

PART-TIME FARMING

ITS ROLE
IN A CHANGING
AGRICULTURE



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●To keep abreast of the dynamic events of today's agriculture, and to better understand the impact of perpetual changes upon farm operators and their families, the College of Agriculture undertook an intensive study of a restricted farm area. Blackwater and Lamine townships of Cooper County were selected and thoroughly surveyed during 1960-61.

Analysis of the data collected revealed that part-time farming occupied an important position in the social and economic makeup of the rural area. This publication resulted from a detailed study of part-time farming as it was found in the designated study area. However, to fully understand the widespread prevalence of part-time farming in today's agriculture, the authors thought it necessary to show the evolution of part-time farming up to the present time.

Only within the past three decades has part-time farming received the attention of researchers, policy makers, and educators. Such belated recognition may explain, in part, the wide confusion concerning the place and importance of part-time farming in family farm adjustment. Many view part-time farming as a new phenomena growing out of a general technological revolution while, in contrast, a few see it as a revival of an old European mode of family living resulting from a maladjustment of resources. Some feel that it is a short run adjustment while others visualize it as a permanent part of a dynamic agricultural structure. Some hail it as an "escape valve" for excess farm labor while others see the shift as harmful, keeping resources in agriculture that are not needed. And still others feel that agriculture should not be concerned; that part-time farming is a problem for industry and the "welfare agencies." What course of events has lead to such diverse interpretations of the role of part-time farming?

PERIODS OF PART-TIME FARMING HISTORY

To achieve a better understanding of the present viewpoints concerning the part-time farm, a review of developments which have led to these varying concepts is needed. Five periods reflect the prevailing economic conditions which have fostered the corresponding concepts of part-time farming.

I. The Village Farming Period

The first period can be called the village farming period. This early predecessor of the modern part-time farm is as old as recorded agricultural history. The earliest known writings on the subject date back to the civilization of Mesopotamia in the lower delta of the Tigris and Euphrates rivers approximately 3,000 B.C.¹ Here the people lived in walled or semi-walled villages for mutual protection and depended upon a combination of agriculture and trade for their livelihood. The family head operated some type of handicraft shop (pottery, jewelry, leathercraft, etc.) which provided products for trading to traveling merchants who commuted among the villages. The older children and wives of the family head worked small plots of land and/or tended a herd of sheep or goats which provided the household food supply and some by-products for the business establishments (leather, tallow, straw, flour, etc.). Village farming prevailed in the Greek and Roman empires and carried on through to modern Europe.²

Since a majority of the early settlers in the New World were from the western European countries, it was only natural that they should introduce the mode of living which their former environment dictated.³

"In New England the English system of agricultural settlement predominated. Most farmers lived in small villages with their fields, pastures, and waste land surrounding. The village with its land was known as a town (township). When the population of a town became too great, or dissension arose, the landless and dissatisfied elements would get title from the legislature to a tract just beyond the limits of existing settlements."⁴

¹Semple, E. C. *Geography of the Mediterranean Region; Its Relation to Ancient History*. New York: H. Holt and Co. 1931; also see, Dickinson, Robert E. "The Growth of the Historic City" in *Readings in Urban Geography*, Edited by H. M. Mayer and C. F. Kohn (Chicago: University of Chicago Press. 1959. Section III; Melvin, Bruce L. "The place of the Part-Time Farmer" *Rural Sociology*, Vol. 19. (September 1954) pp. 281-286; and, Zeuch, W. E. "The Subsistence Homestead from the Viewpoint of an Economist." *Journal of Farm Economics*, Vol. XVII (November, 1935) p. 710.

²Mumford, Louis. *The Culture of Cities*. New York: Harcourt, Brace, and Co., 1935, Chapter I; and Davis, Kingsley. "The Origin and Growth of Urbanization in the World" in *Readings in Urban Geography* (edited by H. M. Mayer and C. F. Kohn). Chicago: University of Chicago Press. 1959. Section III

³Benedict, Murray R. *Farm Policies of the United States, 1790-1950*. New York: The Twentieth Century Fund, 1953. pp. 6-9; and Faulkner, H.U., *American Economic History*. New York: Harper Brothers; 1960 (8th edition) pp. 54-56.

⁴Shannon, Fred A. *Economic History of the People of the United States*. New York: The MacMillan Co., 1934. p. 59.

Such a system of living proved particularly advantageous to the early settlers since supplies were scarce and the need for protection required the utmost in group cooperation.⁵

In New England, rural people tended to identify themselves with their community rather than by occupational or social strata, because of the frequency of part-time farming mixed with part-time industry, and because of the political integration and social homogeneity fostered by the township plan of living."⁶

But as settlements grew, the need for living in a compact village was alleviated. Also, the demand for both agricultural and industrial goods and services expanded at such a rate that the needs could not be met with a part-time labor force.

During their spare time in the winter months many farmers manufactured nails, shingles, barrel staves, or casks which found a ready market in the West Indian trade or in the local fish and rum industry. In fact, by the end of the colonial period this type of industry had often expanded into small local shops. This form of industry—industry that was an adjunct of, or supplementary to, agriculture and commerce—was typical of much colonial manufacturing."⁷

The enterprising settlers soon found it more profitable to concentrate their energies on either the "family farm" or the "family industry."⁸

"Artificial power made household manufacturing unprofitable, driving laborers from their homes into the factories. An increased demand led to more economical means of production, and cheaper goods multiplied consumption."⁹

Both enterprises were small and inefficient, yet they supplied the consumer needs and were regarded as the highest examples of the democratic creed.

". . . democratic language and passion for social and political equality evolved mainly through the fact that at an early date in our history an expanding system of family production unit endowed most people with a common managerial role that enabled them to see and

⁵Jernegan, Marcus W. *The American Colonies, 1492-1750*. New York: Longman's, Green and Co., 1929. Chapters III, IV, IX and XIV.

⁶Johnstone, Paul H. "On the Identification of the Farmer" *Rural Sociology*. Vol. V (March 1940), p. 34.

⁷Faulkner, H. U. *American Economic History*. New York: Harper Brothers, 1960 (8th edition), p. 83.

⁸Thompson, C. M. and F. M. Jones. *The Economic Development of the United States*. New York: The MacMillan Co., 1939, p. 131 and Chapter 5. Also see Andrew, C. M. *The Colonial Period*. New York: Henry Holt & Co. 1912. Chapter IV.

⁹Shannon, Ferd W. Op cit., p. 245.

affirm in each a nobility and dignity that their immediate past had reserved for royal blood."¹⁰

II. The Residential Farming Period

This prevailing philosophy was instrumental in abating "village farming" and ushering in the period of "residential farming," running from approximately 1812 up until 1900.¹¹ As the colonial villages grew into cities, the businesses which had prospered by incorporating farm and non-farm products were forced to move either the business or the residence to the outer edges of the cities. Many moved the residence to the urban periphery and maintained the business establishment in the central city where common access was available to the largest number of customers.

The typical industrial establishment—drew in the main on the surrounding neighborhoods for its raw materials and labor supply, and on the neighborhoods for market outlets. Splendid examples were the so-called woolen mills. These mills provided part-time employment for a great many people, particularly women and girls, the general practice being to ring a large bell or to blow a whistle to notify them when needed. Thus, there grew up thousands of small plants catering, in the main, to a restricted patronage."¹²

As the size of the business grew, the family had less time and labor to keep up full production on both fronts. Usually, the farming activities were reduced until only the household food supply was produced.

Marked differences between Jefferson village and its countryside in general habits of life were slow in developing. The work of the villager was much like that of the farmer, and the workday of the man who kept a store was as long as that of the man who tilled the soil. The commercial services of the village centered in the shoemaker, the blacksmith, the carpenter, the laborer. Every man was his own gardner, butcher, and milkman."¹³

*"These were the 'subsistence homesteads' of their day. They obtained their cash requirements from city employment while they obtained the bulk of their food requirements directly from their own land."*¹⁴

"Residential farming" moved westward with the frontier and by 1860 was wide-spread from the Atlantic seacoast to the Mississippi River.¹⁵

*"In other words, all these stages of industry—the household, the domestic, the small mill or shop, and their various modifications—were contemporary in America on the eve of the Industrial Revolution. Although the United States passed from 'mother-and-daughter power to water-and-steam power' in a short period of some seventy years, almost all phases of the household and domestic stages continued during these years."*¹⁶

The forty year era from 1860 through 1900, known as the "age of the industrial revolution" in the United States, reversed the course of residential farming and changed the economic structure of the United States more than any similar time span in history.¹⁷ The Civil War forced into use many inventions already developed and accelerated the development of a technological base from which the "industrial revolution" evolved immediately after the war.¹⁸ In the short interval of forty years the United States forged ahead to become the top industrial nation in the world.

Agriculture also underwent a "revolution," less spectacular but just as important.¹⁹ The developing industries were pulling the surplus farm population into cities and two out of every five from the flood of immigrants settled in urban areas.

In 1860, eighty percent of the population was rural; by 1900 only 40 percent could be so classified.²⁰ The balance of population swung from a rural majority to a rural minority. Agriculture no longer could afford to be self-sufficient. To meet the rapidly increasing demand for food and fiber, farmers turned to the western lands. Three times as much land was brought under cultivation during this period as during the previous 200 years.²¹ Farmers also mechanized to lighten the family work load and increase efficiency as industry began to produce farm machinery in volume.²² A third factor in increasing efficiency and production was the establishment of land grant colleges in 1862 and the agricultural experiment stations in 1887, which made available scientific research specifically directed toward improving agricultural production.²³

By 1900, the American farmer had increased production to the point where he not only supplied the requirements of a population which had doubled since the Civil War, but had established an important place in

¹⁰Ibid. p. 246.

¹¹Shannon, Fred A. Op. cit. Chapter XXIV, and Faulkner, H. U. Op. cit., Chapter XX.

¹²Thompson, C. M. and F. M. Jones, Op. cit., Chapter XVIII.

¹³Faulkner, H. U. Op. cit., Chapter XIX.

¹⁴Thompson, C. M., and F. M. Jones, Op. cit., p. 262; also pp. 643-45.

¹⁵Ibid. Chapter XIV and pp. 646-53; also see McElveen, J. V. *Family Farms in a Changing Economy*. U.S.D.A. Agricultural Information Bulletin 171, Washington, D.C.: United States Department of Agriculture, March 1957, pp. 8-9.

¹⁶Shannon, Fred A. Op. cit. Chapter XX, and Thompson, C. M. and F. M. Jones. Op. cit. Chapter XIV.

¹⁷Benedict, M. R. Op. cit. pp. 83-84; and Shannon, Fred A. Op. cit., pp. 457-53.

¹⁸Brewster, J. M. "Technological Advance and the Future of the Family Farm," *Journal of Farm Economics*. VI (December 1958), p. 1598.

¹⁹Thompson, C. M. and F. M. Jones, Op. cit., Chapter XI.

²⁰Ibid. Page 206.

²¹Brunner, Edmund and Wilbur C. Hallenbeck. *American Society: Urban and Rural Patterns*. New York: Harper Brothers, 1955. p. 217. Also see Brunner, Edmund. *Village Communities*. New York: Harper & Brothers, 1927. Part II, Chapter 8.

²²Fritts, Frank, and Ralph W. Gwinn, *Fifth Avenue to Farm*. New York: Harper & Brothers, 1938, p. 111.

²³Faulkner, H. U. Op. cit. Chapter X and XI.

world trade.²⁴ These events were destined to influence the future development of part-time farming more than residential farming during the period. In fact, residential farming all but disappeared during this period of "revolution" except in those scattered rural trading centers, isolated by their very location. Moreover, there was ample opportunity for full-time employment in any field and the effort required was just that—full-time. The industrial worker was required to put in 12 to 16 hours of hard work under poor working conditions, while farm operators, depending on horses for power, found 80 acres of crops a full-time family job.

III. The Country Gentleman Period

The third period of part-time farming extended from 1900 to 1930, and was characterized by the "country gentleman farmer." "Country gentlemen" were mostly middle and upper income business and professional people, wealthy enough to afford the luxury of dividing the family labor force.

*" . . . Many well-to-do people had country places outside the city to which they repaired for at least part of the year, and of course some of them had large estates in the outskirts; but it was not until the latter years of the century (nineteenth), generally speaking, that numerous people, . . . began to remain in such places for the winter; that, contrariwise, the sons and daughters of the outlying villages began in large numbers to take city jobs to which they traveled daily; . . ."*²⁵

Many were former rural inhabitants who had "made good" in the big city but "still had a soft spot for country living."²⁶

*" . . . these businesses again addressed themselves seriously to the idea of satellite (part-time) farms. But the idea in its renewed form was for older people after they had succeeded in the struggle."*²⁷

There were many reasons for this shift from a heterogeneous group of "residential farmers" to a homogeneous group of "gentleman farmers." First, the public domain, which had provided free land to anyone who wanted it, was now largely settled. Anyone wanting to farm after 1900 had to buy the land on an inflated market.²⁸ Second, the industrial revolution had accelerated the growth of cities so that the distance from the fringe to the industrial inter-city was a prohibitive barrier—to the farmers and industrial workers who could not afford the daily trolley fares.²⁹

*" . . . for the commuters were pretty well confined to the narrow belts of land within walking distance of railroad stations, and trolley lines, except for those fortunate few who could afford a coachman to harness the horse and drive to the station, and, after the turn of the century, the growing number of those who could swing the cost of that unreliable luxury, the automobile."*³⁰

Thirdly, urban employment opportunities which had been so plentiful during the "industrial revolution" were being "rationed" by closed shop organizations:

*"For years the increasing specialization of society had been encouraging occupational groups to organize for the advancement of their interests, and now the trend was tremendously accelerated. Occupational organizations leaped up in importance,—in the controls they established over admission to the occupation, there was an element of wanting to guarantee qualified personnel—and an element of limiting (job) competition."*³¹

Fourth, the whole economy was undergoing a "boom" period which for the first time in many years included farmers:

*" . . . unlike the prosperity years of the Eighties this period's good times did not leave the farmer feeling outrageously cheated of their share. During the first decade of the twentieth century the prices of agricultural products increased almost fifty per cent while the money value of rural property doubled."*³²

Last, but not of least importance, farm leaders were joined by the commercial interests, led by the editors of the Country Gentleman magazine, in an educational campaign to free the American farmer from the "hayseed" image pinned upon him by writers and cartoonists during the industrial revolution.³³ The "new farmers" were pictured as "businessmen" of the highest caliber. Salesmen began to advertise their products as "invaluable" to the "modern-business farmer."³⁴ Moreover, the writers began a sentimentalized and romantic portrayal of the rural way of life, "comparable to the inditing of Arcadian romances by courtiers in velvet and lace." A 1925 writer described "an actual picture, easily duplicated in every rural community in America."

"Fresh abundant air and night coolness beget early rising; the family are astir, breakfast is out of the way, and the members are scattered before eight o'clock. Even the schoolchildren are gone and madame is taking the

²⁴Thompson, C. M. and F. M. Jones. Op. cit., Chapters XXII, XXVI and pp. 674-77.

²⁵Allen, Frederick L. "The Big Change in Suburbia," *Harper's Magazine*. Vol. 208, (Part 1, June 1964), p. 24.

²⁶Thompson, C. M. and F. M. Jones. Op. cit., Chapter XXVIII.

²⁷Fritts, Frank, and Ralph W. Gwinn. Op. cit., p. 112.

²⁸Benedict, M. R., Op. cit., p. 112.

²⁹Mumford, Louis. Op. cit., p. 211.

³⁰Allen, Frederick L. Op. cit., p. 24.

³¹Goldman, Eric F. *Rendezvous with Destiny*. New York: Vintage Books, Inc. 1959, p. 227.

³²Ibid., p. 55; also see Benedict, M. R. Op. cit. pp. 114-115.

³³Johnstone, Paul H. "On the Identification of the Farmer", *Rural Sociology*, Vol. V (March, 1940)p. 39; also see Allen, J. P. "What a Farmer Really Looks Like," *Country Gentleman*, Vol. LXXXVI (September 10, 1921), p. 7.

³⁴Ibid., p. 40.

table scraps along a garden path to her favorite hen-flock. Presently, returning with the dish half full of morning eggs, she pauses beside the lettuce, or strawberries, or the sweet-pea row. . . . Two hours later, with beds made, the dusting done, and baking and dinner started, there are yet two hours for rest or special tasks, that the afternoon may be free. It will be warm then. Neighbors will call, perhaps receiving some surplus beets or cherries."³⁵

Farming was now a profitable occupation and farmers had no desire to shift to part-time work. However, few could have afforded part-time farming if they so desired because the previous era of low farm incomes had left many heavily in debt. To take full advantage of the rising farm prices, many borrowed still more at high interest rates (10-20%) to invest in more land and machinery.³⁶

The country gentleman stood unchallenged during this era of part-time farming. In fact, the businessman who owned a small, well-improved farm on the outskirts of the city was considered to have reached the pinnacle of success.

" . . . these powerful leaders, . . . are making an indirect contribution to American civilization of great significance, when they, . . . find joy and satisfaction in building monuments to American farming. They are engaged in reasserting the dignity of farm ownership in America. They lend some of their own distinction to farm activities. They are re-establishing in America the farm way of life as a high pattern of civilized living."³⁷

The "country gentleman" became a social ideal, and the outer city fringes became a network of "country estates."

" . . . could the owners of these houses have better expressed their wish to get away, by night, from the ugliness of the commercial world that supported them by day, and to recapture the gracious ways of living that they associated with English Country houses, or European estates, or the mansions of an earlier, supposedly unspoiled, America? . . . wasn't it part of his dream that he was founding an estate that would go down from generation to generation without very much changing in the surroundings?"³⁸

During the latter part of the twenties the stage was being set for the next era of part-time farming. Farm prices had continued to rise up to 1919, and then begun a sharp drop, throwing the farm economy into a tailspin from which it has never recovered except in time of war. (Figure 1)

"In 1919 a bushel of corn bought five gallons of gasoline; a year later it bought one gallon; one year more and it bought half a gallon."³⁹

With the farm price drop, many farm families facing bankruptcy headed for the prosperous cities. Tenant farming, which had been rising since the Civil War, shot to an all-time high of 42.4 percent by 1930.⁴⁰ The Great Depression began for the United States economy on October 29, 1929, but for the farm segment the depression was already ten years old.⁴¹

IV. The Subsistence Farming Period

The stock market crash rang down the curtain on the period of country gentlemen farmers with a heretofore unknown swiftness, and introduced the "subsistence farming" period (1930-45). Prior to 1929, financially depressed farmers began to move into the fringe areas, setting up Jerry-built "homesteads" between the country estates. Here they could maintain a small acreage for the family food supply, and still take advantage of non-farm work opportunities. Their position was enhanced by the improvement in the automobile and hard surface roads which opened large areas of previously inaccessible land to semi-urban "homesteaders."

"This 'Metropolitan invasion' soon brought the establishment of 'hot dog' stands, filling stations, garages, stores, taverns, as well as the residences of laboring people and part-time farmers. Farmers and others found it profitable to sell from wayside stands, build tourist cabins, advertise rooms or start a soft drink stand."⁴²

When the entire economy went into a tailspin, the centrifugal pull of the urban centers was promptly transformed into a centripetal push, forcing thousands of unemployed workers to seek the open country "where they could at least subsist."⁴³ The "country gentleman farmers" quickly vanished in the outrushing tide of "subsistence farmers."

The extent of the depression in 1932 had pushed the American economy to the brink of collapse; farm prices were at an all time low and the number of unemployed had mounted to over 12 million. Franklin Roosevelt, upon entering office in 1933, set in motion many programs designed to bolster the sagging economy.⁴⁴ Most of these

³⁵Goldman, E. F. Op. cit., p. 222.

⁴⁰Thompson, C. M. and F. M. Jones. Op. cit., pp. 714-719; also U.S. Census of Agriculture, 1959. Volume II, Chapter X, p. 1013.

⁴¹Faulkner, H. U. Op. cit., pp. 625-30; and Shannon, Fred A. Op. cit., Chapter XXXIII.

⁴²MacKaye, Benton. *The New Exploration*, New York: Harcourt, Brace and Co. 1928; also see Allen, Frederick L. *The Big Change: America Transforms Itself. 1900-1950*. New York: Harper and Brothers. 1952.

⁴³Colby, Charles. "Centrifugal and Centripetal Forces in Urban Geography" in *Readings in Urban Geography*, edited by Mayer, H. M. and Clyde F. Kohn. Chicago: University of Chicago Press. 1959.

⁴⁴Faulkner, H. U. Op. cit., Chapter XXX; and Thompson, C. M. and F. M. Jones. Op. cit., Chapters XXXV and XXXVI.

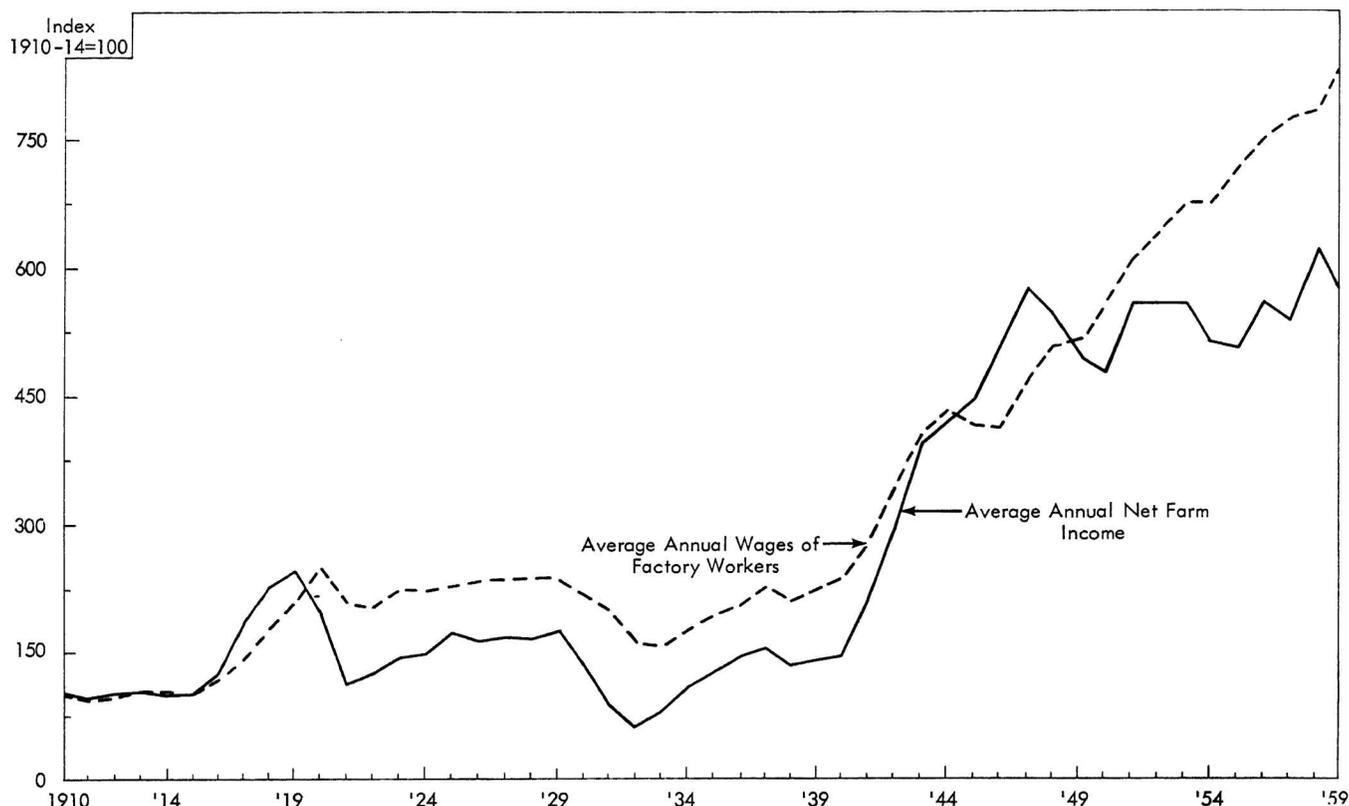
³⁵Ibid., p. 43 as quoted from Kelsey, David Stone. *Kelsey's Rural Guide*. Boston: Little & Co. 1925, pp. 50-51.

³⁶Benedict, M. R. Op. cit., pp. 165-71.

³⁷Fritts, Frank, and Ralph W. Gwinn, Op. cit., p. 113.

³⁸Allen, Frederick L. Op. cit., p. 25.

FIG. 1—AVERAGE ANNUAL TRENDS IN FACTORY WORKER WAGES AND NET FARM INCOME 1910-59



"New Deal" programs were federally administered and initiated direct government control over a wide range of activities including "subsistence homesteads." Section 208 of the National Industrial Recovery Act created the Division of Subsistence Homesteads under the Department of the Interior with the objective— "to provide for aiding the redistribution of the overbalance of population in industrial centers—."⁴⁵ Later the Rural Rehabilitation Division emerged as a part of the Federal Emergency Relief Administration and the subsistence homestead program was transferred to the Resettlement Administration, closely associated with the Department of Agriculture. The Resettlement Administration was quick to announce its primary objectives:

" . . . to build communities or neighborhoods in the penumbrae of industrial centers, supply homes and small acreages to those selected to become residents in these communities and select homesteaders who would receive their cash incomes from non-farming occupations and as much as possible of the subsistence income from home-produced products."⁴⁶

⁴⁵Taylor, C. C. "Social and Economic Significance of the Homesteads Program—From the Viewpoint of a Sociologist", *Journal of Farm Economics*, Vol. XV II (November 1935), p. 727.

⁴⁶*Ibid.*, p. 728.

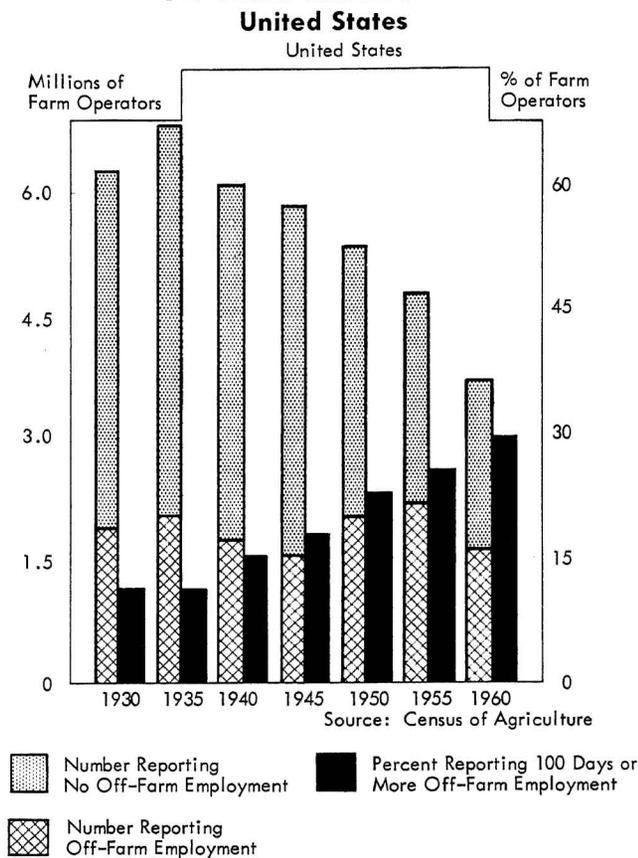
To formulate sound policies and set up reasonable guide lines for administering this "back-to-the-land-movement" a series of studies were initiated. Since the emphasis on a subsistence farm, most studies excluded tracts larger than 20 acres. The average size farm in these studies ranged from 4 to 12 acres, with 5 acres the usual size recommended for a "subsistence homestead."⁴⁷ The Supreme Court in May, 1935, invalidated the N.R.A. before any of these programs were activated, but the concept embracing a part-time farm as a small, low-income unit was firmly established.

As the depression deepened the number of farms, which had been declining up until 1930, increased 7.7 percent by 1935. Yet, in spite of the scarcity of jobs, the proportionate number of farmers reporting off-farm work 100 days or more fell only 0.3 percent.⁴⁸ (Figure 2). The federal government provided many of the "homesteaders" with work through the Civilian Conservation Corps (CCC) and the Works Progress Administration (WPA).

⁴⁷Diehl, L. F. and L. A. Salter, Jr. "Part-time Farming Research," *Journal of Farm Economics*, Vol. XXII (August, 1940) p. 581-600; also see Zeuch, W. E. *Op. cit.*, p. 711.

⁴⁸For the purpose of this introduction, farmers reporting 100 days or more off-farm work will be used to indicate the number of part-time farms since this is the only data available which has any continuity over any length of time. See the appendix for discussion of the study definition of a part-time farm.

