}$ Preliminary.

Table 35.- Total production and production per hour of man labor, typical family operated farms, by type, 1930-45
Index numbers (1935-39 = 100)

Calendar year	Dairy farms		Corn belt farms		Spring wheat farms (Northern Plains)		Winter wheat farms (Southern Plains)		Cotton farms			
	Percent	Production	Percent	Production	Percent	Production	Percent	Production	Percent	Production		
1930	92	103	74	93	150	153	197	262	216	72	91	67
1931	104	87	87	90	121	75	147	290	341	108	123	91
1932	87	101	104	106	133	136	229	182	147	133	102	69
1933	84	90	71	89	77	96	102	159	85	115	96	72
1934	93	83	95	56	65	49	80	91	99	47	72	73
1935	101	103	97	98	106	118	135	72	70	95	86	75
1936	89	89	67	115	50	39	46	116	79	74	93	100
1937	100	105	120	103	95	123	96	86	108	145	121	131
1938	112	105	108	97	114	119	97	146	127	103	95	95
1939	98	98	108	92	135	101	126	80	116	83	105	99
1940	108	116	100	102	121	124	146	128	150	104	108	86
1941	105	108	114	110	158	186	194	277	257	137	82	96
1942	119	129	129	130	200	214	264	304	367	140	92	111
1943	111	125	129	144	150	207	209	233	236	122	101	105
1944	121	131	127	148	185	210	246	328	426	137	94	111
1945	129	127	128	151	177	219	284	336	335	118	105	107
Total production												
1930	90	104	66	88	124	129	157	230	187	68	78	86
1931	104	88	79	86	101	65	117	246	295	96	102	98
1932	87	101	94	102	115	114	172	148	130	112	89	85
1933	85	90	64	84	72	84	84	132	78	93	84	85
1934	94	82	94	57	68	48	76	82	92	51	74	94
1935	107	104	95	95	106	114	114	71	68	102	90	92
1936	92	88	66	113	52	41	54	115	84	78	91	100
1937	100	104	119	105	96	122	101	85	104	134	106	106
1938	108	105	109	97	114	120	102	146	126	102	103	102
1939	93	99	111	90	132	103	129	83	118	84	110	100
1940	103	108	106	112	119	124	137	126	144	101	113	98
1941	100	102	121	117	146	179	179	294	245	133	90	105
1942	113	117	132	136	177	194	223	266	321	130	95	111
1943	105	109	128	144	126	178	165	200	191	106	96	107
1944	110	112	129	151	160	181	189	281	343	137	91	112
1945	117	109	133	154	154	194	206	297	277	128	97	104

Production per hour of man labor

✓ Preliminary.

Table 36.- Operating expense per unit of production and total cost per unit of production, typical family operated farms, by type, 1930-45
Index numbers (1935-39 = 100)

Calendar year	Dairy farms		Corn Belt farms		Hog-beef		Oash		Spring wheat farms (Northern Plains)		Winter wheat farms (Southern Plains)		Ootton farms	
	Percent	Percent	Percent	Percent	Hog-beef raising	Hog-beef fattening	Hog-beef raising	Hog-beef fattening	Wheat-corn-livestock	Wheat-small grain-livestock	Wheat-corn-livestock	Wheat-sorghum	Southern Plains	Black Prairie
1930	129	113	176	125	121	126	94	84	67	49	64	134	130	104
1931	92	108	129	109	89	104	95	143	72	39	36	83	89	102
1932	86	80	89	73	67	80	71	64	39	54	69	61	85	102
1933	89	85	118	81	74	86	101	81	76	56	106	78	93	108
1934	94	101	153	151	148	110	168	174	110	96	90	164	114	97
1935	87	88	89	112	92	85	78	66	57	125	133	92	100	101
1936	104	108	138	82	140	110	173	214	206	78	114	116	105	101
1937	114	102	85	104	86	104	98	68	96	111	90	89	102	102
1938	91	98	94	98	89	102	83	72	80	66	78	92	100	99
1939	104	104	94	104	93	99	68	80	61	120	85	111	93	97
1940	103	93	101	89	82	100	78	68	57	75	69	103	98	100
1941	117	110	97	94	92	114	68	52	48	39	46	102	135	110
1942	121	110	99	94	90	122	63	55	45	39	37	124	154	125
1943	151	132	114	104	112	145	97	68	66	58	65	145	167	140
1944	170	138	122	108	118	171	80	69	68	45	42	145	197	151
1945 ¹	166	152	123	111	124	172	87	68	66	44	52	154	201	158