FIG. 2—NUMBER AND PERCENTAGE FIGURES FOR OFF-FARM EMPLOYMENT



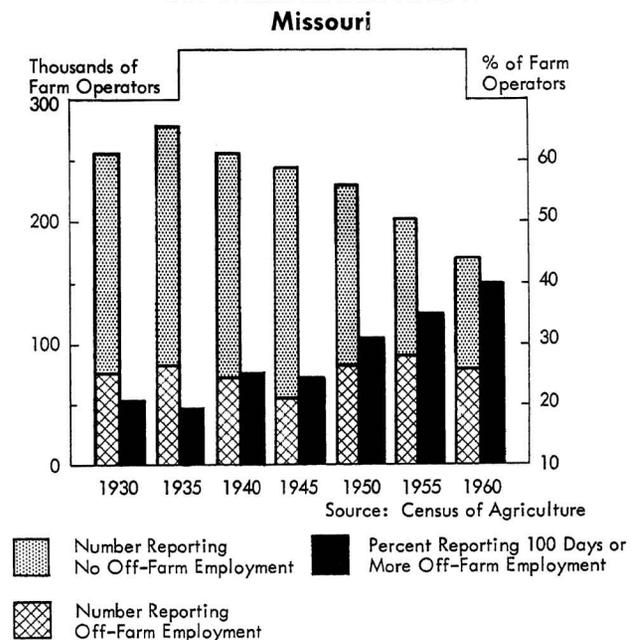
The Agricultural Adjustment Act, the government program aimed directly at improving farm income, sought to control production of certain staple crops by offering governmental subsidies for crops not planted.⁴⁹ Although this act also was declared unconstitutional, it set the stage for future governmental controls on agricultural production. Small farm operators, which included the majority of part-time farmers, were not in position to benefit from many of these programs.⁵⁰ If the small farm operator could not make a living on his farm and could not quit and move to urban employment, subsistence farming was his only alternative.

Several factors combined to reduce (1.8%) the proportion of farm operators reporting off-farm work and to increase (4.3%) the proportion working off-farm 100 days or more between 1935 and 1940: Number one, the economy was gaining in the struggle to achieve full employment, and many of the former urban residents moved back to the cities.⁵¹ Number two, labor unions had shortened the work week, allowing those subsistence farmers

⁴⁹Thompson, C. M. and F. M. Jones. Op. cit., p. 502 and pp. 763-65.
⁵⁰Goldman, E.F. Op. cit., p. 271.
⁵¹McElveen, J. V. Op. cit., p. 10.

who chose to remain on rural acreages more time to expand their farm operations.⁵² Number three, lighter industries such as textiles and shoes were beginning a slow decentralization, moving to smaller cities and villages.⁵³ This movement made off-farm employment available to large numbers of rural residents heretofore by-passed in part-time farm development. Number four, continued improvement in public transportation and communication facilities, aided by Public Works Administration (PWA) funds and labor, extended the distance a part-time farmer could communicate between farm and non-farm work.⁵⁴ Subsistence farming was beginning to give way to modern part-time farming.

FIG. 3—NUMBER AND PERCENTAGE FIGURES FOR OFF-FARM EMPLOYMENT



However, World War II intervened and the development of the part-time farm was virtually stopped. The all-out war effort mobilized the economy and, with the scarcity of labor, a full-time effort was required to meet war-time production goals. By 1945, the number of farm operators reporting off-farm work dropped 10 percent but the number of farmers working off the farm more than 100 days increased 12 percent over the 1940 count. A large part of this increase reflects the enlarged opportunity for non-farm employment not available to potential part-time farmers in 1940.⁵⁵ The year 1945 marked the end of World War II—and the period of the “subsistence farm.”

⁵²Benedict, M. R. Op. cit., pp. 367-69.
⁵³Reeder, Leo O. “Industrial Decentralization as a Factor in Rural-Urban Fringe Development,” *Land Economics*, Vol. XXXI (August 1955), pp. 275-80; and Taylor, C. C., Op. cit., p. 724.
⁵⁴McElveen, J. V. Op. cit., pp. 17-22.
⁵⁵Ibid. pp. 30-31.

Development of the Modern Part-time Farm

The fifth and final development period involves the movement of the part-time farm to the open country in the wake of a "technological revolution." It was a period in which agriculture underwent profound reorganization and adjustment. The movement of part-time farming from the urban fringe to the agricultural hinterland, in retrospect, was an outgrowth of the commercialization of the family farm.⁵⁶ In order to fully understand the trend in part-time farm adjustment it is essential that one first understand the adjustments leading to, and necessitated by, commercial agriculture.

World War II, influenced, as did all previous major wars, the direction of post-war agricultural adjustment. To be sure, many adjustments were in the making before World War II, but a depressed economy has never been very progressive. Dr. G. F. Warren's famous generalization characterizing the agricultural adjustments of the 20's and 30's as "made largely by the sheriff and the undertaker" was largely true.⁵⁷ Farm incomes were so low that many farmers had been able to live and operate only by depreciating accumulated capital investments.

Thus when the United States entered the war, an economically depressed rural economy was challenged to meet enormously expanded military and civilian needs. To induce as much production as possible, and counter fears of another post-war price collapse, the government embarked on an expanded price support program.⁵⁸ More commodities were supported at higher levels than at any time during the 30's.

The Steagall amendment of 1941 and the Stabilization Act of 1942 both were designed to assure farmers that if they expanded output, they would be protected from the consequences of over-production (falling prices) for at least two years after the war.⁵⁹ Farmers responded to these "guaranteed minimum prices" by substituting the more costly, but efficient, industrially manufactured inputs for the cheaper, but less efficient, farm-produced inputs. (Tractors for horses, fertilizer for manure, machinery for labor, etc.) War-time rationing held down the magnitude of these adjustments, yet, by 1945, farm production had increased by 25 percent over 1941 output and gross farm income rose 44 percent during the same period.⁶⁰

When hostilities ended in 1945 industry quickly shifted production from war materials to consumer goods

and products. The demand for these new products was high and a rising farm income made the demand effective. The "technological revolution" began with a running start.

The massive post-war need for food and fiber in the rehabilitation of Europe and Asia, supplied by United States foreign-aid and lend-lease programs, kept pace with the increasing productive capacity of agriculture throughout 1948.⁶¹ However, by 1949, the war-devastated agriculture of Western Europe and Southeast Asia had recovered enough to be self-sufficient and effective demand for agricultural products fell off sharply. Farm income began to dip downward, but with the advent of the Korean War demand increased and farm income again turned upward, reaching a record high in 1951.⁶² The amplified demand of the Korean War proved to be short-run and by 1953 surplus farm commodities were accumulating at an alarming rate.

In 1954 the Federal government sought measures to counter the surplus problem and sagging farm income. President Eisenhower and Secretary of Agriculture Benson recommended a "flexible" price support program which would permit a gradual adjustment to new circumstances and conditions. Under this program incomes were to be stabilized by supporting the prices of certain basic crops grown within the limits of acreage allotments and marketing quotas.

Within a short time the accelerating "technological revolution" allowed farmers to increase production on the allotted acreage, nullifying the key element of the program. CCC inventories which stood at \$6 billion in 1954 were up to \$9.2 billion by April 1960.⁶³ Agriculture has been able to adjust production upward in response to increased demand but has not been able to adjust production downward when consumer demand slacks off. The result has been, even with price support programs, a growing discrepancy between farm and non-farm incomes.

More is involved in the present "income problem" in agriculture than price policies alone, yet these price programs, originally designed to increase production, triggered a "technological revolution" from which the farmer has not been able to escape. To compete in modern commercialized agriculture farmers have had to purchase an increasing amount of their inputs. More technology has meant more capital investments in the farm business and a higher proportion of fixed costs.

⁵⁶Nelson, Lowry. Rural Life in a Mass-Industrial Society," *Rural Sociology*. Vol. XXII (March 1957) pp. 20-30.

⁵⁷Pond, George A. "Discussion of the Income and Resource Problem," by Earl O. Heady and Joseph Ackerman in *Agricultural Adjustment Problems in a Growing Economy*, edited by E. O. Heady, H. A. Dressling, H. R. Jensen, and G. L. Johnson; Ames: The Iowa State College Press, 1958, p.19.

⁵⁸Benedict, M. R. Op. cit., Chapter 16 and 17.

⁵⁹Ibid. p. 415.

⁶⁰McElveen, J. V. Op. cit., pp. 22-23.

⁶¹Benedict, M. R. Op. cit., Chapter 18.

⁶²Johnson, Sherman E. and Kenneth L. Bachman, "Recent Changes in Resource Use and in Farm Incomes" in *Problems and Policies of American Agriculture*, Ames: Iowa State University Press. 1960, pp. 9-27.

⁶³Commodity Credit Corporation. United States Department of Agriculture, *Report of Financial Conditions and Operations as of January, 1954*. Commodity Stabilization Service, January 1954 and March 31, 1960.

Numerous studies have shown that an industry such as General Motors, which is characterized by a high percentage of variable costs, can adjust its production rapidly upward or downward to changes in demand as they affect the profitability of the business. On the other hand an industry such as agriculture, which has a high proportion of fixed costs, is forced to maintain production, because the high fixed charges have to be met and everything made above variable costs can be applied toward these fixed costs.

By increasing the use of power and machinery, fertilizers, biological supplies, petroleum products, and many other manufactured inputs farmers have more and more tightly bound their production costs to the industrial economy.⁶⁴ These increased cash outlays, coupled with inflationary price increases, have played a major role in generating the cost-price squeeze in Agriculture.

As Dale E. Hathaway has pointed out, "In each of the post World War II expansions, the rate of increase in prices paid and production expenses exceeded that for prices received and gross income, whereas prior to World War II the opposite held for every expansion. Non-farm produced items make up an increasing proportion of production expenses in recent years, and their prices rise during periods of expansion. As a result of this greater dependence of farmers upon such non-farm produced items in the future relatively moderate periods of business expansion may inflate farmers' costs, more rapidly than either farm prices or income."⁶⁵

The spiralling cost of operating the family farm is reflected in the increasing percentage of gross farm income required for farm operations. In 1945 production expenses accounted for 54 cents out of every dollar received by farm operators; by 1954 production costs took 63 cents out of every dollar; and by 1959, 70 cents out of every dollar went for operating expenses.⁶⁵ Thus the technological revolution has placed the farm operator in the position of selling his out-put at a stabilized price, based on governmental support programs, and then buying his production inputs at a flexible price, based on their rising production costs. The result has been a 21 percent decrease in net farm income since 1945.

The picture becomes even darker if we add to this decreasing net income the rising cash cost of farm family living. Farmers have long sought to improve their living

standards by demanding an "income parity," defined in the Agricultural Act of 1948 as:

*" . . . that gross income from agriculture which will provide the farm operator and his family with a standard of living equivalent to those afforded persons dependent upon other gainful occupations."*⁶⁶

When farm incomes rose in the late forties and early fifties, farmers could, for the first time in many years, afford to make adjustments in their living standards. Refrigerators, washing machines, kitchen ranges, electric lights, TV sets, all became commonplace in the farm home. Central heating running water, bathroom facilities, all added to the comforts of the rural residence. Improved housing, better transportation and communication facilities, more educational opportunities, and expanded medical services all helped to urbanize the open country.

The "technological revolution" brought the farm family a higher standard of living through the widespread adoption of non-farm produced consumer goods and services. But it also boosted the index of prices paid by farmers for family living items from 75 in 1945 to 118 in 1959, a 36 percent increase.⁶⁷ Here, then, are the two basic elements of the farmers' "income problem": a shrinking net income and a rising cost of living. (Figure 3).

ALTERNATIVES

It is very evident that if the "income problem" of commercial agriculture is to be "solved" the internal structure of agriculture must undergo a major readjustment. Discussion of the two most frequently mentioned alternatives follow.

Reduce Number of Farmers

The simplest and most often suggested readjustment calls for large numbers of farm operators to "quit the agricultural treadmill" and move to non-farm employment.⁶⁸ Farmers have, in fact been moving out of agriculture at the average annual rate of 125,000 per year since 1935, but the reduction needed to bring agricultural production (supply) into equilibrium with effective demand, would require nothing less than a mass exodus from agriculture.

⁶⁴McElveen, J. V. Op. cit., p. 63; also see Kaldor, Don. "Adjusting Resource Organization and Allocation," in *Problems and Policies of American Agriculture*. Ames: Iowa State University Press. 1960. pp. 322-337.

*Hathaway, Dale E. "Agriculture and the Business Cycle;" *Policy for Commercial Agriculture*; Joint Committee Print; 85th Congress, Nov., 1957.

⁶⁵United States Department of Agriculture, Agricultural Marketing Service, *The Farm Income Situation* (July 1960) p. 40, Table 9H.

⁶⁶Benedict, M. R. Op. cit., p. 476.

⁶⁷USDA Market Service, *The Farm Income Situation*, (July 1960), p. 41, Table 10H.

⁶⁸Aull, George H. "Distinctive Problems of Agriculture in Adjusting to Economic Growth and Development," in *Policy for Commercial Agriculture*, Joint Economic Committee, 1st Session, 85th Congress, November 1957, pp. 38-41; also see Baker, C. B. and H. G. Halcrow "Problems in Agricultural Reorganization" in *Problems and Policies of American Agriculture*, Ames:: Iowa State University Press, 1960, Chapter 7.

There are several weaknesses behind this alternative. Number one, the decision as to who should leave would have to be, under democratic system, the free choice of the individual operator, and many farmers simply do not want to leave the farm.⁶⁹ Rural family and community ties are much stronger than those of urban residents, often extending through three or four generations. Numerous farm families are unwilling to break these social ties and forsake the family farm, which may represent years of work and savings, for a better paying urban job.

Number two, a large percentage of the low-income farmers who operate small, inefficient farms are the least willing to leave agriculture, and the most ill-trained for urban employment if they were willing to migrate. Agriculture can no more solve its "income problem" by transferring thousands of farm families to the industrial cities than could the depressed industrial cities of the 30's solve their surplus labor problems by transferring thousands of workers to the country via the "subsistence farm" program.

Enlarge Operations

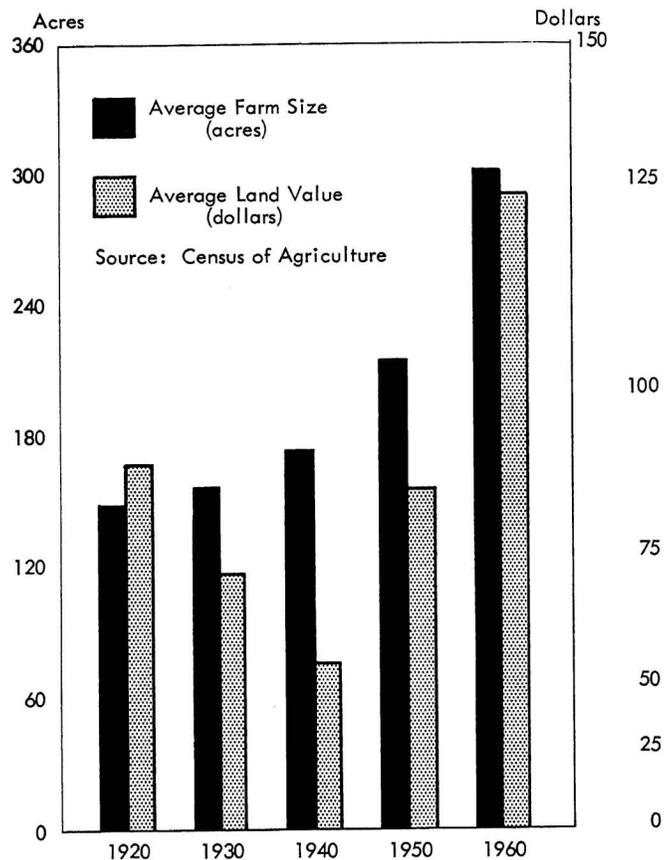
For those farm operators who chose to remain in agriculture, the most logical alternative readjustment would be to enlarge their farming operations to take advantage of scale economies.⁷⁰ High capital investment in machinery and equipment has made it easier to handle larger acreages with the same family labor supply than was formerly possible. This means that the marginal costs of operating the larger acreage would be lower and the farm operator could then spread his high fixed costs over a larger volume of production.

The proportion of farmland purchases made for farm enlargements has been increasing since the early 40's. In 1950, 24 percent of farm sales were for farm expansions: the proportion increased to 33 percent by 1956 and stood at 45 percent in 1960.⁷¹ One result of this commercialization process can be seen in the rapid rise in farm size (Figure 4). The U.S. average size of farms in 1959 was 302.4 acres, in contrast with 194.8 acres in 1945.⁷²

Another result has been the steady increase in the price of farm land as farmers bid for expansion units. The average value of land and buildings per farm is now 2½ times the average for 1950 and 6 times the average for 1940.⁷³

FIG. 4—TRENDS IN U.S. FARM SIZES AND LAND VALUES

Land Value Was Dropping While Farm Size Was Increasing Through 1930s; Then Began to Climb Until, Recently, the Land Value Has Been Climbing More Rapidly Than the Size of Farms.



With advancing land prices setting new highs each year, the small and medium sized farmers—those with a limited credit base—have found it more and more difficult to finance farm expansion and the resulting increase in total production costs. Even if the small farmer could secure the necessary financing for farm enlargement the climbing interest rates, coupled with a declining net farm income make the venture highly questionable, especially to the traditionally conservative farmers.⁷⁴

Large numbers (809,600 in 1969) of farm operators who are not able, or not willing, to purchase additional acreages are enlarging their operations by renting additional land.⁷⁵ The number of farm operators renting additional land has doubled since 1900. Again, the larger

⁶⁹Ibid. p. 39; also see Miller, Paul A. "Social, Economic, and Political Values of Farm People" in *Problems and Policies of American Agriculture*. Ames: Iowa State University Press, 1960, Chapter 6.

⁷⁰Ibid. p. 139.

⁷¹Agricultural Research Service, U. S. Department of Agriculture. *Current Developments in the Farm Real Estate Market*, (July 1951, p. 5) (May 1958, p. 21) and (October 1961, p. 10).

⁷²"1954-1959: Years of Change for U. S. Agriculture", *Better Farming Methods* (March 1961), p. 8, Table 2.

⁷³Ibid., p. 9, Table 8 and p. 20.

⁷⁴Average Federal Land Bank loan rates have increased 24 per cent and Federal Intermediate Credit Bank discounts have advanced 51 per cent since 1955. USDA, *Agricultural Statistics 1960*, p. 503, Tables 706 and 707.

⁷⁵*Better Farming Methods*. Op. cit., p. 20.

and better financed operators can, and do, bid higher for the more productive land available for rent, leaving the smaller operators, who can ill-afford high rental charges, the rougher, less productive land.

Specialize

If the operators of small to medium-sized farms want to remain in commercial agriculture, and cannot expand their farm units, they have only one other major alternative—some form of specialization. The switch to a specialized operation involves the reorganization of the farm resources so that all efforts are directed toward the production of one specific product. Through intensive use of special technical inputs the operator can approach maximum efficiency in the production process, thereby increasing the marginal productivity of all the inputs. Specialization is progressing rapidly in all phases of food and fiber production. In the five-year period 1954-59 farms having milk cows declined 39 percent, yet dairy farms having 50 cows or more increased 41 percent.⁷⁶ Number of farms with commercial poultry flocks dropped 37 percent, but farms having 3,200 or more hens increased 125 percent.⁷⁷ The cost-price squeeze and specialization has ultimately lead to widespread integration practices in such fields as broiler and turkey production.

In a specialized farm enterprise, the "details" of a diversified operation become extremely important and management ability oftentimes evolves as a limiting factor. Also, most specialized enterprises are very competitive, forcing farmers to operate within a very narrow profit margin. Therefore the farmer who specializes "places all his eggs in one basket," so to speak, and can be bankrupted by a sharp price drop or a sudden disease epidemic. Distance to market and processing plants may present a location disadvantage to specialization. If extra handling and transportation charges must be added to production costs, specialization loses much of its advantage. Lastly, the extremely high investment in specialized equipment (i.e., an investment which cannot easily be shifted to other uses) precludes many low income farmers from making such an adjustment.

THE ROLE OF PART-TIME FARMING IN AGRICULTURAL ADJUSTMENTS

The foregoing critique of post-war adjustments resulting from the "technological revolution" and the consequent readjustments necessitated by commercialized agriculture has set the stage for a clearer appraisal of the part-time farm's role in agricultural reorganization.

There are a multitude of reasons for the continued rise in part-time farming during the late 40's and early

50's. Thousands of GI veterans returned to find the initial investment necessary to "get a start" in farming prohibitive.⁷⁸ The government recognized this fact and made available low interest loans for those who wanted to engage in farming. Many veterans took advantage of this opportunity and purchased 40 to 120 acre farms. To help familiarize the veterans with new farming techniques and skills vocational on-the-job training schools were organized with the participants being subsidized for regular attendance.⁷⁹

This was important for three reasons. First, the subsidizing helped young farmers become established by providing operating and living capital during their beginning years. Second, it helped motivate the rapid adoption of modern farming technology which lead to commercialized agriculture. Third, it provided the participants with a wide range of skills which many utilized in transferring directly out of agriculture when farm income began to fall. Others merely switched to an extensive farm organization and took up part-time farming.

Other significant events contributed to the part-time farming trend. Farm wives, who had taken up the slack during the war-time labor shortage, were now accepted in all lines of employment. Many continued to work at off-farm jobs making the part-time operation a true "family occupation."⁸⁰ The slow decentralization of light industry, which had stopped during World War II, was resumed with medium and even some heavy industries "joining the move to the outer cities."⁸¹ Small processing plants and marketing cooperatives began to spring up in numerous rural towns. Time-saving techniques had transformed agricultural operations, allowing small farm operators to accept full-time employment and still perform the necessary farm tasks. By 1950, the proportion of farmers engaged in nonfarm work was up to 45 percent and 77 percent of these worked off the farm 100 days or more.

Since 1951, part-time farm development has been more closely intertwined with the developments in commercial agriculture.⁸² A multiplicity of involved relationships between agriculture, industry, government, and individual interests has complicated the development process. Even the participants within part-time farming view the development differently, depending upon the circumstances underlying their entry into the trend.

⁷⁶McElveen, J. V. Op. cit., pp. 28-30.

⁷⁹Ibid., pp. 28-30.

⁸⁰Blood, Robert O., Jr. and Robert Hamblin. "The Effects of Wife's Employment on Family Power Structure," *Social Forces*. Vol. 36, (1958), p. 351.

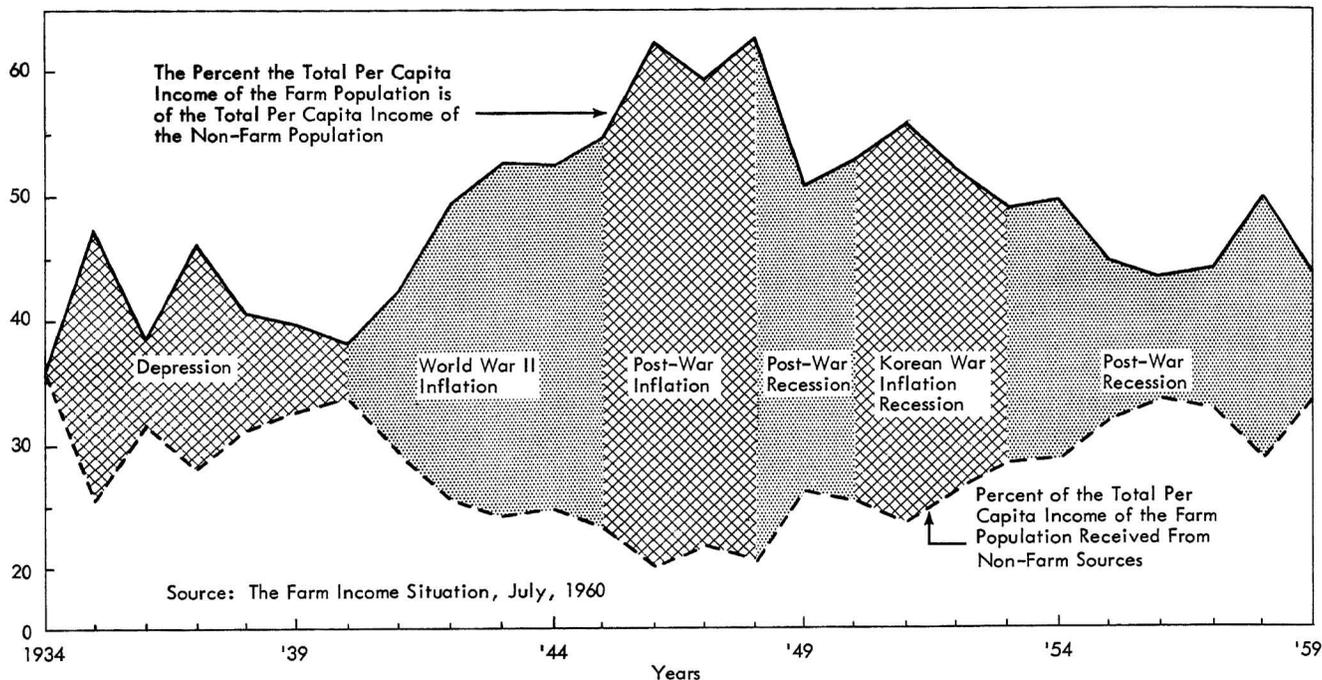
⁸¹Allen, Frederick L. Op. cit. Part I; and Ruttan, Vernon W. "The Potential in Rural Industrialization and Local Economic Development" in *Agricultural Adjustment Problems in a Growing Economy*. Edited by E. O. Heady, H. G. Diesslin, H. R. Jensen, and G. L. Johnson. Ames: Iowa State College Press. 1958. Chapter 12.

⁸²McElveen, J. V. Op. cit., pp. 31-35; and Nelson, Lowry. Op. cit.

⁷⁶Ibid. p. 20-21.

⁷⁷Ibid. p. 20-21.

FIG. 5—THE INVERSE RELATIONSHIP BETWEEN FARMERS' SHARE OF THE NET NATIONAL INCOME AND THEIR DEPENDENCE UPON NON-FARM INCOME



To the thousands of smaller (40-80 acres) farm operators about to be forced out of agriculture by the "technological revolution," part-time farming is a "last foothold." Through the part-time farm they can provide their families with a more respectable level of living and still maintain their social and cultural ties in the home community. This is especially true for the ill-trained farmer of the low income group who, if forced from agriculture undoubtedly would become another "statistic" on the growing list of "hard core" urban unemployed.⁸³

For those who decide to leave agriculture, part-time farming provides a means of gradual transition from rural to urban employment. During the transmigration interval, the farm provides security against "temporary layoffs" while the operator is gaining experience and seniority in his non-farm occupation. Such a gradual transitional period also allows time to make new friends and acquaintances before moving to urban area, thereby making the change-over less disrupting.⁸⁴

For the hundreds of farm operators who must enlarge their farm businesses; for the young farmers who

must "start from scratch;" or for those who desire to specialize, part-time farming may serve as a "spring board" into commercialized agriculture.⁸⁵ The non-farm earnings, by primarily providing the cash for family living, release farm earnings for reinvestment in the farm business and/or to liquidate high interest debts. In fact, with the persistent decline in net farm income, part of the non-farm earnings often are required to support the farming operations in adverse years. Figure 5 dramatizes the inverse relationship between net farm earnings and off-farm income: high farm income minimizes the need for off-farm earnings while low net farm income inflates the importance of non-farm earnings. This means that during the readjustment period, farmers may turn to part-time farming as sort of "disaster insurance." This is particularly true of specialized and/or seasonal operations (cash grain, livestock feeding, etc.).

Finally, there are those business and professional people who, desirous of the serenity and satisfaction of country living, purchase farms and practice "evening" or "weekend" farming. This is the type of part-time farms on which the majority of researchers and policy makers have concentrated their activities and based their recommendations. These farms, equivalent in nature but larger in size, resemble their former counter-parts—the "resi-

⁸³Tarver, James D. *A Study of Rural Manpower in Southeastern Oklahoma*, Agricultural Experiment Station Technical Bulletin T-56. Stillwater: Oklahoma State University, 1955; and Beers, Howard, and Catherine Heflin. "The Urban Status of Rural Migrants," *Social Forces* Vol. 23 (February 1944) p. 36.

⁸⁴Freedman, Ronald, and Deborah Freedman, "Farm-reared Elements in the Non-farm Population," *Rural Sociology*. Vol. 21 (January 1956), pp. 50-51; and Heflin, Catherine, and Howard Beers. "Urban Adjustment of Rural Migrants," Agricultural Experiment Station Bulletin 487. Lexington: University of Kentucky. 1946, pp. 28-29.

⁸⁵Moore, H. R. and Wayt. *The Part-time Route to Full-time Farming*. Agricultural Experiment Station Research Bulletin 793. Wooster: Ohio Agricultural Experiment Station, September 1937.

dential" and "country gentlemen farms." In fact, many researchers feel that these farms might more realistically be called residential farms in light of modern agriculture. To these people, the farming operations usually are extensive and of secondary importance to the non-farm job. Even so, they contribute to the total aggregate production of agricultural products and are, in their small way, a part of the composite agricultural picture.

These then, by and large, are the diverse and often-time complex motives behind the development of the modern part-time farm. This heterogeneous group of part-time farm operators in 1959 controlled nearly one-third of all farm units in the United States. Undoubtedly if a more precise enumeration of part-time farming units were available it would show a greater predominance of part-time farms.

Unfortunately, census data do not adequately represent the full extent of part-time farming.

ADJUSTMENTS BETWEEN AGRICULTURE AND INDUSTRY

Part-time farming, throughout the five development periods, has been an outgrowth of the adjustment and reorganization within and between agriculture and industry. It stands on the mid-ground between these two major productive segments, and, over the years, has served the interests of both. However, the present spread of part-time farming throughout rural America has placed the adjustment problems of part-time farmers on agriculture's doorstep. Until the present time, neither agriculture nor industry has accepted the responsibility for these problems, let alone seeking solutions for them.

Both sides have preferred to ignore these challenges hoping that they either would solve themselves or subside. In reality, the problems of adjustment have not solved themselves. There are several indications that the number of part-time farmers will increase, intensifying the magnitude of their adjustment difficulties:

First, the continued commercialization of agricultural production is persistently pushing the smaller and less efficient farm operators out of agriculture or into part-time farming.

Second, the increasing decentralization of all types of industry—now encouraged by the federal government for defense reasons—is providing enhanced off-farm employment opportunities for all farm operators and their families.

Third, the Rural Redevelopment program, jointly sponsored by federal, local, and industrial leadership, directly encourages part-time farming in low income areas.

Fourth, the automation of industry has made it necessary for workers to possess greater skill and more education in order to obtain employment in industry. This process may greatly hinder rural people in seeking non-farm jobs unless their training is maintained at an equivalent level.

Regardless of whether the trend toward part-time farming stabilizes at the present level or continues its slow upward trend, farm leaders and educators need a broad understanding of the sociological and economic adjustment problems faced by part-time farmers. Until the problems are identified, they cannot hope to formulate more effective programs directed toward solving the problems of the modern part-time farm.

PURPOSE AND DESCRIPTION OF STUDY

The primary purpose of this study was to gain a better understanding of the nature of part-time farming operations and problems associated with the organization and operation of such units.

The farm units included in this analysis are located in a two-township area of Cooper County. These townships, Blackwater and Lamine, are quite typical of completely rural areas in central and north Missouri. Figure 6 shows the location of the area in which a long-range study of family farm adjustments is in progress. The 49 farms in this study represent those which classified as part-time operations in the over-all study of 220 farm units.

A more detailed description of the study area and of the objectives and methodology are included in the Appendix. The next few chapters summarize the results of the analysis and the conclusions derived from them.

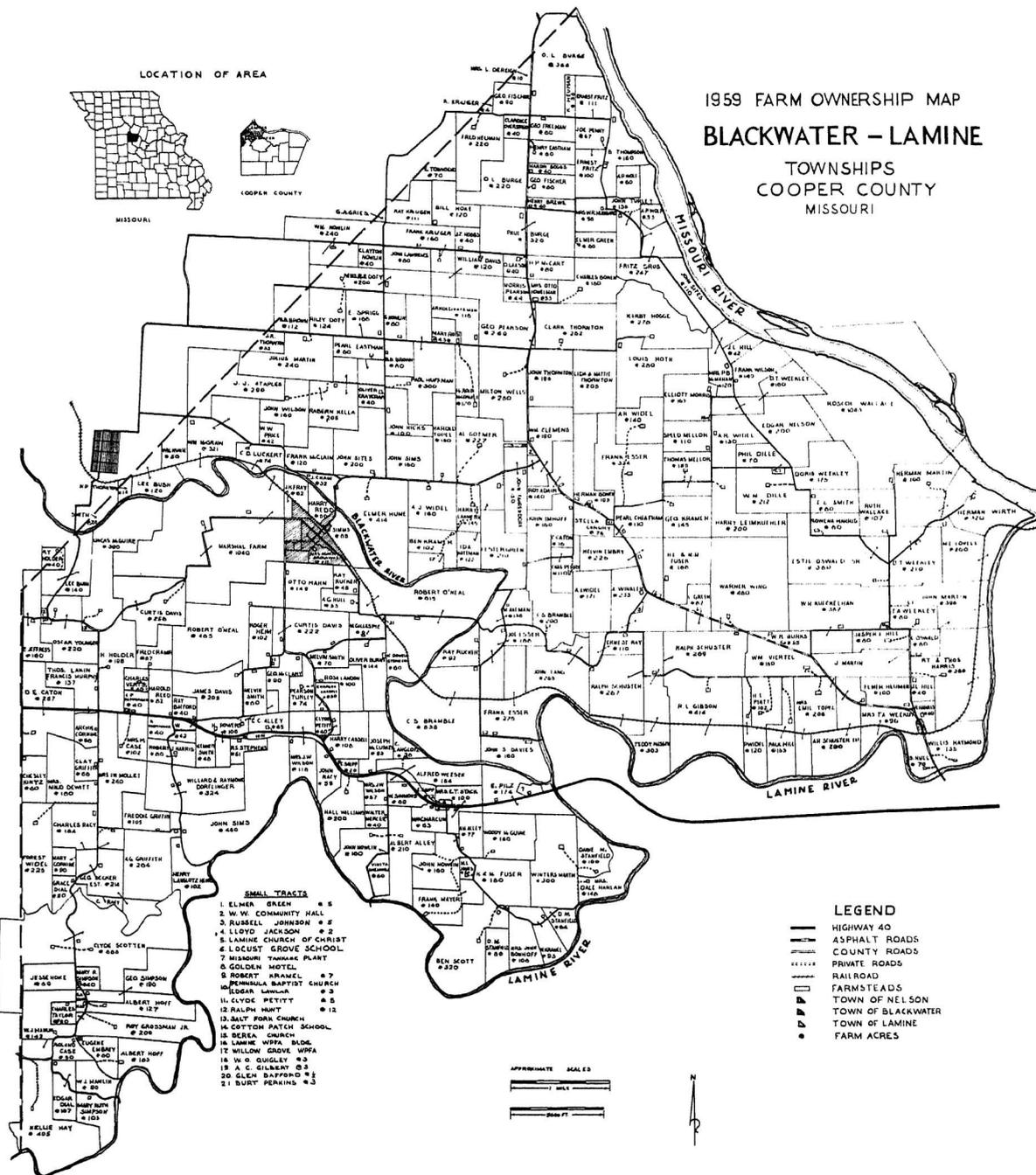


FIG. 6

Part-Time Farming in the Blackwater Area

--- An Over-all Perspective

Using the liberal definitional framework explained in the appendix, all farms in the study area were separated into their appropriate economic classes. (Table 1) Part-time farms emerged as the largest individual economic class numerically, constituting 22 percent of all farm units or 27 percent of the classifiable units. These percentages would have been even higher had all the partial and non-cooperator units (Class X) been classified, since it was later ascertained that a large proportion of these units were operated by part-time farmers. Nevertheless, the predominance of part-time farms exemplifies the extent and importance of part-time farming in the overall agricultural reorganization and adjustment within the study area.

Resources

The remainder of this section will deal with the area-wide inventory of resources and resource use, spotlighting the proportionate share controlled and/or pro-

duced by part-time farms. It should be kept in mind throughout this analysis that the study area is located in the "open country" beyond any major urban or industrial influences. Therefore, the existence of numerous part-time farm operations, large and small, serves to substantiate the introductory inferences concerning the widespread movement of part-time farming into the agricultural hinterland.

Blackwater census data give further evidence of this in the general trend in off-farm work as compared to farm numbers. (Figure 7) The trend toward fewer farms (32 percent decrease since 1939) has been accompanied by an increased trend in off-farm work (31 percent increase). There was a slight decrease in the proportion of operators reporting off-farm work between 1949 and 1959. However, this was due largely to the closing of the McDowell Stone Company Quarry in 1950. Deprived of this major source of employment, several farm operators either shifted to other types of non-farm work on a part-time basis or

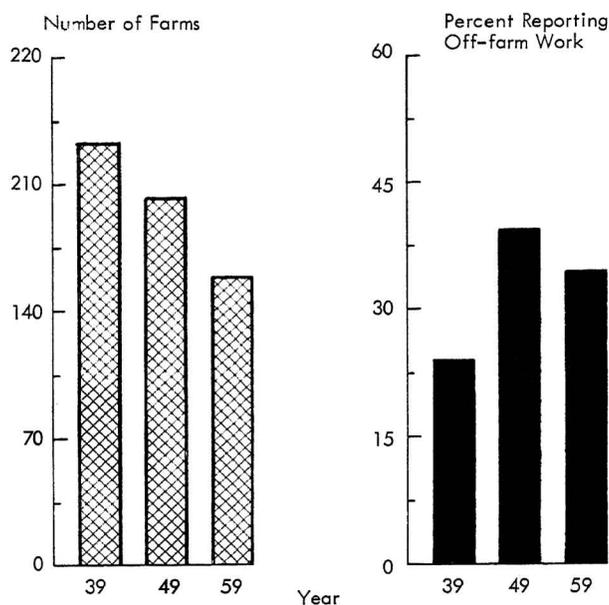
TABLE 1 -- THE NUMBER AND PERCENTAGES OF FARMS AND FARM OPERATORS IN THE DIFFERENT ECONOMIC CLASSES IN THE BLACKWATER STUDY AREA

ECONOMIC CLASS	All Farms				Classifiable Farms			
	Number of Farms		Number of Farm Operators		Number of Farms		Number of Farm Operators	
	No.	%/E.C.*	No.	%/E.C.*	No.	%/E.C.*	No.	%/E.C.*
Class I	5	2.27	7	3.02	5	2.73	7	3.59
Class II	11	5.00	12	5.17	11	6.01	12	6.15
Class III	21	9.55	22	9.48	21	11.48	22	11.28
Class IV	27	12.27	28	12.07	27	14.75	28	14.36
Class V	24	10.91	26	11.21	24	13.11	26	13.33
Class VI	7	3.18	7	3.02	7	3.83	7	3.59
Commercial Farms	95	43.18	102	43.97	95	51.91	102	52.31
Class VII	49	22.27	51	21.98	49	26.78	51	26.15
Class VIII	37	16.82	40	17.24	37	20.22	40	20.51
Class IX	2	0.91	2	0.86	2	1.09	2	1.03
Class X	37	16.82	37	15.95				
Other Farms	125	56.82	130	56.03	88	48.09	93	47.69
All Farms	220	100.00	232	100.00	183	100.00	195	100.00

Source: Blackwater Data; 1959

*%/E.C. = Percent Per Economic Class

FIG. 7—TRENDS IN NUMBER OF FARMS AND OFF-FARM EMPLOYMENT IN THE BLACKWATER AREA



Source: U.S. Census of Agriculture

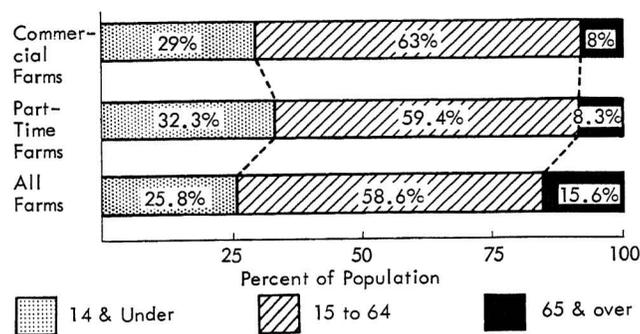
sought full-time employment elsewhere and, by 1959, 35 percent continued to engage in some off-farm employment. According to the "benchmark data" collected by personal interviews, 69 of the area's farm operators were employed at off-farm jobs for at least one week or more in 1959.

a. Labor Resources

Non-farm employment, like farm work, is not confined to the farm operator, and the quantity and quality of human resources are among the most important factors in any area study. In the Blackwater area, there were 195 farm family households containing 604 family members. Part-time farms claimed 25 percent or 49 of the area's households with a total membership of 170 members or 28 percent of the grand total. The average household membership for part-time farms was 3.7 compared to 3.2 for commercial farms and a 3.1 average for all area households.

However, determination of the potentiality of the area's population for productive labor calls for a look at the age distribution. Ability to perform farm and non-farm tasks is low up to 14 years of age, increases up to 25-30, levels off until 45-50, and then begins a slow decline until by 65 the average ability is greatly reduced. Therefore, the proportion of the area's population which falls into the 15-65 age group is a good general measure of the area's current productive labor force. Figure 8 shows that part-time farms have 101 of the 354 house-

FIG. 8—DISTRIBUTION OF STUDY AREA RESIDENTS BY AGE GROUPS



hold members constituting the potential productive labor force. Of the 101 part-time household members, 54 were males and 47 were females, giving the part-time farms control of 28.5 percent of the area's potential labor force.

Considering only the ages of the farm operators, who are assumed to be the heads of the households, part-time operators averaged the same as commercial farm operators, 48.1 to 48.5 years, and both were younger than the 52.3 average for all area operators. The age range for part-time farm operators was much wider than of any other class (22 through 74 years of age) although 54.2 percent were under 50 compared with 49.5 percent for commercial farms and 40.4 percent for all operators. Thus, more of the part-time farm operators were in the "optimum" age group as far as management and labor ability were concerned.

Each farm operator was asked to divide a 300 day year⁸⁶ into days worked on the farm and days worked off the farm. Table 2 gives the results for commercial farms, part-time farms, and all farms.

Both commercial and part-time operators are approaching full employment but the manner in which they are employed is quite different. Commercial farm

TABLE 2 -- BREAKDOWN OF FARM OPERATOR WORKING DAYS BY FARM AND NONFARM WORK

Economic Class	Average Working Days of Farm Operator Labor at:*		
	Farm Work	Nonfarm Work	All Work
Commercial Farms	281.5	8.8	290.3
Part-Time Farms	76.0	208.5	284.5
All Farms	211.1	56.4	267.5

Source: Blackwater Study; 1959

*Averages are on a per operator basis.

⁸⁶A farm operator who works the equivalent of 300 ten-hour days is considered to be fully employed.

operators spend 97 percent of their working days at farm labor while part-time farmers spend only 27 percent of their working days on the farm. Even the number of working days of all family members (including the farm operator) per farm is divided in approximately the same ratio. (Table 3)

TABLE 3 -- BREAKDOWN OF ALL FARM FAMILY WORKING DAYS BY FARM AND NONFARM WORK

Economic Class	Average Working Days of Farm Family Labor at:*		
	Farm Work	Nonfarm Work	All Work
Commercial Farms	318.6	57.1	375.7
Part-Time Farms	93.7	307.2	400.9
All Farms	251.3	108.1	359.4

Source: Blackwater Study; 1959

*Averages on a per farm basis.

Commercial farm families devote 85 percent of their working days to the farm operation and 15 percent to non-farm work. Part-time farm families, in contrast, spend 23 percent of their work days at farm work and 77 percent at off-farm employment. With a total of 400 work days per farm family, part-time farms play a leading role in the labor market of the study area.

Not only is the amount of farm labor available for farm work important, but the efficiency of that labor must meet given standards of effectiveness. Some laborers may claim to be fully employed but may not be very productive, while others may put in less time but accomplish a great deal in terms of productivity. Therefore, a cardinal measure of labor effectiveness is the production resulting from a given unit of working-time. In this study researchers first computed the man-equivalents represented by the actual amount of farm labor used per farm.⁸⁷ Next, this figure was divided into the number of PMWU's (productive man work units) which would "normally" have been required to accomplish the total volume of production per farm.⁸⁸ The result (the number of PMWUs per man-equivalent) is a measure of the

⁸⁷A man-equivalent is the actual number of full-time men required to accomplish the reported days of family and hired labor per farm. It is computed by establishing the total number of days that the operator and all other paid and unpaid laborers worked on the farm during the year and dividing this sum by 25 to convert to months of labor. This is then divided by 12 to obtain the annual man-equivalents. In this computation, the work of women and school age children was converted to equivalent days of man-labor by applying a factor of .2 to the days actually worked by females and .5 to the days worked by school age males and men over 65 years of age.

⁸⁸A PMWU (Productive Man Work Unit) is a labor standard which represents the "normal" amount of work performed in a ten hour day by a farm operator of average ability using typical productive methods and equipment at a given enterprise. Each enterprise was assigned a PMWU constant and this constant multiplied times the number of units in that enterprise on each farm. Missouri Bulletin, B.F. 6103, "Farm Business Planning Guide" was the source of data for PMWU values.

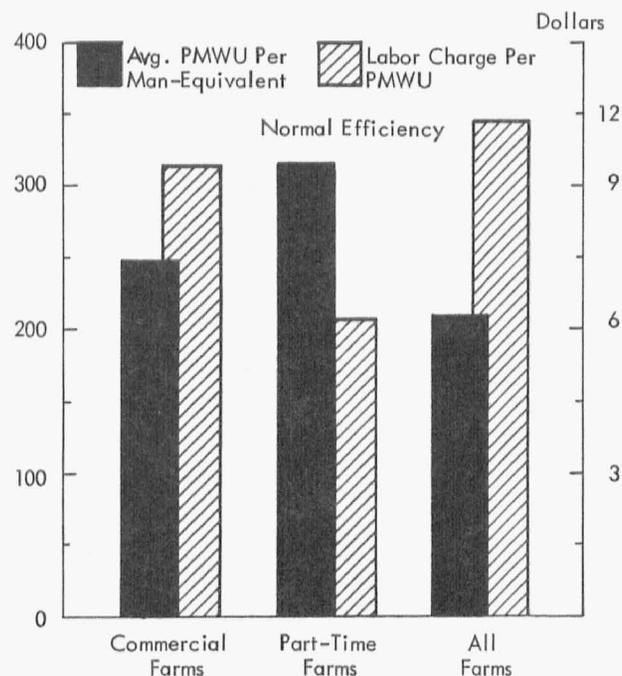


Part-time Farmers are able to increase their labor efficiency during their limited number of farm work days by using self feeders for cattle and hogs.

efficiency of farm labor in performing farm work. Figure 9 discloses that although part-time farmers spend considerably less working time at farm labor than other farmers their labor is more efficient than normal.

Another measure of labor's effectiveness shown on Figure 9 is the labor charge per PMWU per farm. By

FIG. 9—MEASURES OF FARM LABOR EFFICIENCY IN THE BLACKWATER AREA
Part-Time Farmers Got More Productive Man Work Units per Man Equivalent and at Less Cost per PMWU



multiplying the days of farm labor contributed by each type of laborer (i.e. operator, wife, children, and hired) times the study area's going wage rate for each type of labor, a total labor charge was determined for each farm. Dividing the farm PMWU total into the total farm labor charge again indicates that part-time farm labor was more efficient in the performance of farm tasks. The labor charge per PMWU for commercial farms was \$9.34, in contrast to the \$6.20 charges for part-time farms.

b. Land Resources

Probably the next most important resource in an intensive area study is the land and the corresponding control or use of it. This is especially true in an agricultural area where the land is the base to which labor, capital, and management are applied in connection with the production process. Land ownership has been referred to as a "bundle of rights" which gives the holder of the "bundle" considerable control over the use of a specific land area and, thus, considerable influence in any geographic location. Within the study area, part-time farmers constituted the dominant individual economic class in land ownership. The classifiable part-time operators owned 17.6 percent of all area farmland and were closely followed by part-retirement operators who owned 17.3 percent. (Figure 10) Commercial farmers owned one-half

of all area farmland but no single class of commercial operators owned above 14 percent.

Within the commercial classes, the size of the ownership tracts ranged from an average of 497 acres in Class I to an 81-acre average for Class VI. Ownership tracts for all commercial farm units averaged 187.5 acres and those of part-time farms, 126 acres. Three-fourths of the part-time farm units were operated by full owners, compared with 54 percent for commercial farms and 70 percent for all area units (Figure 11).

Considering only the total farmland acres operated within the area, part-time farmers fall to second place in importance. This is because part-time operators "rent out" more land than they "rent in." Class IV farmers operate 17.23 percent of the area's farm land, closely followed by part-time units at 16.77 percent. (Figure 10) The part-time farm units range from 5 acres up to 1,040 acres with an average size of 138.3 acres. Commercial units range from 36 to 912 acres with an average of 256.5 acres for all classifiable commercial farms. Two-thirds of the part-time units were under 160 acres and one-half were under 80 acres. Therefore, part-time units were considerably smaller than commercial units, suggesting that they have not made the necessary scale adjustments to compete effectively with commercial farms.

Quality of the land resource is as important as the quantity and in this respect part-time farms compare less

FIG. 10—PROPORTIONS OF THE LAND RESOURCES IN THE BLACKWATER AREA OWNED AND OPERATED BY FARMERS IN THE VARIOUS ECONOMIC CLASSES

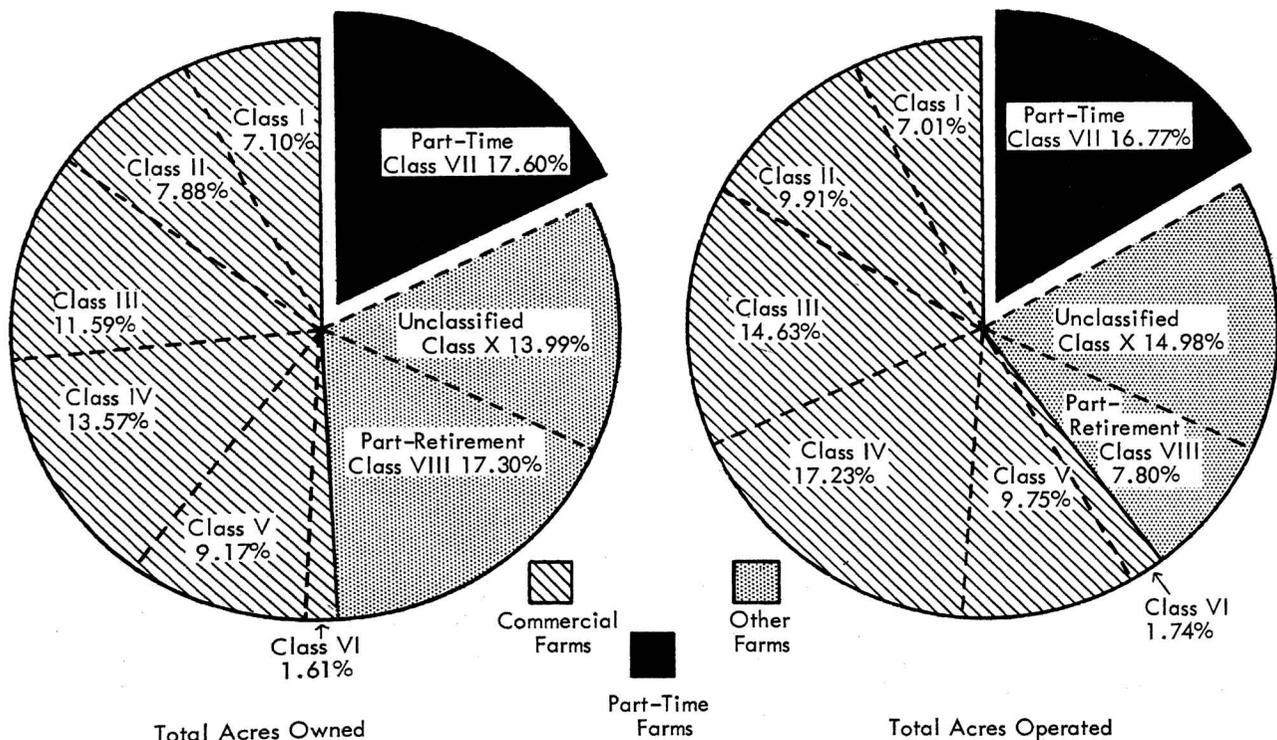
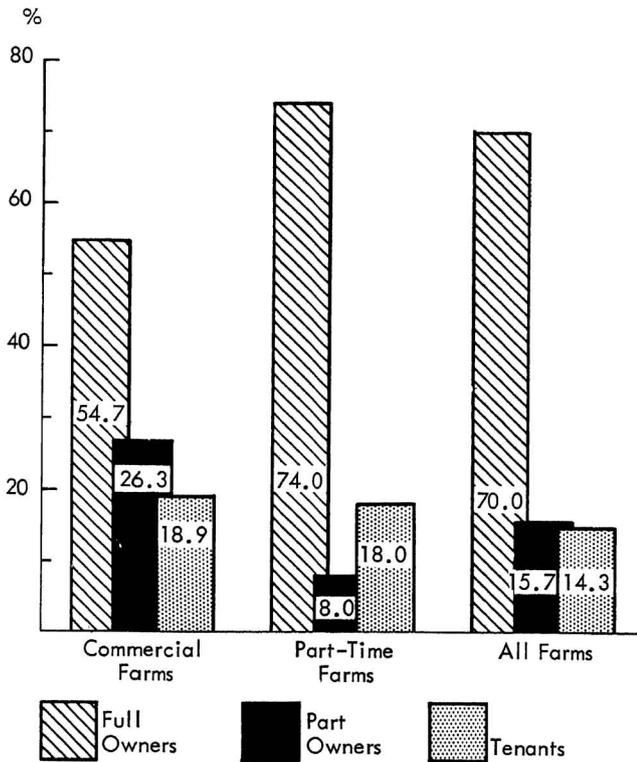


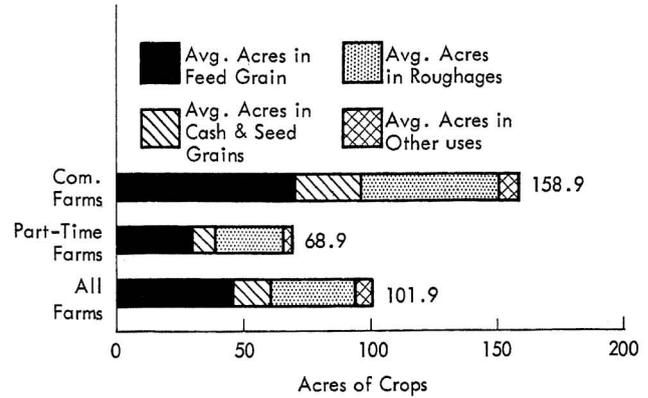
FIG. 11—TENURE OF OPERATED FARMLAND IN THE BLACKWATER AREA BY ECONOMIC CLASSES



favorably with commercial farms. Using the total acres of tillable land as an indication of the farming potential (i.e. land capable of producing the higher value products) the study data revealed that part-time farms had only 88 acres (64 percent) tillable land compared to the 188.5 acres (74 percent) for commercial farms. This suggests that the farmland operated by part-time farmers does not have the productive potential which is characteristic of the land resources of their commercial neighbors. Another indication of the poorer quality of land resources is the value per acre ascribed to the land by the farm operators. Commercial operators estimated the market value of their farm units to be \$162 per acre while part-time farmers thought their land to be worth \$116 per acre. The estimated market value of all farmland in the area averaged \$152 per acre.

A third factor which tends to denote either a lower quality land resource or inadequate management (or both) is the aggregate crop yield index computed for all crop production in the Blackwater area. Commercial farms as a composite group received a crop yield index of 101 which was significantly above the 94.5 index of part-time farms. Since the crop yield index converts all area production to a common index number based on the average area yield, part-time crop yields were below those of the entire area.

FIG. 12—COMPARISON OF ACREAGES OF DIFFERENT CROPS GROWN ON THE SELECTED CLASSES OF FARMS



Production

a. Crop Production

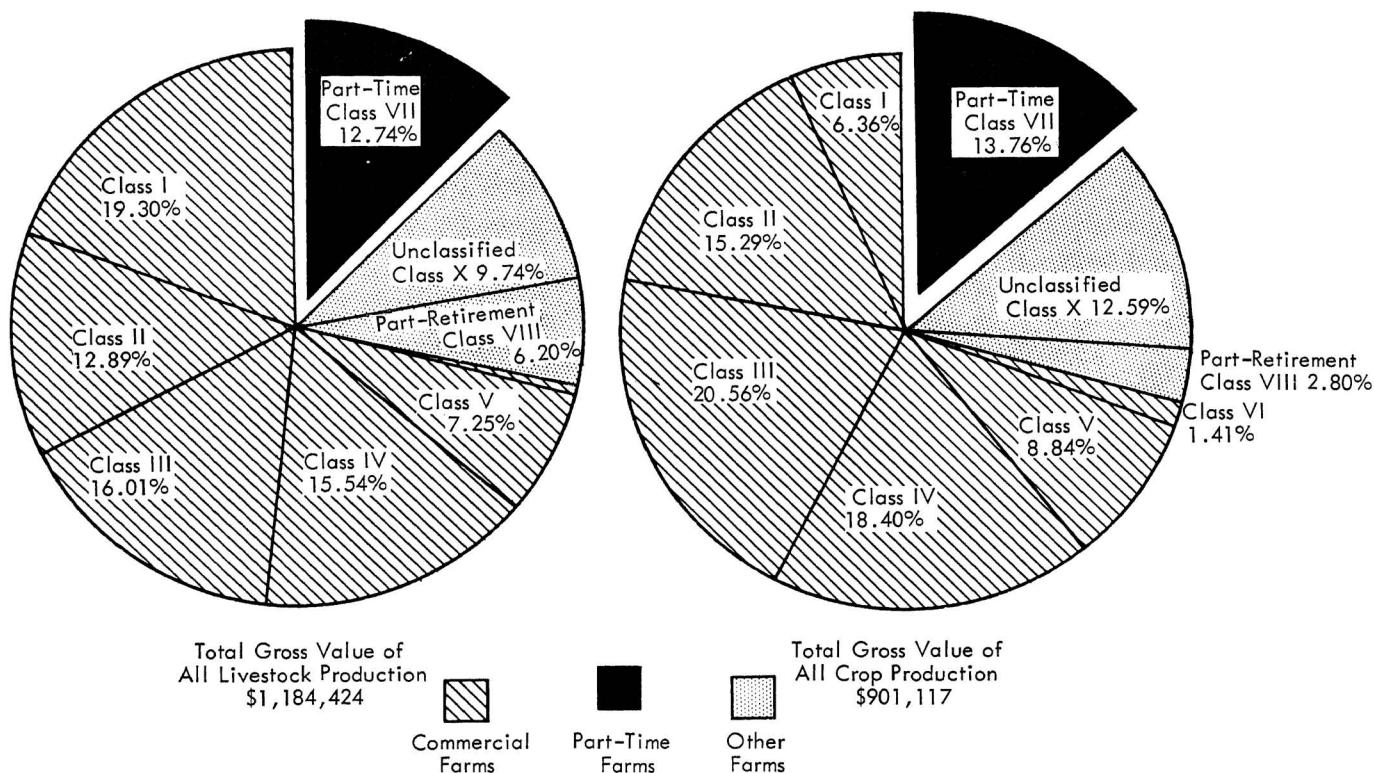
Further analysis of the area's land utilization revealed that part-time farmers reported only an average of 69 acres of cropland for harvested crops or 78 percent of their cropping potential while commercial farms reported an average of 159 acres or 84 percent of their total cropland potential. Therefore, part-time farms not only have less land use potential than commercial units, but they also take less advantage of the potential available.