Operating expense per unit of production

Total cost per unit of production

1930	142	131	163	144	132	129	99	86	74	56	72	145	133	155
1931	106	127	106	114	92	98	90	119	75	41	38	79	77	81
1932	96	89	65	72	62	68	64	52	38	51	62	56	72	79
1933	91	89	87	77	66	73	91	76	79	52	96	76	87	91
1934	92	102	121	129	119	96	126	149	92	100	89	167	122	106
1935	91	89	94	102	86	91	80	67	63	126	127	96	107	103
1936	105	108	127	81	135	110	164	194	208	82	117	120	111	105
1937	107	102	97	106	92	106	100	80	83	109	93	82	95	90
1938	94	98	88	101	91	97	82	72	79	67	77	95	94	101
1939	103	103	94	110	96	96	74	87	67	116	86	107	93	101
1940	98	85	102	101	87	97	83	75	63	76	72	102	95	112
1941	113	108	111	109	101	114	81	69	59	46	55	106	142	136
1942	122	109	124	117	108	124	88	86	62	56	56	121	150	147
1943	151	133	148	135	141	151	140	115	100	84	95	162	183	179
1944	165	142	159	143	148	174	131	125	99	70	73	182	214	165
1945 ¹	163	159	165	145	156	176	147	129	101	74	90	194	218	176

¹ Preliminary.

Table 37.—Total cost (excluding price change) per unit of production and power and machinery used (quantity), typical family operated farms, by type, 1930-45
Index numbers (1935-39 = 100)

Calendar year	Dairy farms		Corn Belt farms		Spring wheat farms (Northern Plains)		Winter wheat farms (Southern Plains)		Cotton farms				
	Percent	Quantity	Percent	Quantity	Percent	Quantity	Percent	Quantity	Percent	Quantity			
1930	113	100	146	115	108	106	72	62	54	54	135	116	146
1931	99	116	119	113	90	100	84	132	70	33	91	86	96
1932	109	96	95	91	81	92	72	62	42	59	74	103	127
1933	111	106	138	106	93	107	119	86	93	63	86	110	119
1934	102	115	178	163	146	117	132	161	104	105	98	136	117
1935	95	93	97	101	79	98	78	64	60	130	110	93	123
1936	106	110	143	87	151	115	188	234	224	78	115	108	95
1937	103	97	80	97	81	95	92	62	77	110	89	87	80
1938	91	97	90	104	92	97	77	65	78	64	76	102	102
1939	105	103	90	111	97	95	65	75	61	118	83	93	100
1940	99	90	97	95	85	93	74	63	56	75	67	93	115
1941	102	97	86	97	87	97	59	44	44	35	42	123	103
1942	95	86	80	83	77	91	51	44	37	36	32	113	92
1943	102	91	83	79	87	90	72	48	51	52	83	107	103
1944	97	90	84	79	86	101	58	48	46	37	74	114	101
1945 $\frac{1}{2}$	93	95	85	79	87	97	60	45	43	37	39	104	109

Calendar year	Spring wheat farms (Northern Plains)		Winter wheat farms (Southern Plains)		Cotton farms	
	Percent	Quantity	Percent	Quantity	Percent	Quantity
1930	117	109	121	122	123	116
1931	115	107	118	119	119	111
1932	111 ^a	102	111	112	111	104
1933	104	96	102	103	101	97
1934	96	89	94	94	94	91
1935	93	88	90	91	91	88
1936	92	88	91	93	90	88
1937	93	95	98	98	94	94
1938	104	108	108	106	107	109
1939	118	121	113	112	118	121
1940	122	121	111	111	118	123
1941	123	119	110	109	116	120
1942	128	124	118	116	127	124
1943	131	124	126	124	135	131
1944	131	123	129	124	138	129
1945 $\frac{1}{2}$	143	134	145	139	151	141