Looking only at the actual cropland acres reported, feed grains were the predominant crop class with commercial and all farm operators devoting 45 percent of their crop acres to the major feed grains—corn, milo, barley, and oats. Part-time farms were on a comparable level with 44 percent of their cropland in feed grains. (Figure 12) The next most important crop class was roughage (hays, silages, and rotation pastures). *Commercial and all farm operators* chose to use 34 percent of their crop acres for these extensive crop enterprises. Part-time farmers devoted 40 percent of their cropland to roughage production. This indicates that the lower quality land and scarcity of farm labor on part-time farm force the operators to rely more on enterprises which utilize a great deal of roughage. This deduction is further strengthened by the fact that 39 percent of land operated by part-time farmers was devoted to open and woodland pasture compared with 27 percent of the commercial farmland.

This failure to take full advantage of the available land resources shows up in the decreasing importance of part-time farms in the over-all area picture of agricultural production. By taking inventory of the total production in each enterprise and multiplying these totals by a constant price⁸⁹, researchers were able to arrive at a gross

⁸⁹Price constants used were taken from the "Farm Business Planning Guide", University of Missouri Agricultural Extension Service, 1961.

FIG. 13—PROPORTIONS OF THE TOTAL GROSS VALUE OF ALL CROP AND LIVESTOCK PRODUCTION IN THE BLACKWATER AREA ATTRIBUTED TO THE VARIOUS ECONOMIC CLASSES



value of production for each enterprise during 1959. Part-time farms fell to fourth place in aggregate crop production with approximately one-seventh of the study area total. (Figure 13) Part-time farms produced 12.8 percent of the area's feed grains, 12.2 percent of the total cash crops, and 17.5 percent of the area's roughage production.

b. Livestock Production

Turning to livestock data, the earlier indications that part-time farms would have a greater dependence upon livestock enterprises to utilize the roughages were confirmed. Part-time farms again ranked fourth in the gross value of livestock production per economic class. However, their combined contribution of both crops and livestock (in terms of gross value) amounted to only one-eighth of the study area total. (Figure 13) Separated into the major components, beef production accounted for 56 percent of the area's livestock gross value production total. Pork production was next in importance with 42 percent of the grand total. The remainder was divided among dairy, sheep, and poultry enterprises. Part-time farms produced 15.0 percent of the beef, 9.7 percent of the pork, and 13.8 percent of other livestock products.

Capital Assets

Farm Assets

Figure 14 summarizes the inventory of farm assets and net worth statements for the 151 farms which gave a complete net worth summary. The inventory of farm resources represents the proportionate value of all working farm assets utilized by the farm operators of each class, regardless of whether they were owned outright or heavily mortgaged. The total value of all farm assets on these farms was \$6,505,730,⁹⁰ with commercial farms controlling 67 percent. Part-time farms ranked third on an economic class basis—behind Class III (20.7 percent) and Class VIII (17.0 percent) at 15.8 percent. The "breakdown" of farm assets shows that land was the largest single item accounting for 66 percent of commercial farm investments and 70 percent of part-time farm investments. It is significant to note that although the total farm assets on part-time farms is considerably lower than that

⁹⁰This is a depreciated value. Each item for every farm was depreciated according to a predesignated schedule.

FIG. 14—AVERAGE INVENTORY VALUE OF FARM ASSETS AND NET WORTH FOR SELECTED ECONOMIC CLASSES

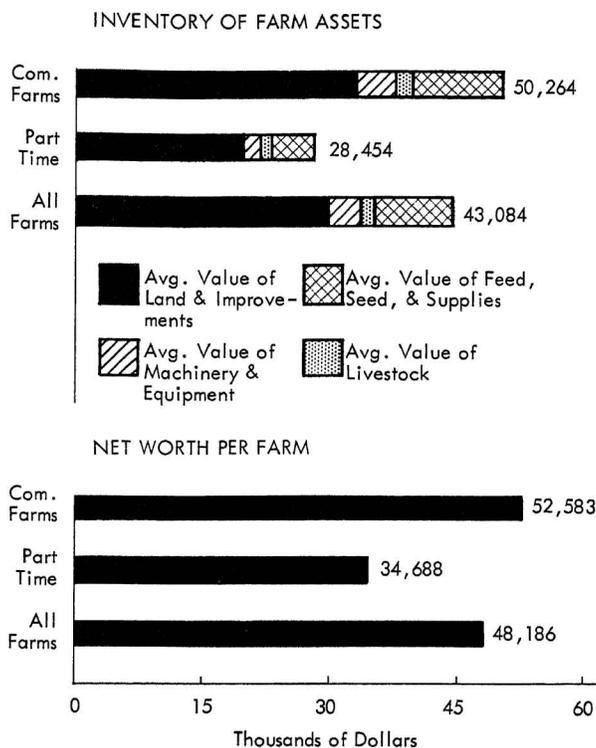
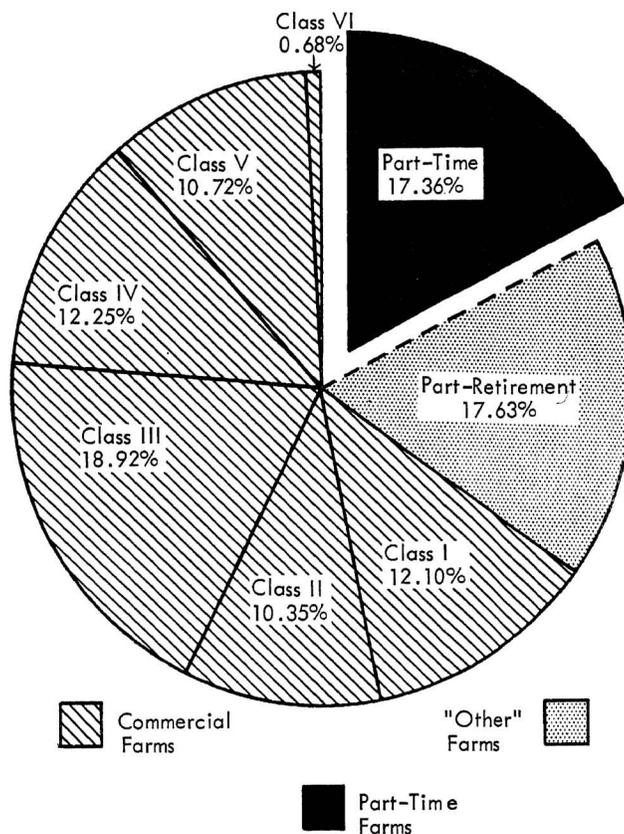


FIG. 15—PROPORTIONS OF THE BLACKWATER AREA'S NET WORTH CONTROLLED BY THE ECONOMIC CLASSES



of commercial units the investment distribution in the major farm asset categories is approximately the same.

Net Worth

The net worth statement includes the value of all farm assets plus the value of other resources owned by the farm operator minus all debts. Part-time farms owned 26.4 percent of the non-farm resources in the area but also were charged with 24.2 percent of the total area debt leaving them in third place among the economic classes in total net worth. (Figure 15) The range in the net worth was quite wide both within and between classes. Commercial farmers' net worth ranged from \$3,140 to to \$353,880 and averaged \$52,583. The net worth of part-time farmers averaged \$34,688, ranging from \$2,050 to \$329,157. However, one-half of the part-time farmers reported a net worth under \$20,000 and four-fifths, under \$40,000, indicating that a majority of these units do not have the accumulated capital necessary to compete with their commercial neighbors on an equivalent basis.

Income

a. Farm Income

Cash Farm Receipts. Regardless of the amount of capital investment in a farm business, the efficiency and use to

which it is put ultimately determine the forthcoming returns. A great difficulty arises in studying the returns to farm families in that many intangible psychological values are encountered which evade any monetary measure. Such feelings as "freedom of action," "security of the land," "long standing community and family ties," "love of nature," and "proper atmosphere for rearing children" are all influential in the decisions farmers make when considering their over-all income position. However, this study made no effort to analyze these feelings and, therefore, will be concerned only with tangible monetary returns.

Considering only the gross cash receipts from farming operations, part-time farms held fourth place among the economic classes with 12 percent of the area's farm receipts. (Figure 16) Commercial farms, as could be expected, took the lion's share of all cash farm receipts: 81 percent or an average of \$12,945 per farm. The part-time farms averaged \$5,013 per farm but four-fifths received less than \$5,000 cash farm receipts and two-fifths received less than \$1,000.

FIG. 16—SHARE OF CASH FARM RECEIPTS AND EXPENDITURES ACCRUING TO EACH ECONOMIC CLASS IN BLACKWATER AREA

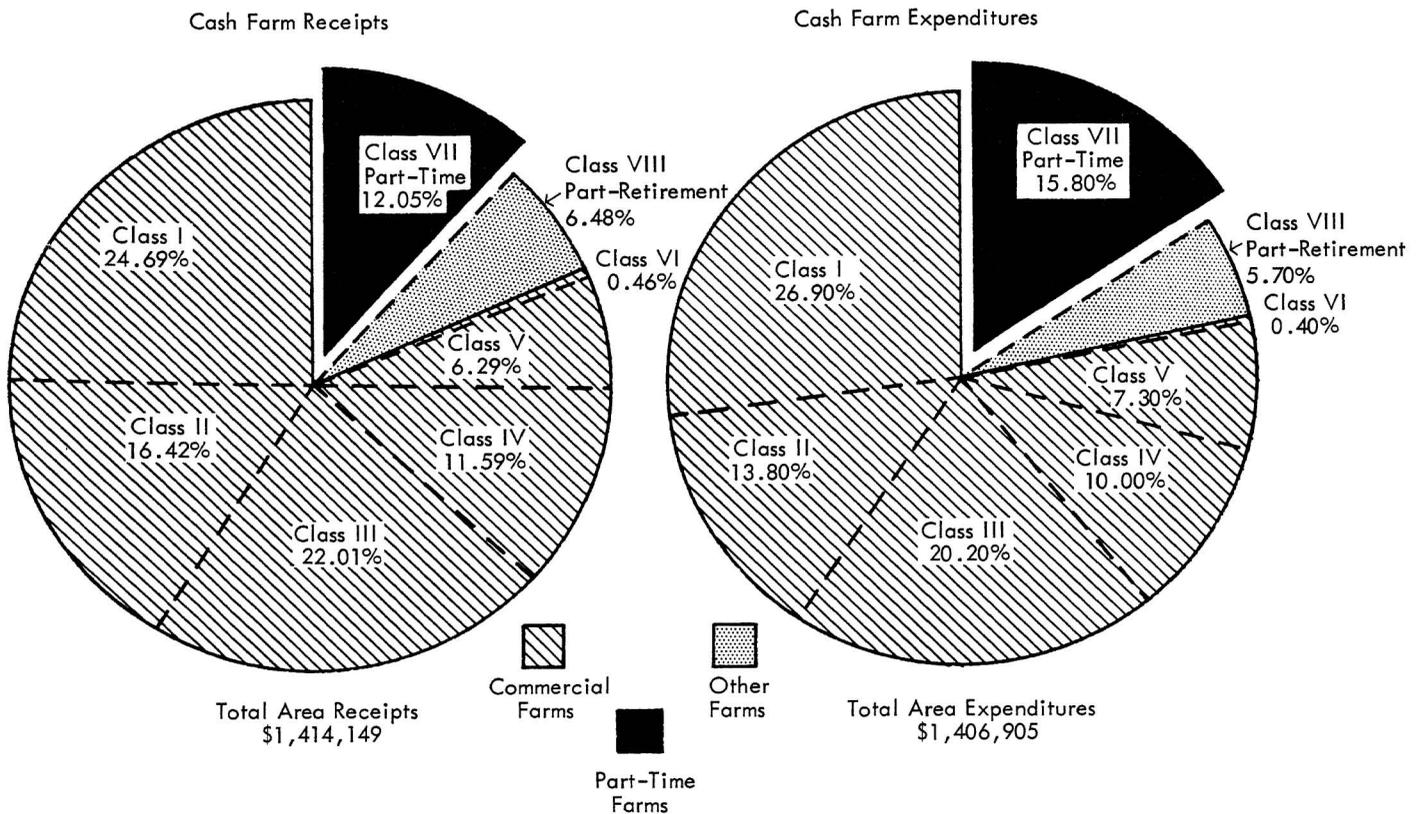


Figure 17 is a summary of the major sources of cash receipts. This illustration clearly shows the importance of the livestock enterprises of the area in marketing the feed grain and roughage production. All three groups shown received 83 percent of their farm receipts from livestock sales with beef (54 percent) and hogs (26 percent) predominating. Crops accounted for 14 percent of the commercial farm receipts while part-time farmers realized only 12 percent of their cash receipts from such sales.

Table 4 delves more deeply into the source of gross farm receipts and illuminates the shift in source of farm receipts due to part-time farming. Commercial farmers rely mainly on hogs, beef, and cash crops. Part-time farmers follow the lead of their commercial neighbors, but there is a noticeable "leveling off," proportionally, with more units in sheep, cash crops, and general diversified farms.

Cash Farm Expenses. Going back to Figure 16, part-time farms held fourth place with their aggregate total of cash receipts, but then had the dubious honor of moving up into third place among the economic classes with respect to their total cash expenditures. Since their cash expendi-

FIG. 17—AVERAGE CASH FARM RECEIPT IN BLACKWATER AREA FOR SELECTED ECONOMIC CLASSES

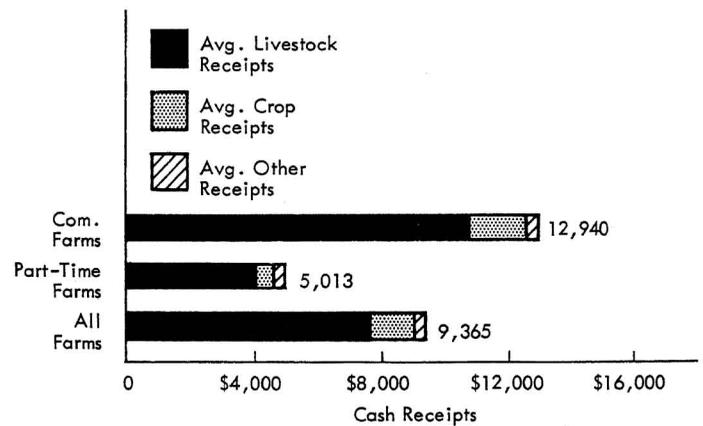


TABLE 4 -- NUMBER AND PERCENTAGE OF BLACKWATER AREA FARMS BY ENTERPRISE CLASSIFICATIONS BASED ON MAJOR SOURCE OF FARM RECEIPTS

Classifications	Commercial		Part-Time		All Farms	
	No.	%	No.	%	No.	%
Hog Farms	31	34.1	7	20.0	45	29.2
Beef Cattle Farms	27	29.7	9	25.7	44	28.6
Sheep Farms	0	00.0	3	8.6	3	1.9
Dairy Farms	2	2.2	1	2.9	3	1.9
Beef-Hog Farms	15	16.5	4	11.4	25	16.2
Mixed Livestock Farms	3	3.3	1	2.9	5	3.2
Cash Crop Farms	11	12.1	6	17.1	21	13.6
General Farms	2	2.2	4	11.4	8	5.2
TOTAL	91	100.0	35	100.0	154	100.0

Source: Blackwater Data; 1959

TABLE 5 -- CASH FARM EXPENSE BREAKDOWN BY MAJOR EXPENSE DIVISIONS

Major Expense Divisions	Commercial Farms		Part-Time Farms		All Farms	
	% W.C.	\$ Avg.	% W.C.	\$ Avg.	% W.C.	\$ Avg.
Labor & Machinery Hire	6.79	833	8.80	615	7.34	678
Crop Expenses	5.12	628	4.94	346	5.27	486
Building & Equipment Upkeep	12.48	1,530	9.77	684	12.37	1,142
Livestock Expenses	19.10	2,342	17.20	1,203	18.95	1,750
New Investments	48.09	5,897	51.73	3,619	47.38	4,374
Miscellaneous	8.41	1,032	7.56	529	8.70	803
TOTALS	100.00	12,262	100.00	6,995	100.00	9,232

Source: Blackwater Study; 1959

tures were greater than their cash receipts, part-time farmers had a negative cash balance of nearly \$2,000 per farm (minus \$1,970). Only two of the six commercial classes had a negative cash balance—Class I (-\$5,815) and Class V (-\$571). This reduced the average for all commercial farms to a low of \$580 per farm. Among all ten economic classes, only Class II farm businesses provided the \$3,000 necessary for a desirable level of farm family living.⁹¹

The breakdown of farm expenses (Table 5) shows that both commercial and part-time operators spent one-half of their cash farm expenditures for farm business investments. This suggests that both groups are striving to adjust their investment structure in a manner necessary

for more competitive operations. Another surprising fact is the very similar pattern of farm cost distribution in both commercial and part-time operations. Although commercial operators had considerably more cash expenditures per farm (\$12,511), part-time operators split their operating costs in almost identical proportions. This indicates that part-time farmers are trying to farm in the same manner as their commercial neighbors in spite of the fact (as previous analysis has shown) that they have neither the quantity nor quality of resources to be most effective. This is undoubtedly one of the major reasons for the large negative cash balance among part-time operations.

Inventory Change. To determine the actual amount of income attributable to the farming operation for a given year, the net inventory change must be considered. The

⁹¹"Missouri Cash Costs of Family Living" University of Missouri Cooperative Extension Service Information, 1959.



A garden is an important source of food for part-time farmers of the urban fringe or the open country.

cash balance for any given year may be either high or low, depending upon the liquidation or build-up of the farm inventory. For example, farmer A may have a high cash balance because he has sold all his crops and part of his breeding herd. Meanwhile, farmer B may have a low cash balance because he has re-invested a large part of his farm earnings in new machinery and livestock, or is holding the animals on feed for a better finish or a heavier weight. These possibilities will be reflected in the yearly net inventory change and thus they are an important component in computing the annual farm and family earnings.

All the economic classes had a net inventory increase except the part-retirement operators who, understandably were depreciating out their machinery and equipment and reducing their feed and livestock inventories. Commercial farm units had an average net inventory increase of \$949.00 per farm, with both Class I and Class V showing enough inventory increases to offset negative cash balances. Part-time operators gained \$1,550 per farm in new inventory but were still \$420 per farm "in the red."

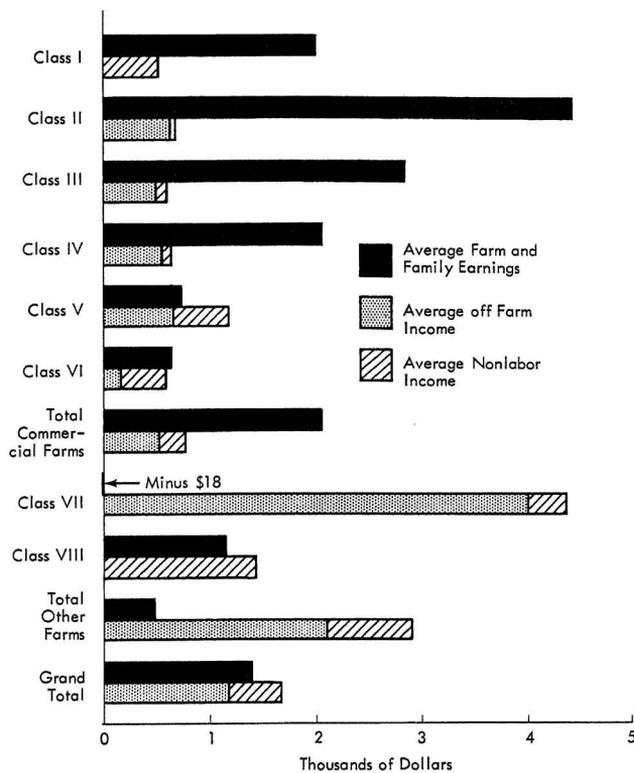
Home-used Products. Most published farm income reports add the value of farm produced products and rent for the farm dwelling to the net farm income figures. This study did not use the "rent for the farm dwelling" as a part of the farm income for two reasons: First, it is more nearly a cost of family living than an actual return to the farm business. A family must have a dwelling whether resid-

ing in the city or on a farm and it is not counted in the incomes of urban and factory workers. Second, if included in farm income, the determination of equitable "rental income values" is difficult since some farmers own their homes while others rent; some live in town and "commute" to the farm; some farm homes are new and very modern while others are quite modest; and, finally, farm operators could give no consistent rental values for their farm homes.

Home-used products are quite a different story, because items such as beef, pork, milk and eggs are part of the farm production and if not separately counted would show up only on the debit side of the farm business ledger. The study area survey revealed that home used products were of considerable importance for all classes of farms, ranging from a high of \$680 per farm in Class I to a low of \$352 per farm in the part-retirement class. All commercial farm families used an average of \$518 worth of farm produced items and part-time families, \$402 worth.

Farm and Family Earnings. All the factors which fit into the computation of farm income have now been analyzed. They are depicted graphically in Figure 18 as farm and family earnings. All economic classes on farms on which complete financial data were available are included to dramatize the fact that only part-time farmers, among all the Blackwater area farmers, lost money in their farming operations. The negative \$18 per farm is not a great

FIG. 18—AVERAGE FARM AND FAMILY EARNINGS AND NON-FARM INCOME PER ECONOMIC CLASS IN BLACKWATER STUDY AREA



loss, but it should be remembered that no deduction has been made for family and operator labor, interest on the investment, or a charge for management. With negative farm and family earnings, computing these charges only accentuated the lack of returns to resources applied to part-time farm operations. This will be done in the succeeding chapter. It is enough in this general over-all analysis to recognize the fact that part-time farmers are, as a group, in most need of help in their agricultural adjustment problems.

b. Non-Farm Income

Off-Farm Income. Figure 18 demonstrates the importance of off-farming income to those farm operations which are most in need of scale adjustments (i.e., commercial classes IV, V and VI; and part-time farms). If the farm income invested in the farm business during 1959 were subtracted from the farm and family earnings, the off-farm earnings would provide 42 percent of the cash for family living in the lower three commercial classes and 30 percent of their grand total net income. Part-time farmers must depend on their off-farm jobs to provide 100 percent of all their farm investment capital plus their cash for family living. The average off farm income for all commercial farms was \$509 while part-time farm families received \$4,000 per farm.

Non-Labor Income. The amount of nonlabor income was of major importance in four economic classes—I, V, and VI in the commercial category and part-retirement in the “other farm” group. The commercial farm average non-labor income was \$247 per farm with the major sources from social security, interest, rent, and dividends. Part-time farms received an average of \$367 per farm with one-third from social security, one-third from interest, rent, and dividends, and one-third from other nonlabor sources.

c. Total Net Family Income

When farm families plan their yearly budgets, they must take into account all the sources of income available to them because, in the final analysis, it is the combined total income which determines the effective purchasing power of the farm family. By totaling the farm and non-farm net earnings, researchers have coined the term “total net family income” to depict the final measure of the over-all financial well-being of the farm family during the year. Thus, in Figure 18, part-time units, by the addition of both income columns, advance from the bottom in farm earnings to second from the top in total net family income. Commercial farm units averaged \$2,800 per farm with Class VI low at \$1,200 and Class II high at \$5,078 per farm. Part-time farmers averaged \$4,354 per farm, all of which came from non-farm sources. Therefore, in the final analysis, Class II and part-time farm families were in the high income group since the third place Class III farmers were \$1,000 below these two classes. Had the \$28,000 in farm assets utilized by part-time farmers yielded the 3 percent return that the farm investments of Class II realized, part-time units would have been the top economic class in terms of income.

EFFECTS OF PART-TIME FARMING ON SELECTED FAMILY CHARACTERISTICS

Family Living Index

What effect have these agricultural adjustment problems (as manifested in low farm incomes) had on the level of farm family living? Have part-time farmers a superior level of living due to their large volume of non-farm income (as implied by many studies of the part-time farmers of the rural urban fringe)?

Table 6 shows that the part-time operators did not measure up to commercial farm families in the over-all family living index or in any of the individual items which reflect the status of the family living level. This fact is not surprising since these units are so small that the non-farm income was required to finance the purchase of needed farm improvements, family living expenses, and, in years with negative farm and family earnings, to support the farm business—all before the purchase of

costly improvements for modern farm family living. Also, the part-time farms had larger families with many school age children who required more cash outlay for education, food, and clothing than their commercial neighbors whose families were, in the main, beyond school age and self-supporting. However, considering the individual economic classes, part-time farm families had higher living standards than either Class V or Class VI in the commercial group and were on a par with part-retirement families.

Educational Level

It has been shown that the level of incomes resulting from small scale, low production farms has a depressing effect upon the educational level of the children growing up on these units. This is largely due to the "propensity to consume" pressure on the farm family, preventing any capital accumulation to finance the advancement of educational opportunities. Previous analysis in this section has shown that part-time farm units are smaller than their commercial competitors and that the farm income of part-time units tends to be low at very best. Thus, following this line of reasoning, one could assume that the operators of small farm units tend to have a lower level of education than those of larger units which have higher amounts of capital available.

Comparing the educational level of the top four economic classes (commercial classes I, II, III, and IV) against that of the lower four classes (commercial classes V, VI and part-time and part-retirement classes) in terms of accumulated capital, we find that the above inference holds true. The average number of years of school completed by the farm operators of the top four classes was 11.3 while for the lower four the average dropped to 8.9 years. Table 7 illustrates that the educational level of part-time farm operators is considerably below that of all commercial farmers. However, looking at the average years of schooling completed by the older children of part-time operators, it is evident that the higher over-all net family income—resulting from off-farm employment—has allowed a near equality in educational attainment.

Leadership Index

A final measure of the extent and importance of part-time farms within the Blackwater area is the leadership index—an indication of the influence of leadership and participation of the farm family in community activities. All the area's organizations were grouped under four main divisions: farm organizations; non-farm organizations; church organizations; and public services. As was expected, the commercial farm operators were most active and influential in the church and farm organizations while part-time farm operators participated most in church and nonfarm organizations. The wives of commercial and part-time operators followed the same pattern as their husbands, although the wives of part-time

operators were more active in community affairs than were their mates. This of course is due largely to the fact that part-time operators have less time available for social and professional organizations after dividing their labor between two occupations. Table 8 gives the numerical leadership index for the Blackwater area.

THE PART-TIME FARM BUSINESS

Use of Farm Resources

In the preceding chapter, the main emphasis centered upon an inventory of the resource accumulation and utilization by part-time farmers. These traits were, in turn, contrasted with the corresponding inventory characteristics of the commercial operators within the Blackwater area. This procedure proved useful in establishing the place of the part-time farmers in the over-all area framework and allowed a generalized analysis of the part-time class. However, the extreme heterogeneity within the part-time class prevented any detailed analysis into the specific adjustment problems which would explain the negative income realized by this class. To gain further insight into these adjustment problems, researchers sought to separate the 36 part-time units on which complete data were available into four or five sub-groups; each sub-group as nearly homogeneous as possible.

Numerous criteria were tried as the basis for the sub-group breakdown: the number of farm acres; acres of cropland and open pasture; days of farm and non-farm work; gross farm sales; number of PMWU; total farm assets; and farm and family earnings. The criteria which gave the best over-all results—in terms of distribution, farm size, type of operation, etc.—was total farm assets. (Table 9)

It will be the primary objective of this chapter to examine these intra-class groups and to delineate the varying problems of agricultural adjustment encountered by each sub-group in relation to the attainment of a maximum farm income.

The Land Factor

a. Land Tenure

It previously has been established that the part-time farm units were, as a whole, not large enough to recognize the returns to scale accorded to the area's commercial units. To explore the affect of part-time farming on farm size and land tenure, the farmers were asked to state the number of acres farmed in two previous years, 1953 and 1939, and to separate the units into owner-operated and tenant-operated acres. Figure 19 illustrates the results for both the part-time class and the intra-class groups. The 1939 columns represent the size and tenure of farming operations by the part-time farmers prior to entering part-time farming. The 1953 and 1959 columns show the trends under the influence of part-time operation.

TABLE 6 -- FAMILY LIVING INDEX AND PROPORTION OF AREA FARMS HAVING SELECTED HOME IMPROVEMENTS BY MAJOR ECONOMIC CLASSIFICATIONS

Economic Classes	Average Family Living Index	Percent of Farm Homes Having:			
		Electric Power	Bathroom Facilities	Sewage Disposal	TV Sets
Commercial Farms	19.7	100.0	65.7	70.6	82.4
Part-Time Farms	19.0	97.5	62.8	66.7	70.6
All Farms	19.2	99.5	68.1	72.0	64.2

Source: Blackwater Study; 1959

TABLE 7 -- PERCENTAGE OF FARM OPERATORS WHO HAVE ATTAINED SPECIFIED LEVELS OF EDUCATION AND AVERAGE YEARS OF SCHOOLING COMPLETED

Items	Commercial Farms	Part-Time Farms	All Farms
Percent of farm operators with an educational attainment:			
Under 9 school years	33.7	52.4	43.2
Under 11 school years	44.9	66.7	56.8
Under 13 school years	90.8	95.2	91.8
Average No. Years Schooling Completed By:			
Farm Operators	10.2	9.7	9.8
Post-school age children			
Males	12.9	12.8	12.7
Females	12.8	12.1	12.3

Source: Blackwater Study; 1959

TABLE 8 -- AVERAGE LEADERSHIP INDEX* FOR FARM OPERATORS AND FARM WIVES OF THE BLACKWATER AREA

Economic Classes	Average Leadership Index (Farm Operators)	Average leadership Index (Farm Wives)	Avg. Total Leadership Index
Commercial Farms	9.1	7.8	8.5
Part-time Farms	4.6	5.6	5.1
All Farms	6.8	6.8	6.8

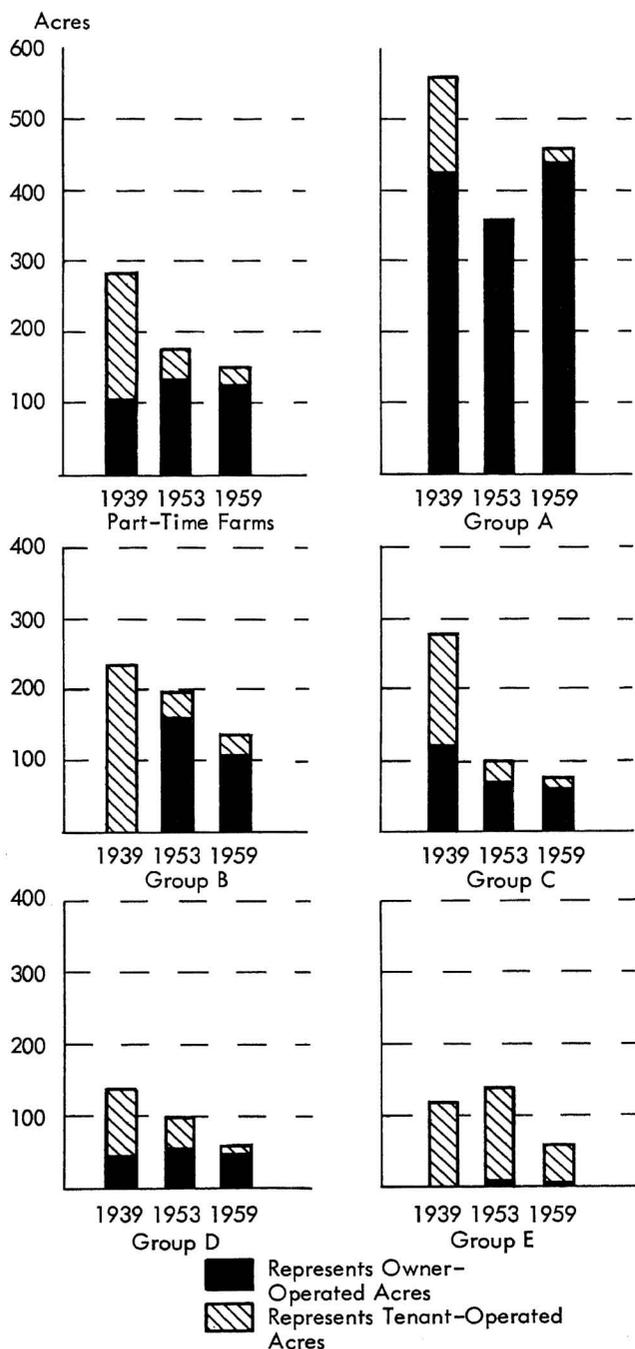
Source: Blackwater Study, 1959

TABLE 9 -- BREAKDOWN OF THE PART-TIME FARM CLASS INTO SUB-GROUPS BASED ON TOTAL FARM ASSETS

Part-Time Farm Sub-Groups	Sub-Group Criterion Total Farm Assets From:	Number of Farm Units
Group A	\$35,000 up	6
Group B	\$20,000 to \$34,999	9
Group C	\$10,000 to 19,999	8
Group D	\$ 5,000 to 9,999	8
Group E	\$ 0 to 4,999	5

Source: Blackwater Data; 1959

FIG. 19—TRENDS IN AVERAGE FARM SIZE AND TENURE FOR PART-TIME FARMS



Generally speaking, the former units operated by farmers now engaged in nonfarm employment were considerably larger than the present units under part-time operation. However, the former units were largely tenant operated while now they are owner-operated. The reduction in total farm size was attributed to four factors: (1) an increase in the number of days at nonfarm employment which reduced the amount of time available for farm work; (2) advancing age which has been accom-

panied by poorer health and a reduction in workload capacity; (3) a sharp rise in both fixed and variable operating costs which have reduced the profit margin per unit of production; and (4) increased competition for rented land, and, in light of factors 1, 2 and 3, made it more profitable for the part-time operators to rent out their cropland on a crop-share basis rather than operate it themselves.

The intra-class breakdown exemplifies the wide range in variability within the part-time class which precludes the selection of any size or type of part-time farm as typical. Group A farms were owner-operated and had the size (459 acres) and resources to effectively compete with commercial units of the area if the operators so desired. On the other end of the scale, Group E farms were small (58 acres) tenant operations in which the part-time farmers had little capital investment.

Thus, with the exception of subgroup A, the majority of part-time farmers operate small units which would not by themselves yield a large enough volume of production, except under exceptional management and/or a specialized operation, to justify the high investment in machinery and equipment prevalent in modern commercialized farming.

b. Efficiency of Land Use

The operation of a modern farm business involves capital investment in certain items (land, buildings, machinery, equipment, etc.) the costs of which, once incurred, become fixed and thus require a high volume of output per farm in order to "spread out" these costs and reduce the cost per unit of production. In the case of part-time farms, the limited amount of land resource on which to produce a large output necessitates an effective land-use organization.

As a rule, the method of land use which yields highest net return per acre in a farm operation is "cropping the land," and cropping implies a certain minimum amount of tillage. Therefore, the total number of tillable acres in a farm unit sets a maximum limit beyond which optimal land use cannot be pushed. Table 10 summarizes the cropping capacity and the amount of utilization of this capacity in terms of cropland acres. By dividing the number of cropland acres by the number of tillable acres for each sub-group, researchers were able to determine the effectiveness of each subgroup in utilizing land use potential.

Part-time farmers of subgroups B and E, the operators of the largest number of rented acres, scored the highest in the utilization of their more valuable farmland. Subgroup D had the least amount of cropland capacity and also made the lowest score in terms of using that capacity. The corresponding land use information for the area's commercial farmers was included in this table as a point of reference. Note that, except for the units of subgroup A, part-time farms have less than half the crop-

TABLE 10 -- AVERAGE ACRES OF TILLABLE LAND; AVERAGE ACRES OF CROPLAND; AND LAND USE EFFICIENCY RATIO FOR PART-TIME FARM SUB-GROUPS IN THE BLACKWATER AREA

Part-Time Farm Sub-Groups	Acres of Tillable Land		Acres of Cropland		Cropland Acres as a Percent of Tillable Acres
	Average	% of Total	Average	% of Total	
Group A	338.8	73.8	258.8	56.4	76.4
Group B	77.7	56.7	67.1	49.0	86.4
Group C	45.0	62.9	31.0	43.4	69.0
Group D	28.8	49.7	15.3	26.4	53.0
Group E	39.8	69.8	36.8	64.6	92.5
All Part-Time Farms	88.3	63.8	68.9	49.8	78.1
Commercial Farms	188.5	73.5	158.9	62.0	84.3

Source: Blackwater Data; 1959

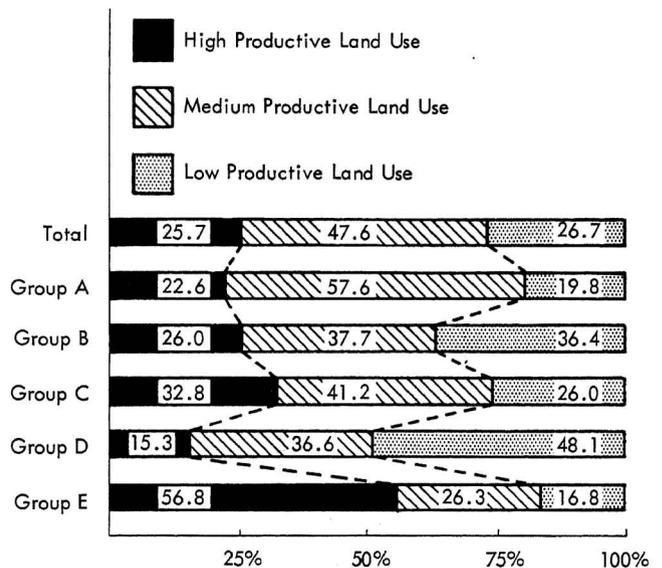
ping potential of the commercial class and do not utilize it nearly so effectively.

Cropland is not, by itself, a sufficient criterion to measure the over-all effectiveness of land use because much variation can be cloaked under the guise of "cropland." For example, there are certain major crops (corn, soybeans, wheat, etc.) which will yield, under "normal" area conditions, a higher net return per unit of input than any others (hays, oats, etc.). To determine what proportion of land resources the part-time farmers in the general class and class subgroups devoted to higher income producing uses, researchers divided all operated farmland acres into three categories based on net return per acre.

Category one included all acres devoted to the most productive land use pattern—feed, seed, and cash grains. Category two included all farmland that in 1959 was devoted to a land use pattern yielding a "moderate" net income per acre, and included, in general, all land producing "roughages." Category three included all the remainder of the farmland of part-time farmers which produced little or no income, (woodland, idle land, waste land, etc.). Using these broad headings to represent the land use pattern, the proportion of land devoted to each use was determined.

Figure 20 shows that within the part-time farm class, subgroup E (the tenant group) again made most effective use of land resources, with over one-half the operated acres in the higher income category. Those in subgroup D, who utilized the least amount of their cropland potential, had only one-sixth of their land in the higher income category, while on the average, all part-time operators devoted one quarter of their land to the higher income producing uses. The trend toward an extensive land use pattern by part-time farmers is very evident in

FIG. 20—PERCENT OF LAND OPERATED BY PART-TIME FARMERS IN LAND-USE CATEGORIES YIELDING HIGH, MEDIUM, OR LOW NET INCOME PER ACRE



this graph where, as a class, they devote approximately three-quarters of their land either to roughages or to non-productive uses.

The Labor Factor

a. Age and Education of Farm Operator

In this study the farm operators were assumed to be the farm managers and to provide the most capable and effective source of farm labor. On the part-time farms of the study area, the farm operators were engaged in non-farm activities more than two-thirds of the time. Yet, in

general, these part-time operators provided at least one-half of the farm labor and, in all cases, claimed to be the primary decision maker with respect to the operation of the farm business. Thus, in part-time farming, as in commercial operations, the farm operator is the pivot around which the farm organization revolves and therefore merits a more detailed analysis.

Age of the farm operator is a point of interest since it is a commonly held opinion that part-time farming is a "young man's game." Table 11 indicates that, at least in this study group, this is not necessarily the case. In fact, only 11 percent of the part-time operators were under 35 years of age. The majority (52 percent) of the operators fell between the ages of 35-50, while the remainder (38 percent) were in the "over 50" age group. The intra-class breakdown, based on accumulated farm assets, was very effective in separating the farm operators by age groups. Subgroups B and E contained 60 percent of the farm operators under 45 years old and subgroups A and C included 59 percent of those operators over 50 years old. The differential between the accumulated farm assets in each of these two groups suggests that age, in itself, is not a significant factor in capital accumulation in part-time farms.

Another conclusion (usually based on analysis of part-time farms in the rural-urban fringe) commonly held regarding the part-time farm operators is that they have attained a higher educational level than their commercial neighbors. Again, the part-time farmers in this study (representing part-time farm operators of the "open country") did not substantiate this view. Thirty-nine percent of the part-time operators had a high school education and only eight percent had received training beyond the high school level. Except for those operators in subgroups A and B, part-time operators actually had less ed-

ucation than the commercial operators of the area. Over all, the educational level of the part-time operators had no consistent influence in-so-far as the operation of the farm business was concerned.

b. Farming Experience of Part-Time Operators

Table 11 indicates that these groups of part-time farmers are not new either to full-time or part-time farming. Rural backgrounds were reported by 75 percent of the farm operators and 80 percent of their wives, and all were raised in farm communities. Although there were several exceptions, the manner in which these part-time operators entered into part-time farming followed a general pattern. As youths, these operators had worked on their home farms until the ages of 18-22, when they shifted to non-farm employment. Part of these future operators had continued to live on the home farm and commute to local jobs and the majority had moved away to other communities. The length of tenure at this first non-farm job ranged from two to 33 years, with the general ranges between eight and 12 years.

Between the ages of 28 and 32 these workers quit their nonfarm employment and entered into full-time farming by taking over the home farm or purchasing a small (40-120 acre) local farm. In either case, a major portion of the farmland was rented. (See Figure 19) This venture into full-time farming lasted between four and 15 years with the average at 6.5 years. Thus, after a brief attempt at full time farming, these operators entered into part-time farming, between the ages of 34 and 38 years, and as a group have maintained this status.

Of the part-time operations included in this study 55.6 percent followed this general pattern and were scattered throughout the part-time sub-groups with the larger number in sub-group B.

TABLE 11 -- CHARACTERISTICS OF OPERATORS OF PART-TIME FARMS, AND PART-TIME FARM SUBGROUPS IN THE BLACKWATER AREA

Characteristic	Part-time Subgroups					All Part-Time Farms Average
	Group A Average	Group B Average	Group C Average	Group D Average	Group E Average	
Age	52.3	41.9	52.6	49.5	43.2	47.9
Schooling	11.6	10.4	8.3	10.0	10.0	10.1
% Raised on Farm:						
Yes	66.6	77.8	75.0	75.0	80.0	75
No	33.4	22.2	25.0	25.0	20.0	25
Years of Farm Experience	23.4	14.0	23.4	18.1	12.8	18.3
Years of Part-time Farm Experience	16.5	10.1	9.7	12.6	12.8	12.5

Source: Blackwater Data; 1959

There are two notable exceptions to this general pattern.

The first exception concerned those operators who, after transferring to full-time non-farm employment, attained a high degree of success in this pursuit before transferring directly into part-time farming. Sixteen percent of the operators followed this pattern and were mainly found in sub-groups A and E.

The remaining operators (27.8 percent) entered directly into full-time farming and continued at this pursuit for approximately 20 years before shifting into part-time farming with no previous experience at non-farm employment. Farm operators following this pattern were in the main located in subgroups C and D. Thus, in all, the operators of part-time farms have entered into part-time farming in various ways, but still have had enough farming experience to practically eliminate knowledge of farming methods as a limiting factor in these part-time operations.

c. Source of Farm Labor

Two of the reasons given for the reduction in scale of farming operations concerned the labor force: the days of available farm labor and the age of the operator. Further evidence supporting the theory that labor becomes the restricting resource on part-time farms is the earlier implication that only approximately one-fourth of the family labor is available for farm work. Proceeding toward a verification of this inference through the intra-class breakdown, Table 12 illustrates that the operators of part-time units provide proportionately less, and "other" family members more, of the farm labor than is customary on the commercial farms of the study area. Moreover, the aggregate effect of the part-time operation resulted in a 33 percent reduction in family labor, and forced a heavier reliance (66 percent) on hired labor. It should be noted, however, that despite the increase in

hired labor, the farm family provides a majority of the labor inputs in the part-time farm operation.

In Table 12, the proportion of the total farm labor provided by each labor source exhibits a wide variation among the five intra-class groups. This variation was directly related to four major influences.

- (1) *The scale of farm operation.* An increase in the scale of farm operation lowered the proportionate share of the farm labor furnished by the operator and his family and increased the relative importance of hired labor.
- (2) *The age of the farm operator and his family.* The younger operators (ages 20-35) furnished 70 percent of the farm labor, with the remainder coming from hired labor since the wife was either working at off-farm employment or caring for young children. The middle aged operators (ages 36-50) provided one-half the farm labor, their families (wife and teen-age males) 20 percent, and hired labor 30 percent. The older farm operators (ages over 50) furnished 20 percent of the operating labor, older children 20 percent and hired labor 60 percent.
- (3) *The type of off-farm work.* Those part-time operators who operated a nonfarm business (i.e. a more stable work source) worked fewer days (30-50) on the farm. Those operators who worked in the professional field found more time (50-75 days) for farm work. Finally those part-time operators who were employed as laborers or semi-skilled workers did not have consistent nonfarm employment and, therefore, were able to work 75-150 days on the farm.
- (4) *The type of farm organization.* The farms that were more specialized in terms of either crops or livestock feeding hired more labor than those which were more diversified or had a very extensive operation

TABLE 12 -- DAYS OF FARM LABOR BY INPUT SOURCE FOR COMMERCIAL, PART-TIME, AND PART-TIME SUBGROUPS IN THE BLACKWATER AREA

Economic Class	Source of Farm Labor by Days					Total Days of Farm Labor
	Farm Operator	Farm Wife	Other Family Members	Total Family Labor	Hired Labor	
Commercial Farms	287	8	24	319	46	365
Part-time Farms	77	15	29	121	85	206
Subgroups:						
Group A	61	4	113	178	304	482
Group B	92	32	13	137	49	186
Group C	96	16	26	138	31	169
Group D	98	14	5	117	25	142
Group E	30	0	4	34	10	44

Source: Blackwater Data; 1959

and, therefore, needed to utilize only the family labor.

d. Labor Utilization Patterns

Turning to the labor utilization pattern in part-time farm operations, Figure 21 demonstrates the extensive organization of part-time farms as measured by PMWU counts. There is a close relationship between the land and labor utilization patterns. The high proportion (56 percent) of PMWUs devoted to livestock (mainly beef

FIG. 21—LABOR UTILIZATION FOR PART-TIME FARMS IN THE BLACKWATER AREA, 1959

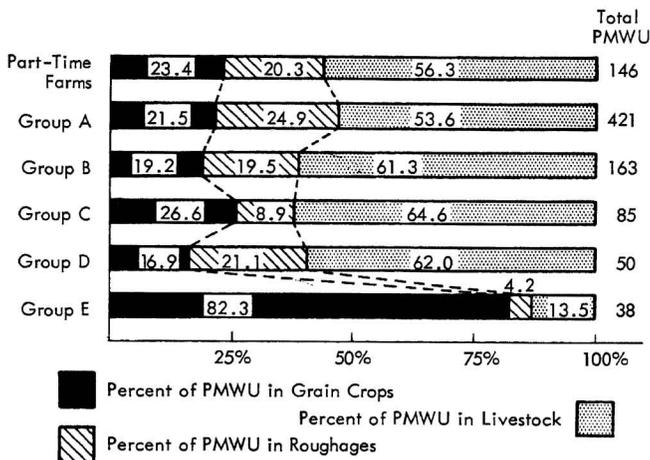
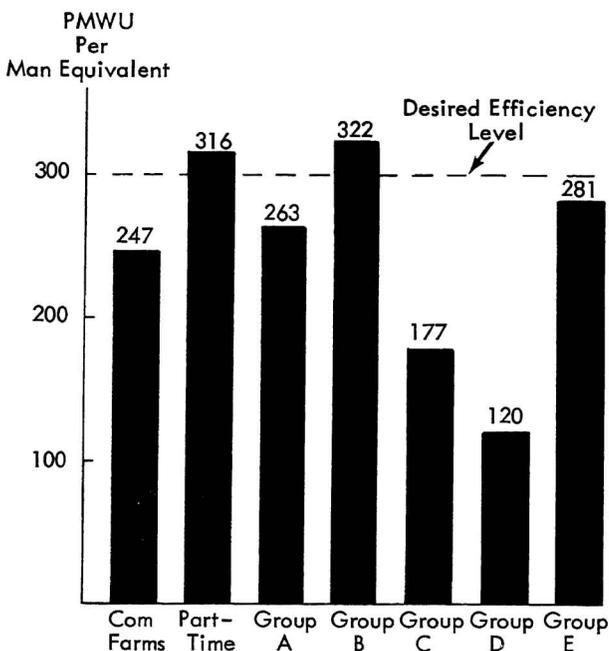


FIG. 22—FARM LABOR EFFICIENCY COMPARISONS IN TERMS OF PMWU'S PER MAN EQUIVALENT



cattle and sheep) indicates an attempt on the part of the part-time operators to: (1) use their lower quality land resource most effectively and (2) make the most efficient use of a limited and less effective labor force.

In general, except for group E, the part-time farmers used 24 percent of their labor in grain crop production, 20 percent in roughage production and 56 percent in livestock enterprises. Group E, operating as tenants, used 82 percent of their labor in crop production in an effort to maximize their returns on the smaller acreages.

e. Labor Efficiency

The area-wide analysis of all part-time farms revealed that their limited labor resource still achieved a higher efficiency rating (PMWU/man-equivalent) than the commercial units (Figure 22). However, the intra-class breakdown shows that the variation in labor efficiency as measured by PMWU/man-equivalent was very great, ranging from an excellent 322 in subgroup B to a low 120 in subgroup D.

A detailed analysis of reasons for the wide variation revealed that farms with a low number of family labor days available for farm work achieved the highest efficiency ratings when that labor, regardless of the source, was directed toward the operation of a more specialized organization. The diversified farm organizations required the spreading out of the labor inputs over such a range of tasks that the effectiveness of the total was considerably reduced.

Sub-groups A and B concentrated their efforts in beef or hog enterprises and those in subgroup E were engaged in either cash grain or corn-hog operations. Subgroups C and D divided their labor inputs among three or more enterprises with some combination of cattle, hogs, sheep, poultry, and grain crops predominating. The substantial increase in productive efficiency due to a concentrated effort in no more than two farm enterprises suggests that part-time farmers should give more consideration to specialization in relation to their available labor supply.

The Capital Asset Factor

a. Farm Inventory Analysis

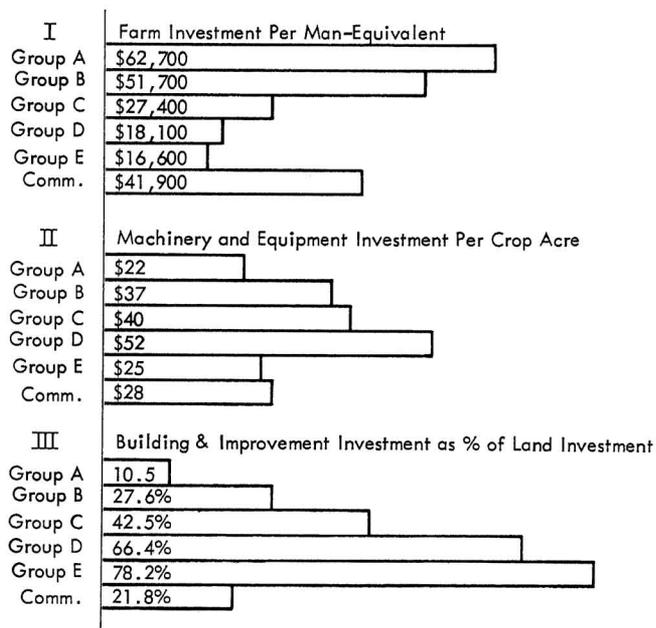
To compare and evaluate all the diverse items appearing in a detailed inventory of any farm business, some method of data standardization is necessary. The easiest and simplest method is to convert all items to a common denominator, such as dollars of value, through the use of weighted price constants. However, in this study, a number of methods were used, depending upon the type of resource. First, the farm operators were asked to estimate as nearly as possible the market value of selected items (land and improvements, livestock, and investments in certain farm and non-farm resources.) The quantities of feeds, seeds and other supplies were inventoried and multiplied, each in turn, by a price constant. The current value of all machinery, equipment, buildings,

and improvements was determined by a straight-line depreciation schedule. Finally, the farm liabilities were the actual debts outstanding on January 1, 1960 (ending inventory).

It was established in chapter six that the investment pattern of all part-time farms was not significantly different from that of either commercial farms or all area farms; i.e., land and buildings, 70 percent; livestock, 18 percent; machinery and equipment, 8 percent; feed, seed and supplies, 4 percent. The intra-class breakdown of part-time farms gave the same general pattern with the exception of those in subgroup E who, because of their small acreages, carry over no livestock or feed from year to year. This similarity is in itself significant, because it illustrates the tendency of part-time operators—in fact, all small farm operators—to pattern their farm organizations after the most successful commercial farms of the area without questioning the feasibility of such a practice. Three consequences which commonly occur as a result of such an unplanned organization are shown in Figure 23.

Section I of Figure 23 examines the amount of capital invested in the farm business with respect to the man-equivalents of labor available on the particular farms. Since the operation of a family farm requires the furnishing of both labor and management, and since part-time farms have only a limited amount of operator labor available, the higher the capital investment per-man-equivalent the higher the necessary diligence required of the restricted supply of labor and management. For example, the part-time operator who has only a small amount of capital with which to work has a larger margin of error than a part-time operator with very high investments.

FIG. 23—MACHINERY, BUILDING, AND IMPROVEMENT INVESTMENT COMPARISONS FOR BLACK-WATER AREA FARMS



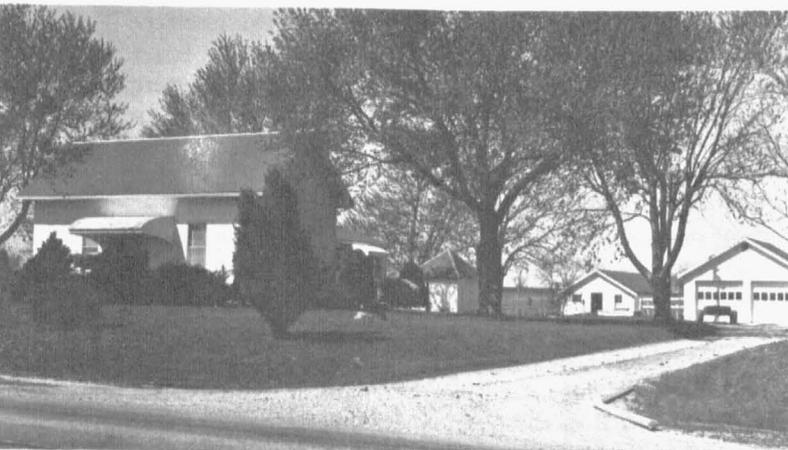
Even if an operator with a small investment neglected his operation or made repeated misjudgments his losses would not be so staggering as those on high investment units where lesser "errors of management" would be more disrupting. Therefore, using the commercial ratio as a guide, part-time subgroups A and B were highly "over-invested" with respect to their labor supply. Moreover, the three remaining subgroups, although below the commercial standard, had relatively high total investment considering their reliance on secondary labor sources.

Sections II and III of figure 23 depict some of the sources of this "over-investment" on small or part-time farms, i.e. buildings, land improvement, machinery, and equipment. All of these items are quite expensive, yet the return on investment costs is slow, even under intensive use. The small extensive farming operations of the part-time farmers demand that the investment in such items be kept as low as possible. In section II, it is the intermediate sized part-time units (subgroups B, C and D) which are "over-invested" in machinery and equipment in relation to the quantity of cropland they operate. These part-time units could improve their farm returns by following the example of subgroup E where machinery investment is kept low by joint-ownership arrangements with other small part-time or commercial units, or by reliance on custom work by other area operators.

Section III illustrates the usual tendency for the percentage of real estate investment in building and improvement to increase as the size of the unit in acres decreases. This is a more difficult problem with which to deal, since each and every farm, as defined in this study, must have a certain minimum amount of buildings, fences, water sources, etc. Therefore, care and planning are needed to keep these long-term investments in line with the farming operations. Too many of the part-time farms in subgroups C, D, and E have "show place" farmsteads which do not yield high enough returns to cover the yearly interest, insurance, maintenance and depreciation costs. This, of course, places an increased burden on other aspects of the farm business to make up the deficiency.

b. Balance Sheet Analysis

Normally, the grouping of inventory items into balance sheet divisions and sub-divisions is somewhat arbitrary due to the complex interrelationships among farm assets in the production process. This difficulty is multiplied in the case of part-time farms where a majority of the operators invest a share of their capital in either a nonfarm business or nonfarm resources. In fact, a majority of the part-time operators employed a portion of their inventory in both the farm and nonfarm business, increasing the difficulty of separation. Nevertheless, a conscientious effort was made, using all available data, to separate the inventory into farm and nonfarm assets. Data in the farm business balance sheet (Table 13) were



Investments of part-time farmers in buildings and improvements cover a wide range as illustrated by these examples.

as accurate a representation of the farm inventory as was possible.