Calendar year	Spring wheat farms (Northern Plains)		Winter wheat farms (Southern Plains)		Cotton farms	
	Percent	Quantity	Percent	Quantity	Percent	Quantity
1930	116	137	141	143	105	103
1931	111	127	135	137	104	101
1932	104	116	123	126	100	98
1933	97	107	109	112	95	96
1934	91	98	96	99	91	93
1935	88	95	92	93	88	95
1936	88	98	92	92	96	97
1937	94	99	97	96	100	98
1938	109	102	106	104	104	104
1939	121	106	113	115	106	106
1940	123	111	117	118	106	107
1941	120	117	118	121	124	107
1942	124	122	128	131	136	110
1943	131	122	139	139	137	113
1944	129	121	142	143	137	113
1945 $\frac{1}{2}$	141	121	150	151	147	117

^a Preliminary.

Table 36.- Prices received and prices and wages paid, typical family operated farms, by type, 1930-45
Index numbers (1935-39 = 100)

Calendar year	Dairy farms		Corn Belt farms		Spring wheat farms (Northern Plains)		Winter wheat farms (Southern Plains)		Wheat-grain (Northern Plains)		Cotton farms	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
1930	131	118	115	111	113	103	98	89	93	108	108	98
1931	97	81	73	79	78	69	70	52	52	65	61	60
1932	70	60	45	56	53	51	49	42	44	59	62	64
1933	77	62	56	90	94	61	61	54	65	82	82	84
1934	83	71	75	61	65	62	75	76	76	94	122	124
1935	96	97	102	106	102	99	100	102	104	113	111	109
1936	107	109	112	99	110	106	107	111	115	114	123	127
1937	105	112	116	116	113	119	123	118	115	89	94	87
1938	94	95	84	92	93	89	84	85	81	91	83	88
1939	98	87	86	87	82	87	86	84	85	93	89	89
1940	104	92	92	85	85	88	92	82	82	97	90	94
1941	123	124	121	113	114	121	122	100	103	145	151	167
1942	143	153	149	146	148	149	142	134	129	172	173	188
1943	182	183	173	154	172	182	179	168	172	201	198	197
1944	207	194	180	146	171	184	195	171	197	204	202	200
1945 1/2	218	205	190	154	188	196	202	181	207	211	217	204

Prices received for products sold											
Year	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
1930	115	119	123	121	123	123	125	122	114	115	111
1931	93	98	106	107	106	109	108	106	105	94	94
1932	73	85	94	91	87	95	92	92	93	76	86
1933	79	82	86	84	81	87	88	85	90	89	93
1934	91	89	91	88	88	95	96	104	96	92	97
1935	97	96	95	95	93	96	97	95	99	99	100
1936	99	98	99	99	98	98	98	97	99	99	103
1937	110	105	103	104	104	103	102	108	101	104	107
1938	98	102	102	102	103	103	103	100	101	99	95
1939	96	99	101	101	102	100	100	100	101	99	95
1940	98	100	100	99	102	99	101	102	98	101	96
1941	107	110	105	104	110	104	105	104	103	114	110
1942	123	125	114	119	124	114	112	114	108	131	122
1943	142	143	126	136	145	128	127	131	116	152	139
1944	165	150	129	141	153	132	139	148	127	155	153
1945 1/2	163	155	130	144	157	139	146	158	126	151	160

Prices paid including wages to hired labor											
Year	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
1930	115	119	123	121	123	123	125	122	114	115	111
1931	93	98	109	107	106	109	108	106	102	92	99
1932	73	85	94	91	87	95	92	92	87	76	87
1933	79	82	86	84	81	87	88	85	85	89	90
1934	91	89	91	88	88	95	96	104	95	92	97
1935	97	96	95	95	93	96	97	95	99	99	101
1936	99	98	99	99	98	98	98	97	98	99	102
1937	110	105	103	104	104	103	102	108	102	104	104
1938	98	102	102	102	103	103	103	100	101	99	98
1939	96	99	101	101	102	100	100	100	101	99	95
1940	98	100	100	99	102	99	101	102	97	101	96
1941	107	110	105	107	110	104	105	104	104	114	105
1942	123	125	114	119	124	114	112	114	106	131	122
1943	142	143	126	136	145	128	127	131	110	152	139
1944	165	150	129	141	153	132	139	148	116	155	153
1945 1/2	163	155	130	144	157	139	146	158	116	151	160

1/2 Preliminary.