In Table 13, operating assets represent those investments which may be varied in the year to year operation of the farm business, and are divided into two categories according to their rate of turnover. Current assets include those inventory items that are normally invested in the farm business less than one year and are readily convertible to cash on short notice, i.e. operating cash, feeding livestock, feeds, seeds, and supplies. Working assets represent capital investments that ordinarily are utilized in the farm operation over a number of production periods and may be converted into dollars of value at a somewhat slower rate than current assets. In this

study, working assets were composed of the dollar value of the breeding livestock plus that of farm machinery and equipment. Fixed assets represent those investments which once made, are used over a long time span, and their value is recovered very slowly. They include such items as farmland, buildings, and farm improvements such as terraces and fencing.

There are two noteworthy factors to observe in the distribution of farm assets as represented in Table 13. The first is the wide range on total capital investments between the intra-class groups. Farms of subgroup A have a high enough capital investment to place them in the top 10 percent of all farms in the area. On the other end of the scale, farms of subgroup E have very little

TABLE 13 -- FARM BUSINESS BALANCE SHEET FOR PART-TIME FARMS AND PART-TIME FARM SUBGROUPS OF THE BLACKWATER AREA, 1959

ITEMS	Part-Time Farm Subgroups					All Part-Time Farms Average
	Group A Average	Group B Average	Group C Average	Group D Average	Group E Average	
Operating Assets:						
Current	\$17,738	\$ 4,962	\$1,932	\$ 3,029	\$ 200	\$ 5,328
Working	11,598	4,428	2,248	1,575	928	3,976
Fixed Assets	71,625	17,556	9,575	5,688	1,400	19,913
Total Farm Assets:	100,961	26,946	13,755	10,292	2,528	19,217
Farm Liabilities:						
Short-Term	12,333	2,389	675	238	310	2,899
Long-Term	2,917	3,178	856	1,162	0	1,729
Total Farm Liabilities	15,250	5,567	1,531	1,400	310	4,628
Net Worth	\$85,711	\$21,379	\$12,224	\$ 8,892	\$ 2,218	\$24,589

Source: Blackwater Data; 1959



investment in the farm business, ranking below most of the small scale commercial farms. It is noted that, except for subgroups A and E, the total farm investment is not beyond the normal cost range of modern urban or suburban housing. (This is an important point in the initial decision to enter part-time farming as will be explained in Chapter Eight.)

The second noteworthy factor is the variation in the percentage distribution of investment capital in current, working, and fixed assets. In analyzing the reasons for this variation, two were immediately obvious: (1) the type of farm enterprise organization affected the capital distribution between current and working assets (a specialized beef or hog feeding operation had a large current asset inventory than did a highly mechanized cropping operation, in which case the inverse relationship was usually true); and (2) the land tenure arrangement of the farm operation. The farmers who had full title and control over their farmland had a higher percentage of their farm investment in fixed assets than did the smaller part-owner units.

The aggregated capital assets of all part-time farms gave an investment ratio of 18:14:68 for current, working and fixed assets and the commercial farm ratio was 14:19:67. A detailed statistical analysis into the variation in the investment ratio of part-time farms revealed no consistently significant factors; hence, management was assumed to be the critical factor which guided a particular pattern of investment to success or failure, income-wise.

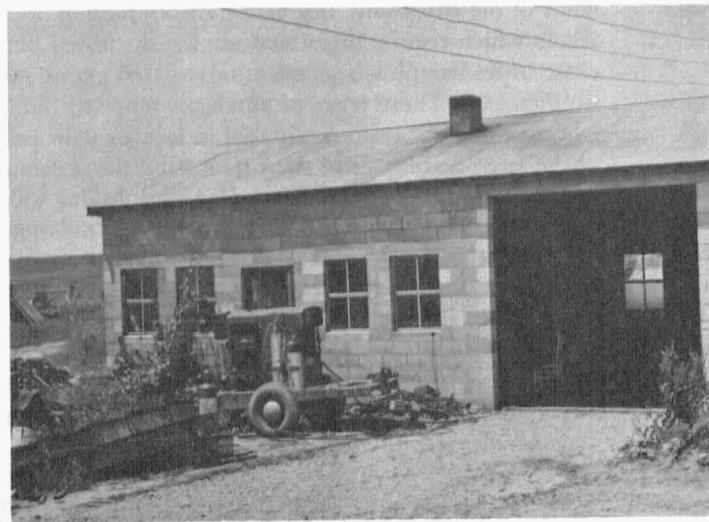
c. Farm Liabilities

Turning back to Table 13, farm liabilities—legal claims against the farm business—were separated into two categories; short-term and long-term. Short-term liabilities include all debts which are incurred in the ordinary operation of the farm business and usually fall due within one production cycle, such as accounts payable,

chattel mortgages on supplies, livestock, machinery, etc. Long-term liabilities also are incurred in the farm operation, but are payable in part over a number of production periods, i.e. mortgages on farmland, buildings, and improvements, power machinery, etc. In Table 13, part-time farms carry a fairly consistent level of legal claims against their farm businesses (16 percent) with a high of 21 percent in subgroup B and a low of 11 percent in subgroup C.

More of the part-time operations carried some farm debt (two-thirds of the units) than did the commercial farms (approximately three-fifths). Eight out of every ten farms in the larger part-time subgroups (A, B and C) had legal claims against their farm business while only four out of every ten of the smaller subgroups (D and E) had any farm liabilities. Considering only those part-time units with farm debts, 37.5 percent used only short-term

Many farm investments can be used to earn non-farm income, such as the above farm shop which is used to overhaul and repair farm machinery for neighborhood farmers.



credit; 41.7 percent used both short and long-term credit; and the remaining 20.8 percent used only long-term credit. Thirty-seven percent of these operators used short-term credit for livestock purchases, 32 percent used it for machinery and equipment, and the remainder used it for fertilizers, feeds, family living, and other supplies. The only two sources of short-term credit reported by part-time farmers were the local bank (79 percent) and various types of dealerships (21 percent).

Long-term credit was used for only one purpose by the part-time farmers—the purchase of farmland. The major sources of long-term credit were individuals (37.5 percent), life insurance companies (12.5 percent) and “other” (50 percent).⁹² A disproportionately high percentage (62.6 percent) of the total claims against the part-time farm business were carried as short-term liabilities. In fact, subgroup A carried 81 percent of their debt in short-term claims and subgroup E had all their claims in the same category.

There are three reasons why such a high level of short-term liabilities would seem to be a questionable financial practice. First, the interest rates on short-term credit are considerably higher than those on long-term credit, thus adding to farm operating expenses. Secondly, the claims fall due within the production period, placing, even in years of high gross farm income, a heavy burden upon the farm financial structure. In years less favorable, in terms of farm earnings, a large amount of short-term claims falling due can seriously disrupt farm operation and may cause forced sales to meet pressing credit needs. Thirdly, a farm business which has already “over extended” its short-term credit will find it extremely difficult to secure additional credit in case of unforeseeable emergencies during the yearly farm operation. Again, the only prospect in such a financial pinch may be a premature liquidation of farm assets.

This analysis does not imply that part-time farms should not utilize short-term credit, but merely attempts to point out the dangers. For instance, some part-time farms of the Blackwater area have livestock feeding operations which require investment capital for initial purchase of feeders plus large quantities of feed grains and supplements. These types of purchases represent bona fide uses of short-term credit and, in fact, explain part of the large percentage of short-term liabilities accumulated by part-time farm operators. However, making wide use of short-term credit for power machinery, buildings, and breeding livestock is not a recommended practice.

Two factors were uncovered during the field survey work which, although not numerically measurable, shed some light upon the reasons behind the “under-use” of long-term credit by part-time farmers. First, part-time farmers seem to feel that they were discriminated against

in applying for long-term farm credit. They expressed the belief that, because they received a large part of their income from nonfarm sources, many financial institutions regarded them as being outside of agriculture, and on this basis, advised them to seek long-term credit from nonfarm sources. Survey evidence that tends to support this belief is the reported source of long-term credit. Not a single part-time farmer reported banks, dealerships, or federal loan institutions as sources of long-term credit, yet these were frequently reported by commercial operators. The part-time farmers used the more unorthodox sources such as individual and “others” for long-term credit.

The second factor is a reluctance on the part of the part-time operators to carry long-term liabilities. Many of the farmers, especially the older individuals, feared attachment of their farm property, and, thus, would rather take their chances on short-term loans. Also, because of the belief of discrimination, they tended to hold off on investments requiring long-term liabilities. If long-term liabilities become necessary, they sought out credit sources which they considered to be more “tolerant and certain.” Therefore, in light of this information, the part-time farmers were not altogether at fault in their failure to utilize more fully the advantages of long-term credit where appropriate. A more detailed study of this problem than is possible in this analysis is desirable before any specific recommendation can be made.

d. Net Worth and Asset Liquidity

The final measure to be considered in this analysis of part-time farm financial structure is the net worth statement. Net worth indicates the absolute equity, in dollars, the farm family holds in its farm operation at any given point in time. It is an important measure since by comparing the difference between yearly net worth statements the farm operator can follow the growth (positive or negative) of his farm investment capital. Table 14 shows that the part-time farms of the Blackwater area increased their net worth by \$1,550 with the majority of the increase in subgroup A. Subgroups C and D had rather moderate increases but subgroups B and E, those with younger operators, underwent a small reduction in net worth. Thus, the part-time farms as a group enjoyed a higher gain in net worth (6.3 percent) than did the commercial farms (1.9 percent) and even disregarding the large influence of subgroup A they still had a gain of 1.3 percent.

Another important characteristic of the net worth statement is its use as a measure of farm asset liquidity, i.e. the ease and speed with which the farm assets can be converted into net cash. In this respect the net worth can be expressed as a percent (net worth ÷ total farm assets) and is commonly called the equity ratio; a measure of the ultimate solvency of the farm business assets by the farm operator. It is also a barometer of the net

⁹²More specifically “other” sources of long-term credit included Cooper County Abstract Co., building and loan associations, G.I. loans, and Federal Housing Authority.

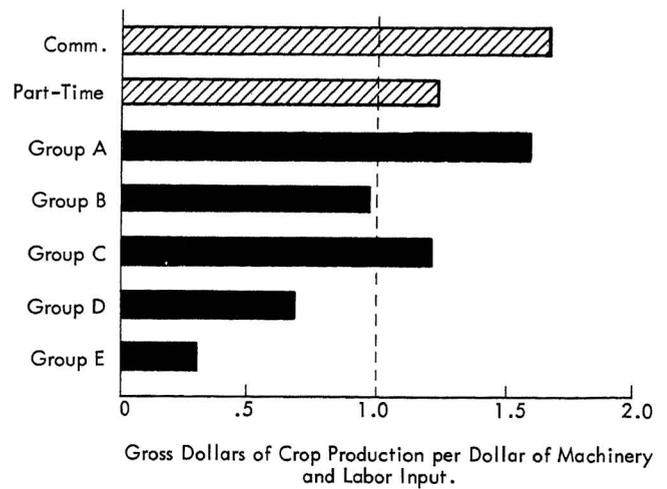
financial attainment of the farm family in its over-all operation.

All the part-time farmers, in spite of their relatively poor return on investment, have attained a very favorable equity ratio of 84 percent. This means that, given time to dispose of their farm assets without sacrifice of market value, the farm family would be able to keep \$84 out of every \$100 gross investment. It also indicates they are in a very strong position to borrow more operating capital if the need should arise.

The final measure to be considered in this net worth analysis is what is sometimes termed the "banker's ratios," ratios that express the speed of intra-farm asset liquidity and the degree of financial safety within the capital structure of the farm operation. The current ratio (current assets/short term liabilities) is a measure of immediate liquidity, i.e. ability of current assets to be sold quickly without sacrifice of value. In the same pattern the working ratio (current and working assets ÷ short-term and intermediate liabilities) measures the ultimate liquidity of the fixed assets. Part-time farms of subgroups B and C have a favorable balance of current, working, and fixed ratios; that is, they possess a favorable degree of liquidity and yet have a safe range between assets and liabilities over all time ranges.

Contrast the liquidity ratios of subgroups B and C with those of subgroups A and D (Table 14.) The farms of subgroup A have too narrow a ratio in both the current and working categories and too large a ratio in the fixed category. To correct this situation they should make more use of their fixed assets for credit security, and release some of the burden placed on current and working assets as financial backing. The opposite is true in subgroup D, where the current and working ratios are too large in relation to the fixed ratio. This means

FIG. 24—COMPARISON OF TYPES OF BLACKWATER AREA FARMS IN GROSS DOLLARS OF CROP PRODUCTION PER DOLLAR OF MACHINERY AND LABOR INPUT, 1959



that they would be wise to use their current and working assets more fully as backing for their credit needs to relieve the pressure on the fixed assets. However, as a group, part-time farmers tend to rely too much on short-term credit and to ignore, more than is advisable, long-term credit.

The Management Factor

So far this analysis of the part-time farm business has dealt with the three physical factors of production—land, labor and capital—each of which plays an important part in the farm operation. As important as these factors are, there is yet a fourth which takes precedence

TABLE 14 -- CHANGE IN FARM NET WORTH AND LIQUIDITY RATIO FOR PART-TIME FARMS AND PART-TIME SUBGROUPS

ITEM	Part-Time Farm Subgroups					All Part-Time Farms Average
	Group A Average	Group B Average	Group C Average	Group D Average	Group E Average	
Farm Net Worth (1-1-59)	\$77,482	\$21,571	\$11,649	\$ 8,659	\$ 2,341	\$23,039
Farm Net Worth (1-1-60)	85,711	21,379	12,224	8,892	2,218	24,589
Change in Net Worth	+8,229	-138	+575	+233	-123	+1,550
Liquidity Ratio						
Equity Ratio	84.9	79.3	88.9	86.4	87.7	84.2
Current Ratio	1.4	2.1	2.9	12.7	0.6	1.8
Working Ratio	2.4	3.9	6.2	19.3	3.6	3.2
Fixed Ratio	24.6	5.5	11.2	4.9	---	11.5

Source: Blackwater Data; 1959

over all, and that is the human factor or management.

Management on the family farm is, in theory, the responsibility of the entire family with major authority vested in the family head or the farm operator. The commercialization of the family farm, with the large investments in resources and the narrowing profit margins, has increased the need for competence on the part of the farm operator. More and more the success of a farm operation depends upon the ability of the farm operator to perform his management tasks as effectively and efficiently as possible.

Important as the management factor has become in modern agriculture, it remains the most difficult factor to isolate and measure. There is no tangible aspect of the farm business which can be separated out and labeled as management. The best that can be accomplished in a broad study such as this is to examine a variety of managerial indicators. In this respect, all the efficiency measures presented in the preceding analysis of the physical factors of production were indicators of management's effectiveness. Although these measures have revealed several structural weaknesses in the farm operation, they have not shown any conclusive deficiency that would yield such low incomes as those obtained by part-time farmers. Therefore, the weakest link in the part-time farm business must lie somewhere within the management factor. To analyze management in this study, it will be divided into two phases, (1) organization and (2) operation, which will be examined separately.

Part-Time Farm Organizations

The organizational phase of farm management is concerned with both the long-run and the short-run planning aspects of the farm business. This includes consideration of all alternatives and selection of the type and scale of crop and livestock enterprises which best fit the individual farm resources. Such an analysis should be made at the end of each year giving due consideration to costs, prices, availability of labor, capital requirements, etc. Thus, a good organization on one farm is not necessarily the best for another due to variation in resources.

It has been shown that part-time farms, with their short supply of labor, have begun to shift toward a more extensive farm enterprise organization. To examine this trend more closely, researchers computed the absolute quantity of production in each farm enterprise and then multiplied by given price constants.⁹³ This put all enterprise production on a comparable basis, and yet illustrated the importance of each enterprise in terms of gross dollar value. Table 15 presents the crop production data.

Looking first at the organizational aspects of the crop enterprises on part-time farms, it is evident that specialization has not made as much headway as the short labor supply and limited crop acreage would seem

to indicate desirable. It is true that part-time farms, as a whole, have shifted toward a more extensive crop organization, raising more roughages and less feed, cash, and seed grains than their commercial farm neighbors. Yet, the habits of former farm experience and the influence of the contemporary commercial farm environment have proven to be difficult barriers to overcome in the organizational adjustment to part-time farming. This point has been made before, but it is an extremely important factor and represents the most critical flow in the operation of the part-time farm business.

Feed grains ranked highest in terms of gross value of production on part-time farms although roughages were tops in terms of acres grown. Corn and milo proved to be the top ranking feed grains both in acreages and value of production. Roughage production patterns exhibited much variation with the larger farms (Group A and B) growing silages, hays, and rotation pastures while the smaller farms grew mostly hays to supplement the native pastures. Wheat and soybeans were the most important cash grain crops while part-time farmers in subgroups B, C, and D harvested small acreages of clover and grass seed to sell commercially.

All of these crops are competitive for land, labor, and capital, and the degree of competition increases as the quantity of the productive factors decreases; i.e., as the number of crop acres and the labor supply are reduced by part-time farming.

In addition, several of these crop enterprises require the use of costly specialized equipment which must receive large scale use to return even the ownership and operating costs. Therefore, remembering that the farm should be organized to utilize efficiently the available resources, it would be only logical for part-time farmers to reduce the number of crop enterprises in line with their resources.

The analysis of labor efficiency suggested that **part-time farms of the Blackwater area should not try to spread their resources over more than two crop enterprises.**⁹⁴ Some rough budgeting also supported this thesis, yet, 54 percent of the part-time farms in this study maintained three or more major crop enterprises exclusive of their rotation and native pastures. Since most of these farms do not have enough labor available to operate this many enterprises effectively, survey data indicates that the part-time operators have attempted to substitute capital in the form of machinery and equipment for labor in order to preserve their farm organization. (See Figure 23). However, Figure 24 demonstrates that, with the exception of subgroup A, the small crop acreages on part-time farms do not justify so much machinery investment even if labor is in short supply.

⁹³Missouri Agricultural Extension Service, "1961 Farm Business Planning Guide," University of Missouri, 1961.

⁹⁴This, of course, is a very general statement since the organization will depend upon the type of off-farm work and the size of farm. However, it is applicable to the majority of part-time farms under study.

TABLE 15 -- AVERAGE GROSS VALUE OF CROP PRODUCTION PER FARM BY PART-TIME AND PART-TIME SUBGROUPS OF THE BLACKWATER AREA; 1959

ITEM	Part-Time Farm Subgroups					All Part-Time Farms Average
	Group A Average	Group B Average	Group C Average	Group D Average	Group E Average	
Crop Enterprises						
Wheat	\$1,160	\$ 162	\$ 56	\$ 87	\$ 32	\$ 270
Soybeans	330	181	56	56	0	125
Clover & Grass Seed	0	10	15	25	0	11
Rye	4	0	0	0	0	1
Total: Cash and Seed Grains	1,494	353	127	168	32	407
Corn	3,489	878	711	149	70	1,002
Milo	622	234	236	0	130	233
Barley	149	34	0	17	0	37
Oats	0	74	38	0	0	27
Total: Feed Grains	4,260	1,220	985	166	200	1,299
Silages	752	311	0	0	0	203
Hays	814	433	87	100	0	285
Rotation Pasture	1,684	140	0	37	0	324
Open and Timber Pasture	634	106	134	98	68	193
Total: Roughages	3,884	990	221	235	68	1,005
Total: All Crop Enterprises	\$9,638	\$2,563	\$1,333	\$ 569	\$ 300	\$2,711

Source: Blackwater Data; 1959

Not only does Figure 24 illustrate the influence of low volume output on gross value received per dollar of machinery and labor input for both commercial and part-time farms, but it also shows that part-time subgroups B, D, and E did not even recover their machinery and labor costs. This means that part-time farm operators, by selecting more than two competitive crop enterprises and producing these crops on a small scale, have increased their operating costs to the point where, in many cases, it would be cheaper for the operators to purchase either their feed grains or roughages rather than to produce them. More information will be presented on the organizational problems of part-time farms in a follow-up study.

Livestock data presented in Table 16 gives somewhat the same picture of organizational diversification as the cropping system although the extent is not so great. Approximately 40 percent of the part-time farms carried two or more major livestock enterprises. The livestock organization should fit the crop organization and in this respect the part-time operators have planned well. To utilize and market their increased acreages of rough-

age, they have either beef cattle or sheep enterprises. They try to maximize their returns on feed grains by feeding out swine, cattle, or sheep.

The weakness of the livestock organization on part-time farms was in the combination of enterprises. Beef cow herds and a sow and litter swine system proved to be the most popular combination, and, also, the one that yielded lowest returns. The swine enterprise in almost all cases provided a positive net return, but the addition of 10-15 beef cows reduced the operating efficiency and increased operating costs to the point where the enterprise combination was not profitable. This was not true on the part-time units of subgroup A where the cow herds were larger and the swine were used to supplement the fattening of the calves (i.e. the pigs ran in the feed lots, feeding on waste grain, and then were fed out after the cattle were sold).

Although beef cattle consume large quantities of roughage, they require a high capital investment and receive a low rate of return (due to high wintering costs and slow rate of investment turnover). This means that beef cattle must be produced in such a large volume that



Sheep make one of the best part-time farm enterprises.

their inclusion in the livestock organization of part-time farms is questionable.

In general, the most profitable enterprise combination was either fattening of feeder calves and swine or swine and sheep. However, greatest returns, again exclusive of the large group A farms, were received on those part-time farms where efforts and resources were concentrated on only one livestock enterprise. Swine enterprises were most profitable, followed by sheep and feeder calves. Thus data from the Blackwater study area tends to support the statement by the North Central Farm Management Committee:

"From a management standpoint, it is highly questionable whether a part-time farmer should have more than one major livestock enterprise."⁹⁵

Graphic illustration of the validity of the one livestock enterprise thesis for part-time farms is given in Figure 25. On the basis of gross dollar returns per dollar of capital and labor input, Figure 25 shows that part-time operators were much more efficient in livestock than in

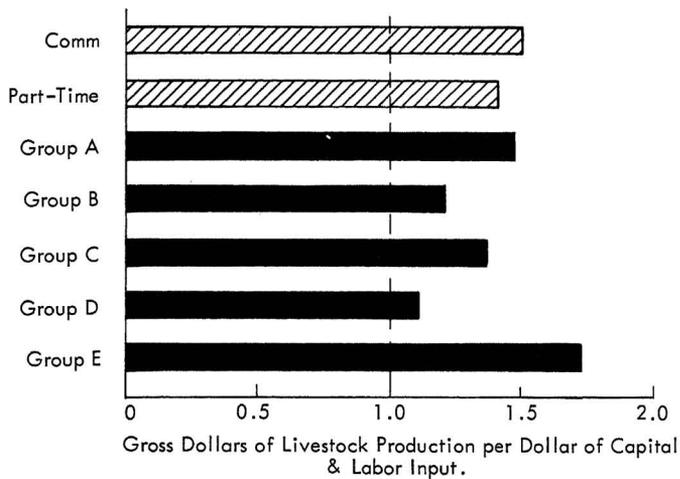
⁹⁵Hartmans, E. H., H. W. Herbison, G. Pulver, and B. F. Lanpher, "Part-time Farming: Possibilities and Limitations," North Central Regional Publication No. 7, June, 1959.

TABLE 16 -- AVERAGE GROSS VALUE OF LIVESTOCK PRODUCTION PER FARM BY PART-TIME AND PART-TIME SUBGROUPS OF THE BLACKWATER AREA; 1959

ITEM Livestock Enterprises	Part-Time Farm Subgroups					All Part- Time Farms Average
	Group A Average	Group B Average	Group C Average	Group D Average	Group E Average	
Beef Cattle	\$	\$	\$	\$	\$	\$
Cow Herds	2,447	433	268	123	0	603
Purchased Feeders	11,605	1,724	0	0	0	2,365
Total: Beef Cattle	\$14,052	\$ 2,157	\$ 268	\$ 123	\$ 0	\$ 2,968
Swine						
Sow and Litter	2,658	1,283	690	344	56	1,002
Purchased Feeders	260	275	298	52	0	190
Total: Swine	\$ 2,918	\$ 1,558	\$ 988	\$ 396	\$ 56	\$ 1,192
Sheep						
Wool	0	46	11	52	0	24
Ewe Flock	0	144	48	138	0	77
Total: Sheep	0	190	59	190	0	102
Total: Other Livestock (Dairy)	0	292	0	0	0	73
Total: All Livestock	\$16,970	\$ 4,197	\$ 1,315	\$ 709	\$ 56	\$ 4,335

Source: Blackwater Data; 1959

FIG. 25—COMPARISON OF TYPES OF BLACKWATER AREA FARMS IN GROSS DOLLARS OF LIVESTOCK PRODUCTION PER DOLLAR OF CAPITAL AND LABOR INPUT



crop organization. Returns above these costs were realized on all part-time subgroups. However, subgroup E, the smallest group in terms of farm size, received high enough gross returns to place them on a level with the best commercial farms in terms of organizational efficiency. These farm units concentrated their efforts on a sow and litter swine enterprise even at the expense of leaving their rough native pasture idle part of the year.

Their example shows that efficient organization can overcome the disadvantage of small size, and that buildings and equipment do not have to be elaborate for success in part-time farming.

Part-Time Farm Operation

Once the organization of the farm business has been determined, the second phase of management, or operation, takes over. Farm operation is concerned with the short-run or day-to-day decisions that must be made as the organizational plans are put into practice.

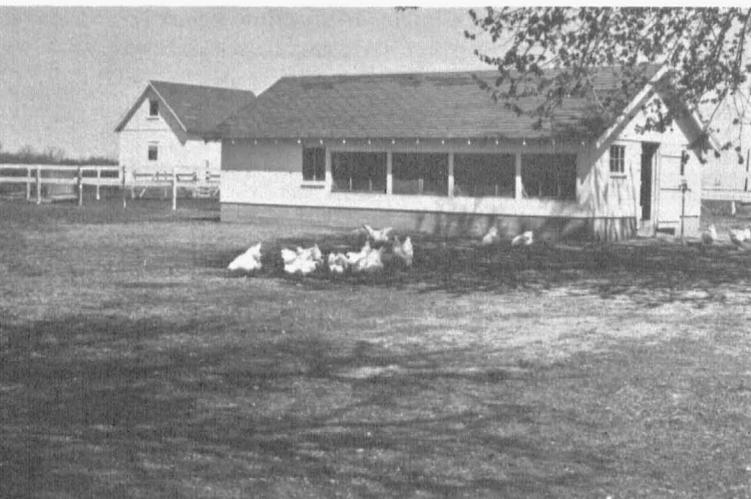
As with farm organization, the operational phase of management is very difficult to measure objectively. Perhaps the most commonly used indicator of the efficiency and effectiveness of a farm business operation is the year-end financial summary. After all, it is assumed that the time, money, and effort put into the farm business is for the expressed purpose of receiving a reasonable income in return. Therefore, the net farm and family earnings figure will be a reasonable indication of the farm operator's ability to manipulate his resources in competition with all other area farmers. The analysis will first examine the source of cash receipts and expenses on part-time farms before the short financial summary is presented. Total cash farm receipts are given in Table 17.

Following from the heavy emphasis placed on livestock in the farm enterprise organization, Table 17 shows that live-stock provided over 80 percent of the cash farm receipts. Since livestock are of such importance on part-time farms the breakdown of livestock receipts is given

TABLE 17 -- GROSS CASH RECEIPTS FROM THE SALE OF FARM PRODUCTS ON PART-TIME FARMS AND PART-TIME FARM SUBGROUPS IN THE BLACKWATER STUDY AREA

ITEM	Part-Time Farm Subgroups					Part-Time Farms Average
	Group A Average	Group B Average	Group C Average	Group D Average	Group E Average	
Cash Receipts	(6)	(9)	(6)	(8)	(5)	
Livestock Receipts:						
Beef Cattle	\$11,675	\$ 2,131	\$ 697	\$ 372	\$ 0	\$ 2,832
Swine	3,348	1,257	480	450	71	1,124
Sheep	0	196	53	119	0	89
Other (poultry and dairy)	0	302	130	57	0	116
Total Livestock Receipts	15,023	3,886	1,360	998	71	4,161
Total Crops Receipts	1,718	552	461	138	150	585
Other Receipts	152	759	132	50	20	266
Total: All Farm Receipts	\$16,893	\$ 5,197	\$ 1,953	\$ 1,186	\$ 241	\$ 5,012

Source: Blackwater Data; 1959



Poultry is a popular enterprise for part-time farmers—one that provides both food and income using family labor.

whereas the remainder is listed only by major headings. Beef cattle yielded 68 percent of the livestock receipts and swine were second at 27 percent. These two enterprises provided 95 percent of the livestock receipts and 79 percent of the total part-time farm receipts. On the larger part-time farms beef cattle were the most important source of receipts while on the smaller farms swine enterprises proved to be better income sources.

A surprising aspect of the livestock receipts was the fact that poultry and dairy receipts ranked above those from the sheep enterprise. This was unexpected because when the part-time farmers were asked to list their commercial livestock enterprises only two farms listed dairy and none listed poultry. A re-check of the records disclosed that most of the part-time farms kept 25 to 100 laying hens and from 1 to 4 milk cows to provide the family with eggs, meat, and milk. The sale receipts from

these two minor enterprises resulted from the sale of excess eggs and milk plus the sale of dairy calves and culled hens.

Crop receipts accounted for 12 percent of total gross farm receipts with cash grain sales (wheat-soybeans-grass seed) leading at 87 percent of the crop total. Sales of feed grains (corn, milo, and barley) made up 10 percent of crop sales with the remainder coming from hay and small specialty crops. Note that feed grains and roughages account for only 13 percent of the total cash receipts from farming, yet they made up 85 percent of the total gross value of crop production. This, of course, is due to the fact that almost all of this production was marketed through livestock, yet it is a good example of why gross sales often give a very distorted view of farm organization.

The general "other receipts" category is a "catch-all" and includes income from such sources as land and pasture rent, soil bank payments, gas tax refunds, and machinery and equipment rental. These items were of minor importance to subgroups A, D, and E but of significance in subgroups B and C where they ran up to 15 percent of total receipts. Total cash receipts reflect the magnitude and scope of farm operations with farms in subgroup A receiving almost \$17,000 in gross farm income whereas farms of subgroup E sold less than \$250 in farm products. However, the danger of drawing conclusions based on gross farm sales alone has already been pointed out. Therefore, the opposite side of the financial ledger (i.e. the cash farm expenditures) will be presented before any analysis is attempted.

Cash Expenses. The cash farm operating expenses of part-time farms were perhaps the most complex and variable information that researchers tried to analyze. In fact,

TABLE 18 -- TOTAL CASH EXPENSES RESULTING FROM THE OPERATION OF THE FARM BUSINESS ON PART-TIME FARMS AND PART-TIME FARM SUBGROUPS IN THE BLACKWATER STUDY AREA

ITEM	Part-Time Farm Subgroups					Part-Time Farms Average
	Group A Average	Group B Average	Group C Average	Group D Average	Group E Average	
Cash Expenditures						
Livestock Expenses	\$ 3,659	\$ 1,580	\$ 280	\$ 333	\$ 32	\$ 1,203
Crop Expenses	879	467	237	78	47	346
Labor and Machinery Hire	2,634	307	240	114	00	615
Building and Equipment Upkeep and Operation	2,028	801	356	207	14	684
New Investments and Replacement of Old Investments	14,364	2,259	1,154	961	193	3,591
Other Miscellaneous Expenses	1,432	692	301	164	24	532
Total Farm Expenses	\$25,032	\$ 6,106	\$ 2,568	\$ 1,857	\$ 311	\$ 6,971

Source: Blackwater Data; 1959

about the only consistency was that expenditures on new investments or the replacement of old investments drew the largest amount of cash outlays in each and every subgroup. This expense category accounted for 52 percent of all cash expenses and ranged from a high of 62 percent in group E to a low of 37 percent of the total costs in group B. For the larger part-time farms (subgroups A, B, and C) the greatest investment outlays were for livestock (77 percent) and new machinery (21 percent), suggesting that these farmers are trying to improve income by intensifying their efforts in crop and livestock enterprises. On the smaller part-time farms, the investment expenses were concentrated on providing buildings and equipment to improve the scale of their swine enterprises. Therefore both large and small part-time farmers are striving, through the addition of capital investments, to improve their farm operations.

Livesock expenses were perhaps the second most important operating cost, making up 17 percent of total expenses for the part-time class, but the variation was from 9 percent in Group C to 26 percent in Group B. Purchased feeds were by far the largest single item, accounting for 80 to 95 percent of livestock costs. This is in itself a strong indication of the organizational flaw in part-time farms in which the crop and livestock enterprises are not balanced. Further support of this view is the fact that subgroup B, the group which had the largest number of three crop and two livestock enterprise units put 24 percent of their total expenses into the purchase of feeds. This is nearly twice the percentage spent by group A operators who had much larger scale operations; and over three times the percentage used by group E with only one small livestock enterprise. As a result of this poor planning, group B farms had the lowest farm and family earning in the part-time class.

Along this same line the part-time group with the second most diversified operations (group D) also had the second highest amount of their total farm expenses in purchased feeds for their livestock operations (17 percent). Moreover, in line with their counterparts in group B, they ranked second lowest in total farm income. In fact, these were the only two groups that had negative farm and family earnings. It should not be construed that this is the only reason for the poor financial showing of these two groups, but it is certainly a big contributing factor. Had the crop and livestock enterprises been in closer harmony, livestock expenses would have been cut at least in half. The only other livestock expense item of any importance was veterinary and medicine fees but this was a very small part of the total farm expenses.

Cash expenses of the cropping operations were a small part of total expenses for part-time groups A through D, but the importance of the category increased as the scale of the enterprises decreased. For these groups, the largest cash outlays for the cropping operations were for fertilizers and lime (48 percent), closely followed by purchased seeds and plants (35 percent). Remaining costs were divided among cash rents, weed sprays, crop

insurance, etc. This was not true for group E farms, i.e. the part-time tenant farms. These farmers used no fertilizers and lime but incurred all their crop expenses on the form of cropland rent (74 percent) and purchased seeds and plants (26 percent).

An expense category closely related to the crop and livestock enterprise expenses is *labor and machinery hire*. These items made up 9 percent of total part-time farm costs, but exhibited a great deal of variation within the intraclass breakdown. Hired labor, as might be expected, was the big item for the part-time class (71 percent) but was directly related to the size of the part-time farm operation. Hired labor accounted for 80 percent of the cash spent for labor and machine hire on group A farms but the proportion decreased rapidly down to zero percent for those in group E. (Group E farms hired no labor or machinery.) However, as the importance of hired labor decreased the amount of custom work expense increased down through group D farms, which had a high of 76 percent for the category. This is only as it should be, but researchers feel that group E could have reduced their total operating cost considerably by spending more for custom harvesting instead of trying to own a complete line of equipment.

Building and equipment upkeep and operating costs ranked third among cost categories in the operation of the part-time farm business making up 10 percent of total expenses. For part-time groups A through C this category of expenses was divided as follows: One-fourth for operating supplies purchased; one-third for repairs and maintenance; one-third for fuels and lubricants; and the remaining one-twelfth for auto expenses (farm share). On the smaller part-time units (group D and E) the repairs and maintenance fell to one-fourth while fuels and lubricants jumped to one-half, and the operating supplies purchased decreased to one-twelfth. This change is directly related to greater inefficiencies of the smaller farm operations.

All cash farm expenses which did not fit into any of the categories above were listed under miscellaneous expenses, a heading that may be misleading. However, with the exception of farm taxes, insurance, and interest, these items (such as the farm share of operating utilities, storage costs for miscellaneous materials, legal fees, etc.) were less than 1 percent of the total operating costs. Miscellaneous expenses accounted for the final 8 percent of total part-time farm expenses, and 41 percent of this was in the form of interest payments on the farm debt. Part-time groups B and D paid out the highest proportion of their farm expenses as interest; they also had the lowest farm and family earnings. Better planning and use of credit could have reduced these payments for all part-time groups, and certainly for groups B and D.

Tax costs were directly related to the quantity and value of farm resources on which the farm family possessed legal claim. Therefore, since all part-time families owned approximately the same proportion of their farm

business, they paid out a consistent 2.5 to 3.0 percent of their total expenses in taxes. This was 25 to 36 percent of their miscellaneous expenses. Farm insurance was much more variable among groups, increasing in magnitude as the size of the farm decreased; group A spent 0.76 percent of their total expenses for insurance while group E spent 4.8 (fire and liability insurance for equivalent farmstead investments cost the same whether the farm has 10 or 1,000 acres). The farm share of the operating utilities was the only other miscellaneous item that was common to all part-time farms but was an insignificant share of the total farm expenses.

FINANCIAL SUMMARY OF THE PART-TIME FARM BUSINESS

Data necessary for computing a year-end financial summary for the part-time farm business now have been examined. Table 19 summarizes the data. It is obvious that every part-time farm group realized a negative cash balance from their farm operations. However, it is not so easy to diagnose the cause or to prescribe the cure. The problem is made complex by the extreme variability exhibited by the components of the part-time class. This means that even very generalized statements are full of loopholes. Yet it can be stated with a great deal of certainty the biggest factors behind the negative cash balance are unbalanced farm organizations and the inefficiencies of small scale operation. Even the operational deficiencies, such as improper use of credit, too much purchased feed, too little or too much dependence upon hired labor and custom work, etc., all result from the attempts of part-time operators to overcome these two disadvantages and make their farm businesses profitable.

The large negative cash balance on part-time farms is indeed a disturbing aspect, but the net farm and family earnings figure is all important in the financial balance sheet. This figure is computed by adding to the cash balance the net gain (or loss) in farm inventory plus the

value of all farm-produced items used by the farm family. Net inventory change was computed by subtracting the beginning inventory from the ending inventory. The importance of this figure to the farm business analysis is shown in Table 19 where group A units had a negative cash balance of over \$8,000 but this was counterbalanced by an \$8,200 gain in farm inventory. Groups C and D also had gains in inventory but not large enough to cover their negative cash balances. On the part-time farms of groups B and E (the younger operators), the sales of old inventory plus depreciation charges were greater than new investments leaving these farms with a small reduction in farm inventory.

The value of farm production used by the part-time farm family amounted to approximately \$400 per family, based upon the prevailing market value of all such products. This item was more important to the younger families than to the older farm families. Meat, milk, eggs, and fruits made up the bulk of home use products with beef and pork contributing the most in value.

The intra-class breakdown of net farm and family earnings shows a much brighter financial outlook than the original class statement of earnings. Three of the five groups had small but positive farm earnings.

Groups B and D both had negative earnings with the young farmers of Group B losing nearly \$550 per farm. Since these two groups constituted one-half the total farms in the sample, their losses outweighed the positive earnings of the three smaller groups, leaving deficit earning of \$18 per part-time farm. Attempts were made to identify reasons for these differences but none of significance could be found. With the low income realized from these part-time operations, substantial increases in both volume and efficiency would be necessary for shifting to full-time farming with adequate income for family living. However, such increases, with existing resources, would hardly be possible so it is not hard to see why these families have turned to off-farm employment for supplemental income.

TABLE 19 -- FARM FINANCIAL SUMMARY FOR COMMERCIAL FARMS; PART-TIME FARMS; AND PART-TIME FARM SUBGROUPS OF THE BLACKWATER STUDY AREA

ECONOMIC CLASS	Entries in Financial Summary (Average Amounts)					
	Cash Receipts	Cash Expenses	Cash Balance	Inventory Change	Home-Use Products	Net Farm & Family Earnings
Commercial Farms	\$13,092	\$12,511	\$ 580	\$ 949	\$ 518	\$ 2,048
Part-Time Farms	5,012	6,971	-1,959	1,539	402	-18
Part-Time Farm Sub-Groups:						
Group A	16,893	25,032	-8,139	8,229	383	473
Group B	5,197	6,106	-909	-138	502	-545
Group C	1,953	2,568	-615	575	349	309
Group D	1,186	1,857	-671	233	281	-157
Group E	241	311	-70	-123	422	229

Source: Blackwater Data; 1959

The Part-Time Farmer and The Non-Farm Business ⁹⁶

The steadily increasing movement of farm families into the part-time farming field has stimulated much interest in the type and amount of off-farm employment sought by, and available to, rural workers. Such information is essential to the agricultural extension workers who are charged with the responsibility of guiding the adjustment of these farm families. It also is of interest to people in business and industry who must bargain directly with these families for their business and their labor.

The objective of this chapter is to analyze the off-farm jobs and occupations held by part-time farmers and to examine the effect of off-farm employment on the part-time farms and on the entire Blackwater community.

MOTIVES BEHIND THE ENTRY INTO PART-TIME FARMING

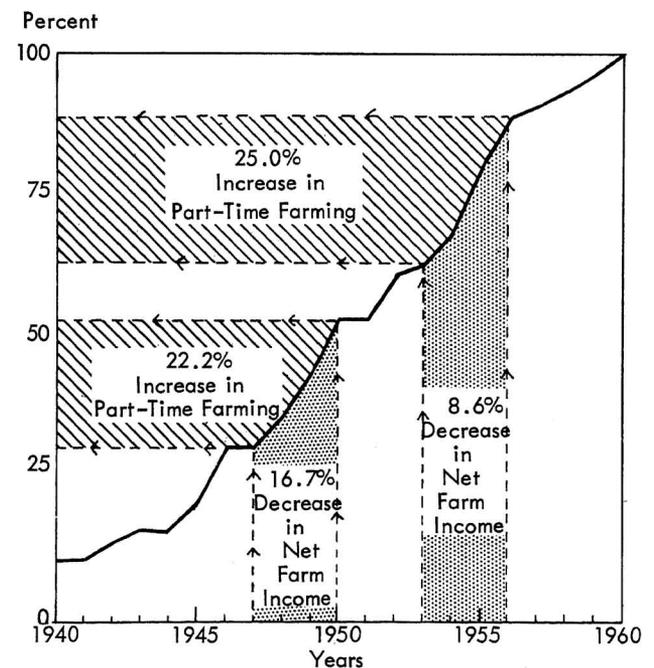
A helpful prelude to a detailed analysis of off-farm employment by farm families would be a re-examination of the underlying reasons and/or needs that motivated the shift into part-time farming. It was asserted in the introductory chapter that the movement of part-time farming into the open country was a direct result of the cost-price squeeze in agriculture: Inflationary pressures have forced the prices of farm inputs to rise at a faster rate relative to the price of farm outputs thus yielding the farmer a shrinking net income from agriculture. Data gathered in the Blackwater area gave strong support to this assertion. By plotting the year of entry into part-time farming for each such operation on a cumulative line, researchers were able to ascertain the rate of entry into part-time farming for the area over time. (Figure 26) Note that the two periods of most rapid and sustained entry into part-time farming (1947-50 and 1953-56) correspond exactly with the two periods of sharpest reduction in total net farm income.⁹⁷

Individual family reasons for entry into part-time farming varied from family to family, but were all closely related to a need for more income and their former family background. Earlier data established the fact that a majority of farm families presently engaged in part-time farming followed a similar entry pattern; farm to non-farm to farm to part-time farm. The following gen-

eralizations typify the adjustment problems which necessitated this group's decision to engage in part-time farming. First, they experienced difficulty in shifting from non-farm to farm income. The initial income earned by these families was from non-farm employment; therefore, their entire economic and social life was formed around and based upon, a known and relatively certain weekly, monthly, or yearly wage. Often both the husband and worked and their combined income was a net, since most of the claims against the income were deducted before receipt by the family. Upon transferring to full-time farming, these families found it difficult to re-adapt their living habits in line with a farm income which fluctuated widely from year to year and varied greatly from month to month. Also, the farm receipts were a gross from which no deductions had been made. Therefore, the family too often made purchases based on an estimated gross income rather than net earnings, leaving the farming operation with a deficit income at year's end.

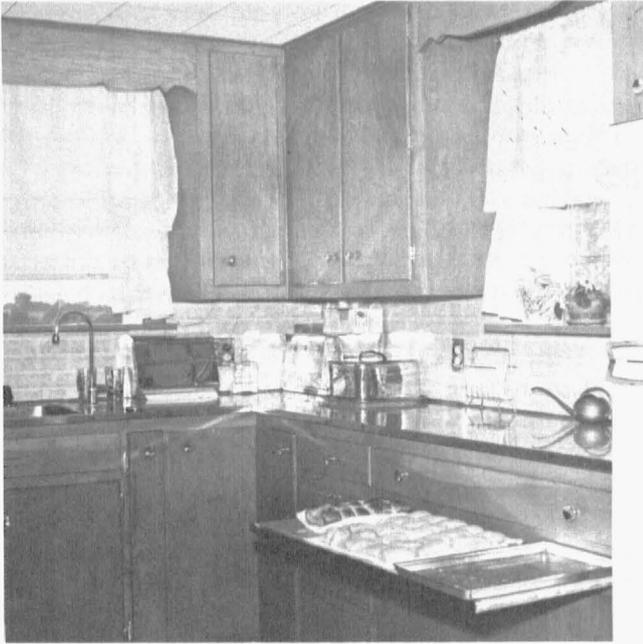
Secondly, it is obvious that deficit spending will lead to a steady rise in the farm liability level. Misguided

FIG. 26—CUMULATIVE FREQUENCY CURVE SHOWING RATE OF ENTRY INTO PART-TIME FARMING IN BLACKWATER AREA



⁹⁶Non-Farm Business is here broadly defined as encompassing all lines and levels of off-farm employment utilized by farm family members.

⁹⁷See Figure 1 in the Introduction for further comparison.



Part-time farming allows many small farm owners to enjoy modern living conveniences that would not otherwise be attainable.

farm investment purchases placed many farmers in immediate difficulty. All too many purchased a complete line of new equipment which could not be utilized effectively on their small acreages of 110 to 160 acres. Several made immediate investments in farm improvements such as new fencing, new buildings or new home improvements. These are investments which yield beneficial results over the long-run, but in the short-run place a heavy financial burden on the farm business. With this beginning difficulty of balancing consumption and investment expenditures with net farm receipts, many of these small farm operators could do no more than maintain a constant level of farm debt.

Thirdly, there was a strong desire, especially on the part of the farm wife, for a higher level of farm family living. Operation of a farm business which was engaged in a financial struggle for continued existence furnished little opportunity for purchases of a multiplicity of costly modern conveniences that had been taken for granted during their former off-farm employment. Installation of such systems as running water, sewage, air conditioning and central heating were planned, and then postponed from year to year. Even such items as TV sets, home freezers, modern cooking ranges or an occasional new suit of clothes seemed out of reach without an increased source of income.

Again, it should be pointed out that this is merely a generalized summary of the more common of the varied motives behind the shift of those farm operators who possessed a former history of off-farm employment into part-time farming. Not all individual farms suffered from

all or any of the above pressures. However, in light of the perplexing adjustment problem encountered by these families, one might justifiably wonder why they did not sell out and return to their former off-farm employment. Their reasons included the following.

First, they were in a poor bargaining position. It is no easy task to liquidate a farm business which is heavily mortgaged and still retain anything like the true equity invested in the operation. Also, there is seldom any money compensation forthcoming for sentimental or aesthetic values placed on the "old home place."

Second, they expressed a liking for farm life and a strong dislike for the "hustle and bustle," the "regimentation," the "lack of elbow room," which they had encountered in their urban employment.

Third, approximately two-thirds of these operators had been able to qualify only as unskilled or semi-skilled laborers. They feared the uncertainty and insecurity associated with this type of work.

Fourth, several, especially among the younger operators, felt certain that they "could make a go of it" as soon as their farm operation "got on its feet." To them, part-time farming was just a means to an end—the successful establishment in full-time farming. Finally, there seemed to be an element of pride involved—a feeling that they had been challenged, and they were not going to succumb to failure in a field where their fathers and/or brothers had previously succeeded.

Turning to the motives and aspirations of the group of farmers who shifted directly into part-time farming from a lifetime of full-time farming, there existed a considerable contrast. For instance, they were faced with an income problem but it was almost universally a case of inadequate resources to provide a volume of production large enough to maintain a desirable level of family living. These were older farmers who had operated their small commercial farms (40-120 acres) for more than 20 years and therefore were well aware of the problems of the cost-price squeeze and the commercialization of agriculture. Being older, they were more conservative than the group discussed above and carried little, if any, farm liabilities. Moreover, they were not willing to seriously consider any proposals to increase their farm business size or volume of production that would place them under sizeable long-term obligations.

Future retirement plans played a part in their decision to enter part-time farming. Few had participated in any type of retirement program and their level of savings was rather modest. Therefore, they felt a need to acquire additional income to invest "for a rainy day" or to establish an adequate level of reserves. A few openly stated that their primary objective in seeking off-farm employment was either to become eligible for social security or to increase their level of benefits under the program. There were also a few who wanted to make some final improvements in their farm home before retirement, al-

though this group had a farm family living index considerably higher than the average part-time farmer.

Of course, there were motives which fit no specific group and were scattered throughout all strata of part-time farm family groups. For instance, off-farm employment was a profitable way to utilize the periods of "slack time" in the farm operation. Some were offered a specific job and "just couldn't afford to turn it down." There was the desire "to give the children a better opportunity than we had," which more specifically referred to higher education. Some were caring for their elderly parents or other relatives. Excessive sickness or injury caused some to seek off-farm work to help with the medical expenses.

Regardless of the reason designated or motive behind the entry into part-time farming, the need for a greater volume of net family income was involved.

As for selling the farm business and moving to an urban or suburban residence, no single family in either of the groups described above indicated any such move in the near future. It is doubtful if they could purchase equivalent housing in the city and maintain a comparable level of living without increasing their expenses. As was shown in Chapter VII, the farm provided a high percentage of their food. An equivalent volume and quality would have cost considerably more at urban retail prices. For both groups, the farm business and the non-farm business, each in turn, provided a security hedge against unemployment. In case of an unexpected reversal in either, the family would still possess some means of livelihood. Finally, there was a life-time of community ties, strongly welded and highly valued, which many families considered as important as greater economic gain. This feeling was more pronounced among the older farmers than the younger operators. Thus, the longer a family lives and works in a specific community the more difficult it becomes to leave, even when beset by pressing financial problems.

Omitted from the analysis above were the part-time farm families who had achieved a high degree of success in a non-farm business or profession before moving directly into part-time farming. As a group, these farm families made up only a small proportion of the total (16 percent of part-time farms) and their motives were difficult to pinpoint. However, in addition to possessing a lucrative non-farm occupation these families also owned and operated a large farm operation. Therefore, need for added income was hardly a primary motive behind their entry into part-time farming. In fact, evidence indicated that the income from non-farm sources motivated the entry into farming. The farm operation served as an investment through which they could "cushion" the "tax-take" on their total earnings by the use of investment and depreciation allowances on the farm operation. For others, the farm served as a base of operation for both the farm and non-farm business; for example, veterinary service, trucking businesses, lumber mills, etc. Operated in this

manner, the farm served as a rural residence, as a base of non-farm operation, and as a farm unit; a most convenient way of cutting operating costs in the non-farm business.

ANALYSIS OF OFF-FARM EMPLOYMENT

Armed with this additional insight into the varied motives behind the entry into part-time farming, the analysis can now move into more specific details of off-farm employment. Looking first at the amount of off-farm employment by family divisions, Table 20 shows that all part-time farm families are active, to varying degrees, in non-farm work. Again, as in the farm operation, the heads of part-time farm families were the dominant participants with all but two of the part-time operators engaged in off-farm work. Even on commercial farms, 20 percent of the operators reported two weeks or more of off-farm employment. However, the off-farm employment of commercial farmers was on a much smaller scale than that of part-time operators. Note that in the part-time farm subgroups, the operators of the smaller farm units worked the largest number of days off the farm.

Twenty-seven percent of the part-time farm wives worked off the farm compared to only 10 percent of the commercial farm wives. Working wives of both groups spent one-third to two-thirds of their time at non-farm occupations and the remainder at their farm home. Again, it is noted that in the part-time subgroups, the proportion of working wives increases as the size of the farms becomes smaller, but the number of days worked at off-farm employment decreases. This inverse relationship is explained by the fact that these families have smaller farms and larger families, increasing the need for more off-farm income, but the increased duties of caring for larger families and/or younger children restricts the amount of time they can work.

A high proportion of "other family members," largely male children between 14 and 20 years of age, were engaged in off-farm work. The younger school age children worked at summer jobs while the older family members tended to work year-round. The same was true on commercial farms, although fewer sought any off-farm employment. Again note that the smaller part-time farm units had a larger proportion of their eligible members working more days at off-farm employment than the families on larger part-time farms. Moreover, those other family members, especially the children, were considerably younger on the smaller farms than on the larger units, indicating that the need for additional income forces the children to seek employment at younger ages.

The family units on part-time farms reported off-farm employment averaging 327 days per family. Thirty-five percent of the commercial farm families reported off-farm work averaging 175 days per family or about half the total time of the part-time units. The part-time sub-

TABLE 20 -- DAYS OF OFF-FARM EMPLOYMENT AND THE PERCENT OF THE FAMILY MEMBERS REPORTING FOR COMMERCIAL, PART-TIME, AND PART-TIME SUBGROUPS IN THE BLACKWATER STUDY AREA

Economic Class	Divisions of Farm Family Members*							
	Farm Operators		Farm Wives		Other Family Members		All Family Members	
	% Reporting	Days of Off-Farm Employment	% Reporting	Days of Off-Farm Employment	% Reporting	Days of Off-Farm Employment	% Reporting	Days of Off-Farm Employment
Commercial	19.4	45	9.7	158	34.1	185	34.7	175
Part-Time	97.2	218	27.3	183	63.6	162	100.0	327
Sub-Groups								
Group A	100.0	218	16.7	190	50.0	123	100.0	312
Group B	100.0	201	25.0	210	50.0	126	100.0	275
Group C	100.0	204	25.0	100	80.0	124	100.0	291
Group D	87.5	229	28.6	180	75.0	250	100.0	340
Group E	100.0	239	40.0	122	66.7	220	100.0	329

Source: Blackwater Data; 1959

*"Other Family Members" includes only able-bodied workers between 14 and 65 years of age.

groups exhibit a variation around the 300-day mark with the families of the smaller farm units working the largest number of days off the farm.

TYPES OF OFF-FARM EMPLOYMENT

Delving deeper into the analysis, researchers sought to separate the off-farm jobs and occupations into divisions which would most nearly indicate the true nature of the work, i.e. degree of skill, responsibility, training, etc. A breakdown into five major categories provided the most homogeneous groupings of off-farm occupations.

- (1) *Private Businesses*—In this category, the part-time farm family owned (or controlled) and operated the business, furnished all the management, and part of the labor.
- (2) *Skilled Services (salaried by month or year)*—These workers did not own the business at which they worked but held a high degree of authority and/or responsibility. These jobs and occupations required a level of training and skill not generally attained—a sort of skilled profession.
- (3) *Skilled Services (wage work by hour or job)*—This group differed from the salaried skilled services division in that its members held no position of authority and had a lower level of responsibility. Yet, they possessed enough skill and training to qualify as providing special services.
- (4) *Labor Services (salaried by month or year)*—workers in this group possessed no special skills beyond that of any other average worker in the area, and were hired on a straight salary basis.

- (5) *Labor Services (wage work by hour or job)*—Workers in this division were similar to those in (4), possessing no special skills or training beyond what could be gained in a short period of time. The primary difference between the two types of labor services is the method of pay. Obviously, there is a very narrow line between the divisions but the differences are rather insignificant since the primary objective is a separation into major job and occupation divisions, to illustrate types of work sought by part-time farm families.

OFF-FARM EMPLOYMENT BY PART-TIME FARM OPERATORS

To facilitate the study of off-farm employment by part-time farm families, the jobs and occupations held by each division of family labor will be examined separately. The part-time farm operators were the major participants engaged in non-farm work and therefore deserve first attention. Table 21 presents a summary of statistics on the part-time farmers in each employment classification. Table 22 gives a detailed listing of the jobs and occupations held presently by part-time farm operators, and the number reporting in each category. Table 23 gives the previous jobs and occupations reported by part-time operators.

The most significant aspect of the movement of farm families into part-time farming has been their ability to take advantage of every employment opportunity. They have been able to accomplish this in spite of an educational handicap—58.8 percent did not have a high school education and only 8.8 percent had received any

TABLE 21 -- PERCENTAGE OF PART-TIME FARM OPERATORS REPORTING IN EACH MAJOR EMPLOYMENT DIVISION AND A SUMMARY OF SELECTED CHARACTERISTICS OF OPERATORS IN EACH DIVISION

Major Employment Divisions	% of Farm Operators	Selected Characteristics					
		Average Age	Average Years of Schooling	Average Years of Experience	Average Days of Work	Average* Off-Farm Income	Average Return/Hr. Work
	(per cent)	(years)	(years)	(years)	(days)		
Private Business	23.1	54	10	30	237	\$2,781	\$1.17
Skilled Service (Salaried)	21.2	47	12	14	233	4,058	1.74
Skilled Service (Wage)	19.2	42	10	8	201	3,429	1.70
Labor Service (Salaried)	13.4	59	9	12	230	1,928	.84
Labor Service (Wage)	23.1	39	9	11	184	2,834	1.54
Total: Part-Time Operators Reporting	100.0	48	10.2	13	218	3,135	1.46

Source: Blackwater Data; 1959

* The private business income is a net income average

training beyond high school. The changing character of non-farm work created an additional problem, since the skill required for non-farm employment has greatly increased since World War II. Paramount in this adaptability has been an occupational flexibility gained from their farming experience. The commercialization of the family farm required the farmer to become an amateur in many lines of work—a jack-of-all-trades. Through their ability to capitalize on a variety of talents when the opportunity arose, part-time farmers were able to move into a wide range of employment. (Table 22)

Another important aspect has been the increasing availability of nonfarm employment in or around the Blackwater community. For example, in the era prior to World War II and immediately thereafter farmers who sought off-farm employment were forced to move to the larger cities, due to the scarcity of local nonfarm work. However, after World War II small industries—in Boonville a shoe factory and electrical company—moved into the larger country towns, creating new employment opportunities.

Development of these local industries facilitated the growth of part-time farming in the Blackwater study area in two ways. First, it created new jobs and occupations close to the community into which both farm and urban labor could move directly. Second, it brought about a shift in the jobs available to rural people. Prior to the rural industrialization, competition within the local labor force was intense enough to keep farmers out of most skilled or semi-skilled jobs. When the industries began operations, a short-run scarcity of labor developed in the community allowing the farmers to step into skilled and semi-skilled professions formerly denied them.

Tables 22 and 23 illustrate the ability and extent to

which the part-time farmers have been able to improve their status in off-farm employment. Seventy-seven percent of the jobs previously held by part-time operators fell within the labor services division. In 1959, only 36 percent of the part-time operators were in the labor service division while 40 percent were in the skilled services division. This improvement in employment status has assured the part-time operators a more consistent level of employment in addition to a one-third increase in off-farm income. Regardless of how they entered the non-farm labor force the importance of education in improving employment status is evident in Table 21; 60 percent of those with high school diplomas were in the higher paying skilled services while 54 percent with only an eighth grade education or less were in the lower paying labor services.

All the private business enterprises operated by part-time farmers were located either in the Blackwater community or close to the area. The businesses were small and had served the area for many years. The operators were older men, community leaders who felt that their farm operations helped them keep in touch with the needs and desires of their customers. This, plus the small size of their business, explains in large part their rather low earnings from their non-farm business. (Note that the private business income figure is a net income average.) It is significant to note that all the private businesses, as well as most of the skilled and labor service occupations, are either complementary or supplementary to the farming operations of the rural community in which they are located. This seems to suggest that the local industries have pulled in the skilled and semi-skilled urban workers, leaving the occupations serving agriculture to the part-time farmers and rural residents.

TABLE 22 -- OFF-FARM EMPLOYMENT OF PART-TIME FARM OPERATORS BY MAJOR EMPLOYMENT DIVISIONS AND OCCUPATION TITLES

Major Employment Divisions	Occupations by Title	No. Reporting	Major Employment Divisions	Occupations by Title	No. Reporting	
Private Business	Grocery store	2	Skilled Services (wage work by hour or job)	Truck and school Bus drivers	4	
	Garage (repair and maintenance)	2		Carpentry	2	
	Hardware store	1		Mechanic	2	
	Feed and seed store	1		Asbestos worker	1	
	Grain elevator	1		Veterinarian	1	
	Bank	1		Total Skilled Service (wages)		10
	Service station	1		Labor Services (salaried by month or year)	Farm worker	3
	Trucking business	1			Janitor	2
	Native lumber mill	1			Watchman	2
	Contractor	1		Total Labor Service (salaried)		7
Total Businesses		12	Labor Services (wage work by hour or job)	Factory workers	6	
Skilled Services (salaried by month or year)	State highway dept.	2		Construction workers	3	
	Teaching (secondary school)	2		Service station att.	1	
	Power plant supt.	1		Feed store worker	1	
	MFA exchange mgmt.	1		County road worker	1	
	County surveyor	1		Total Labor Services (wages)		12
	Rural mail carrier	1		Total Skilled Services (salaried)		11
	Elec. equip. servicemen	1		Total Labor Services (salaried)		7
	Baker	1		Total Labor Services (wages)		12
	Salesman (Insurance)	1		Total Skilled Services (salaried)		11
Total Skilled Services (salaried)		11	Total Labor Services (wages)		12	

Source: Blackwater Data; 1959

TABLE 23 -- PREVIOUS OFF-FARM OCCUPATIONS HELD BY PART-TIME OPERATORS IN THE BLACKWATER STUDY AREA

Previous Occupations Held	No. Reporting
Armed Service (over 3 years)	4
Factory Worker	4
Farm Hand	3
Mechanic	2
School Teacher	2
Trucking	1
Hatchery	1
Railroad (section hand)	1
Pile Driver (river work)	1
TOTAL	19

OFF-FARM EMPLOYMENT BY PART-TIME FARM WIVES

For many years, about the only off-farm employment attempted by farm wives was teaching the local schools. However, with the passing of the one room country grade school and the consolidation of the small town high schools fewer teaching opportunities were available. Therefore, farm wives were forced to look elsewhere for non-farm employment and in this respect the increased availability of local work following World War II helped the farm wives as much as it did the farm operators. Following the same patterns as their husbands in exploiting the existing employment opportunities, part-time farm wives are now engaged in a variety of jobs and occupations. (Tables 24 and 25.)

Although the increased availability of work facilitated the movement of farm wives into non-farm occupations, other factors probably were influential. The urban-

TABLE 24 -- PROPORTION OF PART-TIME FARM WIVES REPORTING IN EACH MAJOR EMPLOYMENT DIVISION AND A SUMMARY OF SELECTED CHARACTERISTICS OF WIVES IN EACH DIVISION

Major Employment Divisions	Percent of Working Wives per Division	Selected Characteristics				
		Average Age (years)	Average Years of Schooling	Average Days of Work	Average* Off-farm Income	Average Return/Hr. Work
Private Business	15.4	40	10	270	\$2,250	\$0.82
Skilled Service (salary and wage)	38.5	43	15	170	3,090	1.82
Labor Service (salary and wage)	46.1	35	10	155	1,374	0.88
Total No. Housewives Reporting Work	100.0	39	12	181	2,235	1.23

Source: Blackwater Data; 1959

*The Private Business Income is a Net Income Average.

TABLE 25 -- OFF-FARM EMPLOYMENT OF PART-TIME FARM HOUSEWIVES BY MAJOR EMPLOYMENT DIVISION AND OCCUPATION TITLE

Major Employment Divisions and Occupation Title	Number Reporting
Private Business:	
Beauty Parlor	1
Grocery Store (partnership)	$\frac{1}{2}$
Total	2
Skilled Services (Salary and Wage Work)	
Teaching	3
Nurse (LPN)	1
Secretary	$\frac{1}{5}$
Total	5
Labor Services (Salary and Wage Work)	
Factory Work	3
Store Clerk	2
Housekeeper (maid)	$\frac{1}{6}$
Total	6

Source: Blackwater Data; 1959

zation of the countryside introduced many modern conveniences—purchased with the husband's non-farm income—to reduce the housekeeping workload. Also, the increased absence of the husband due to his off-farm employment, along with the hot lunch program of the schools, reduced the amount of cooking and lunch packing required of the housewife, giving her more flexibility in performing the housekeeping duties. Instead of three meals per day plus the preparing of school lunches, she now had only two meals and no lunches to prepare. For others, the children had grown up and married or become self-sufficient, increasing the possibility of moving into nonfarm employment.

An additional factor contributing to the feasibility

of non-farm employment for part-time farm wives was the fact that, as a group, they were not as handicapped by a lack of education as were their husbands—two-thirds of the working wives had a high school education or better. School teaching continued to be the most remunerative off-farm occupation of the farm wives although all skilled services brought a much higher rate of pay than the fields of private business or labor services. The wives in private business received the lowest returns per unit of time employed but had the benefit of job security. Wives who worked in the labor service division received a somewhat higher rate of pay but were employed only on a part-time basis.

OFF-FARM EMPLOYMENT BY "OTHER" FAMILY MEMBERS ON PART-TIME FARMS

Previous analysis revealed that part-time farm families were larger than those on commercial farms and that 30 percent more of the part-time family members were engaged in off-farm employment. The majority of "other" family members on part-time farms who worked off the farm two weeks or more were more than 18 years of age. They were family members who had completed their schooling and entered the local labor force, while continuing to maintain their residence with the family. The work reported by the younger children (14-18) was all summer work in the local community. (Tables 26 and 27.)

There are two principal facts shown in Tables 26 and 27 with respect to the off-farm employment of "other" family members on part-time farms. First, the young age at which the school-age children enter the working force, even on a reduced basis. This, of course, is due to the small size of the farms and the abundant supply of family labor via large families. With little working time required on the home farm, these young workers have sought seasonal employment on the neighboring commercial farms. Second, the post-school age

TABLE 26 -- PROPORTION OF "OTHER" FAMILY MEMBERS* ON PART-TIME FARMS REPORTING IN EACH MAJOR EMPLOYMENT DIVISION AND A SUMMARY OF SELECTED CHARACTERISTICS OF MEMBERS IN EACH DIVISION

Major Employment Divisions	Percent of Other Household Members Working Per Division (percent)	Selected Characteristics				
		Average Age (years)	Average Years of Schooling	Average Days of Work	Average Off-Farm Income(\$)	Average Return/Hr Work(\$)
Private Business				(None Reporting)		
Skilled Services (salary and wage)				(None Reporting)		
Labor Service (Family members under 18)	35.7	16	10	92	470	0.51
Labor Service (Family members 18 or over)	64.3	23	11	200	1,640	0.82
Total: Part-Time Family Members Reporting	100.0	20	11	158	1,193	0.75

Source: Blackwater Data; 1959

*"Other" family members includes only able-bodied workers between 14 and 65 years of age.

TABLE 27 -- OFF-FARM EMPLOYMENT OF "OTHER" FAMILY MEMBERS* ON PART-TIME FARMS BY MAJOR EMPLOYMENT DIVISION AND OCCUPATION TITLE

Major Employment Divisions	Occupation	Number Reporting
Private Business	(None Reported)	
Skilled Services (salary and wage)	(None Reported)	
Labor Services (Family members under 18)	Farm Work	4
	Drive-in Waitress	1
	Total Labor Services (Family members under 18)	5
Labor Services (Family members 18 or over)	Factory work	4
	Construction work	1
	Store clerk	1
	Service station work	1
	Freight worker	1
	Farm work	1
Total Labor Services (Family members 18 or over)		9

Source: Blackwater Data; 1959

*Other Family Members includes only able-bodied workers between 14 and 65 years of age.

family members are all engaged in the low wage labor services division. Being young they have had no formal training in any trade or skill and, therefore, find it difficult to compete with the older, more experienced members of the local labor force.

The future for these workers in the Blackwater community is rather dismal due to the lack of opportunity to advance their employment status. Few would be able to accumulate enough capital to farm, even if the income situation in agriculture should improve. Without

technical training, more education, or expansion of the industrial facilities, all of which are not likely in the near future, these workers face the nebulous prospects of working their way up through the ranks as their parents have had to do. This involves a long period of hard work and low salaries as exhibited by their present earnings.

Many of the area's young people who have had more opportunity for advanced training have migrated to urban centers seeking higher pay, leaving the community with a declining population. The problems of young people who wish to remain in the local area if suitable employment can be provided are rapidly becoming a concern of all rural area residents. What can be accomplished is beyond the scope of this analysis but bears important implications to part-time farming as well as the area's adjustment and development.

COMMUTING PATTERNS AND COSTS

Farm workers who live in the agricultural hinterland and are employed in the urban sector necessarily become commuters in the broadest sense of the term. The fact that commuting involves a high use of time and money is not commonly appreciated by either the rural workers or their advisors. For instance, few part-time farmers in the Blackwater area could give anything other than a rough estimate concerning their yearly commuting time, mileage, or cost. Such disregard for the commuting costs associated with off-farm employment causes the workers (and some researchers) to over-state the actual disposable income received from non-farm work. In the Blackwater community, located beyond the boundaries of any industrialized county town, the quantity of travel necessary for commuting to any major source of employment becomes an item of primary importance, and the income overstatement distorts the financial well-being of the rural workers.

Even if the commuting costs are adequately evaluated, the long distance to a work source leaves the rural workers at some disadvantage, though not as much today as formerly. There are several offsetting factors which tend to minimize the rural disadvantage. First, by operating a part-time farm, only half of the value of the family car and the complete value of any pick-up or other truck is assigned to the farm operation. This reduces considerably, the operating costs charged against the income from non-farm employment. Secondly, the road systems of rural areas have greatly improved since World War II. The modernized road system which serves the Blackwater area was an asset in favor of the rural workers. There were six hard surface routes (Interstate 70, U.S. 40, Missouri 41, and state-county routes DD, K, and Z), plus an extensive system of all-weather gravel routes. Such improved road systems have done much to equalize work opportunities among rural and urban residents, by reducing commuting time and costs.

Third, and possibly most important, the intermediate location tends to reduce the "work location bias" which restricts employment opportunities of workers living in the rural-urban fringe. Workers who live close to a major source of employment will usually seek work close to their homes, while disregarding or ignoring all other employment opportunities. Rural workers who live in an intermediate location have no such locational bias; therefore, they tend to consider all alternatives more carefully, since they will be forced to commute a considerable distance in any event. Thus, free of the "work location bias," farmers of the Blackwater area have a much wider choice of employment with which they may counter their distance disadvantage. The extent to which all part-time farm family members exercise their choice in regard to work location is shown in Figure 27.

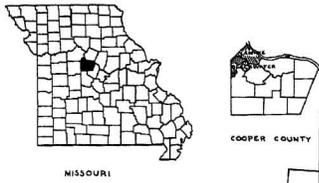
Data in Figure 27 illustrates the broad expanse over which part-time farmers commute, yet a majority (52.2 percent) of the commuting was within the study area. The remainder was divided between the intermediate area (27.3 percent) and the outlying area (19.4 percent). Travel within the area ranged from zero miles where the members performed the non-farm work on the farm unit, to area-wide work (carpentry, trucking, veterinarian, etc.) which averaged 16.8 miles per round trip. The town of Blackwater drew the largest number of commuters within the area while Boonville, the county seat, drew the largest group of workers out of the area. The amount of travel and the associated costs of nonfarm commuting are presented in Table 28 by major family divisions.

There was no significant difference between the average number of commuting miles traveled per day by part-time farm family members or between part-time farm families and commercial farm families. Using a constant cost figure of 7 cents per commuting mile there was no significant difference in the daily commuting costs, which averaged around \$1.46 per day. However, there was considerable variation in the yearly commuting costs due to the differentials in days of nonfarm employment among the divisions.

More importantly, a decisive relationship appeared between the amount and type of non-farm employment and the importance of commuting costs. Part-time farm family members who maintained steady employment, and thus a higher yearly income, payed out between 8 and 12 percent of their off-farm earnings in commuting costs. Inversely, those who worked only intermittently at lower rates of pay were forced to pay out 18 to 30 percent of their off-farm earnings in commuting costs.

These figures do not include charges made for the loss of time involved in commuting, but for the workers who must travel 20 to 30 miles per day this is no small matter when considered on a yearly basis. Therefore, it would seem advisable that part-time farm workers give more weight to commuting costs in making future de-

LOCATION OF AREA



COMMUTING FLOW CHART BLACKWATER - LAMINE TOWNSHIPS COOPER COUNTY MISSOURI

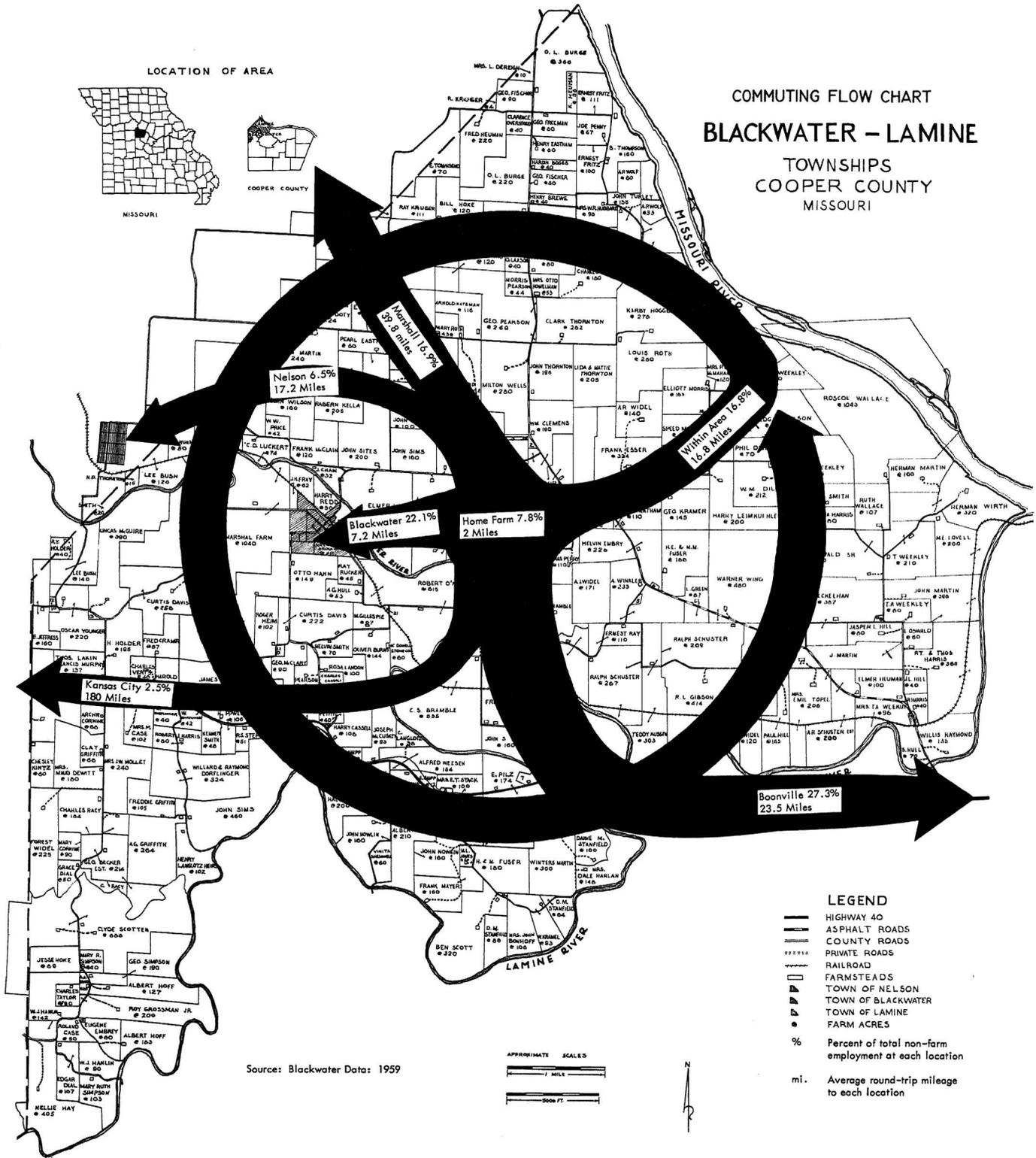


Fig. 27

TABLE 28 -- NUMBER OF PART-TIME FARM FAMILIES REPORTING TRAVEL TO OFF-FARM EMPLOYMENT; COMMUTING MILES/DAY, AND COMMUTING COSTS/DAY AND /YEAR

ITEM	Part-time Farm Family Member Divisions			All Part- Time Farm Members	All Com- mercial Farm Members
	Farm Operators	Farm Wives	Other Family Members		
Number Reporting	51	12	14	77	43
Average Commuting Miles/Day	20.4	20.8	23.6	21.0	20.8
Average Commuting Costs/Day	\$1.43	\$1.46	\$1.65	\$1.47	\$1.46
Average Commuting Costs/Year	\$311	\$266	\$268	\$276	\$188
Commuting Costs as % of Total Off-Farm Income	10.0%	12.0%	24.2%	11.1%	18.8%

Source: Blackwater Data; 1959

cisions concerning off-farm employment than they evidently have in the past.

NONFARM INVESTMENTS

There is yet another aspect of the non-farm business which should be examined before a final analysis of the nonfarm income—the investment in nonfarm assets. Personal interviews revealed that beyond the sizeable farm business investments made by both commercial and part-time farmers, there has been a gradual increase in their holdings of nonfarm investments.

In the prosperous years during and after World War II, and again during the Korean war, farmers, like workers in other segments of the economy, invested a portion of their earnings in nonfarm assets, i.e. stocks, bonds, real estate, life insurance, etc. They soon discovered that such investments had several advantages for them: a profitable method of saving; a hedge against the inflationary spiral; a source of income in years of adverse farm earnings; and backing or security for borrowing additional funds. During years of favorable farm income, the earnings from off-farm investments could be reinvested. Then, in years of low farm returns, the accumulated earnings from outside investments would be available to supplement farm income.

Although both commercial and part-time farm families hold a substantial amount of nonfarm assets, Table 29 reveals a significant difference in the type of investments and, thus, in how their asset earnings are reported. Commercial farmers list stocks (cooperatives and credit institutions), bonds (U. S. savings, state and local), and

real estate (urban housing and non-area farmland), respectively, with the income generally reported in terms of dividends, interest, and rents. The part-time farmers reported nonfarm real estate (used in nonfarm businesses such as stores, filling stations, or garages), stocks (industrial and cooperatives), bonds (U.S. savings), and household and personal property. The earnings from the nonfarm assets of part-time farmers were more difficult to pinpoint, but were largely represented by the earnings from nonfarm businesses and professions, plus a modest level of returns in the form of interest, rents, and dividends.

Returning to the intra-class breakdown of part-time farms introduced in the previous chapter, Table 29 exhibits the same trend as shown in the farm business investments; i.e., group A farms have high investments while group E farms have little or no investment. However, as a group, 72 percent of part-time farmers had money invested in some form other than household and personal property, compared with only 53 percent for the commercial farm operators.

A final aspect of the nonfarm investments is shown in the short Net Worth statement (Table 30). Part-time farmers have been able to keep their nonfarm investments relatively free of liabilities. In fact sub-groups B and C reported no nonfarm liabilities while for Group A the debt claims amounted to less than 2 percent of the gross investment. The two smaller sub-groups (D and E) had higher liability levels but, as a group, part-time farmers maintained a low 3.5 percent debt level against their nonfarm investments. Commercial farmers also had a low

TABLE 29 -- CASH VALUE OF ALL NONFARM INVESTMENTS BY PART-TIME FARMS AND PART-TIME FARM SUBGROUPS OF THE BLACKWATER STUDY AREA

ITEMS	Part-Time Farm Subgroups					All Part-Time Farms
	Group A	Group B	Group C	Group D	Group E	
Stocks and Bonds						
% Reporting	50.0	22.2	28.6	37.5	00.0	28.3
Average Investment	\$14,700	\$1,012	\$ 300	\$ 400	\$ 000	\$4,793
Non-Farm Real Estate						
% Reporting	50.0	22.2	57.1	12.5	00.0	28.3
Average Investment	\$ 9,667	\$9,000	\$7,250	\$20,000	\$ 000	\$9,600
Life Insurance (Cash Value)						
% Reporting	50.0	44.4	57.1	25.0	00.0	37.1
Average Investment	\$ 7,500	\$1,750	\$1,100	\$ 1,250	\$ 000	\$2,769
Household and Personal Property						
% Reporting	100.0	100.0	100.0	100.0	100.0	100.0
Average Investment	\$ 4,333	\$3,456	\$2,857	\$ 2,625	\$2,500	\$3,160
Other Investments						
% Reporting	50.0	00.0	00.0	00.0	00.0	8.5
Average Investment	\$ 9,239	\$ 000	\$ 000	\$ 000	\$ 000	\$9,239
Total Non-Farm Investments						
% Reporting	100.0	100.0	100.0	100.0	100.0	100.0
Average Investment	\$24,886	\$6,458	\$7,714	\$ 5,588	\$2,500	\$9,094

Source: Blackwater Data; 1959

TABLE 30 -- NET WORTH STATEMENT FOR NONFARM INVESTMENTS BY COMMERCIAL FARMS, PART-TIME FARMS, AND PART-TIME FARM SUBGROUPS

ITEM	Part-Time Farm Subgroups					All Part-Time Farms	Commercial Farms
	Group A	Group B	Group C	Group D	Group E		
	(Avg.)	(Avg.)	(Avg.)	(Avg.)	(Avg.)	(Avg.)	(Avg.)
Avg. Non-farm Investment	\$24,886	\$6,458	\$7,714	\$5,588	\$2,500	\$9,094	\$6,973
Debt on Nonfarm Assets	333	000	000	875	520	322	412
Net Non-farm Investment	\$24,553	\$6,458	\$7,714	\$4,713	\$1,980	\$8,772	\$6,561

Source: Blackwater Data; 1959

liability level equal to 6 percent of their gross nonfarm investments. Such a low level of liabilities indicates that the farmers want to keep this supplemental income as near debt-free as possible.

TOTAL NONFARM INCOME

Nonfarm income was defined earlier as the sum of two income sources: (1) Off-farm income and (2)

nonlabor income. Off-farm income is derived from employment at nonfarm occupations, and is received by the farmers in the form of wages or salaries. The foregoing analysis has examined the off-farm employment of farmers for each individual family member and by type of employment. To complete the analysis of off-farm employment the data need only be presented on a per farm family basis. In Table 31, off-farm family income is presented in both gross and net forms in order that the in-

TABLE 31 -- TOTAL NON-FARM INCOME RECEIVED BY COMMERCIAL, PART-TIME, AND PART-TIME SUB-GROUP FAMILIES OF THE BLACKWATER STUDY AREA

Economic Class	Gross Off-Farm Income/ Family	Net Off-Farm* In- come/Family	Nonlabor Income/ Family	Total Net Nonfarm Income per Family
	Average \$	Average \$	Average \$	Average \$
Commercial Farms	\$ 509	\$ 321	\$247	\$ 568
Part-Time Farms	4,020	3,597	367	3,890
Group A	4,080	3,780	697	4,477
Group B	3,614	3,179	274	3,453
Group C	3,611	3,228	600	3,828
Group D	4,247	3,883	280	4,163
Group E	4,090	3,545	000	3,545

Source: Blackwater Data; 1959

*Total income from non-farm employment minus commuting costs.

fluence of commuting costs might be shown on a family basis.

It is evident that even after subtracting commuting costs the net off-farm income per family unit is sufficient to provide the part-time farm family a substantial level of living as measured by the \$3,000 per year standard of the Missouri Extension Service. Off-farm income was of minor importance for the larger commercial farm families but increased in importance as the size of farm decreased.

Other than quantity, the major difference between the off-farm incomes of commercial and part-time farm families resulted from the variation in income origination within the family unit. On part-time farms the major portion (76 percent) of the off-farm income was earned by the farm operator, with a lesser share from the farm wife (14 percent) and "other" family members (10 percent).

Almost the complete opposite was true of commercial farms where, as a rule, only one family member received nonfarm employment income. "Other" family members earned 54 percent of the off-farm income, whereas the wife received 24 percent and the farm operator earned the remaining 22 percent. In other words, the operators of part-time farms are the "bread-winners" at both the farm and nonfarm business; whereas, on commercial farms the farm operator cares for the farm business and the remainder of the family handle the nonfarm employment.

The intra-class breakdown of part-time farms showed very little variation except for groups A and B. Group A families were older and all worked, thus, reducing the percentage of the total off-farm income provided by the farm operator to 68 percent. In group B the opposite was true. The predominantly younger families increased the off-farm income by the operator to 84 percent of the group total.

Nonlabor income—the second source of nonfarm income—is the sum of all income not connected with

the farm operation and not requiring physical effort. This is a minor source of income for both commercial and part-time farm families as aggregated classes. Only 32 percent of the commercial farms reported any such income and, surprisingly enough, it was the larger and the smaller farms which reported it. For the large commercial farms the nonlabor income was exclusively interest, rent, and dividends. On the other end of the scale, small commercial farms received their nonlabor income in the form of social security, unemployment compensation and pensions.

Part-time farms received more nonlabor income in aggregate (Table 31), but wide variations prevailed among groups as well as sources. Those in group A received two-thirds of their nonlabor income from interest rent, and dividends and one-third from retirement funds. The only source of nonlabor income for those in group B was from social security payments to dependent parents. Three-fourths of the nonlabor income in group C was for interest, rent, and dividends and the remainder from social security. Group D members received small amounts of social security and interest payments. Those in Group E (the youngest family group) did not receive nonlabor income in 1959 due mainly to the fact that they had not yet established eligibility or accumulated enough savings to yield any returns. It is significant to note that not a single part-time farm family reported any welfare payments, nor were any such payments badly needed.

By totaling the net off-farm and nonlabor incomes in Table 31, a total net nonfarm family income is derived. Nonfarm income for part-time farm families accounted for 47 percent of their total gross receipts, or more importantly, 101 percent of the net family receipts. (The latter figure is more than 100 percent because part-time farm families lost money on their farm operations). Total net nonfarm income for the part-time class was \$3,890 per farm family, with 92 percent of this from off-farm employment. Average nonfarm income ranged from

a low of \$3,453 in group B to a high of \$4,477 in group A. These nonfarm family incomes placed all the part-time farms within the top one-half of all area families in terms of net income.

Nonfarm income was not nearly so important for commercial farms, accounting for only 6 percent of total gross receipts, but jumping to 20 percent in terms of net receipts. This would seem to indicate that, if only real income is considered, nonfarm income would become a factor of primary importance to the commercial farmers. In fact, when the data for both commercial and part-time farms were combined, nonfarm income made up 14 percent of the total gross receipts and 45 percent of the net

receipts. Adding the income of the part-retirement families to the area total, boosts nonfarm income to 16 percent of the gross area income and to 47 percent of the net area income.

With almost 50 percent of the real income of rural families coming from nonfarm sources, there is no longer any valid grounds for agricultural policy makers and administrators to scoff at this trend as "only temporary" or to ignore it as "no concern of agriculture." The time is long past due for Extension and other rural workers to recognize the fact that industry and agriculture are becoming more and more an integrated complex, each segment dependent upon the other.

Summary

This study of part-time farming represents one phase of a long-range and comprehensive area study of family farm adjustments. The study area includes all of the Blackwater and Lamine townships of Cooper County, Missouri—usually referred to as the “Blackwater area.”

The purpose of the over-all research project was to identify and study the problems encountered by farm families in the area in adjusting to changing economic, technologic and sociologic conditions. Much of the basic data for the study was gathered through personal interviews with most of the farm operators in the area in 1960 and 1961, covering 1959 operations. This initial survey revealed a rather large number of part-time farming units and stimulated interest in a special study of problems peculiar to these kinds of operations. This publication covers the results of the analyses. Highlights include:

1. Part-time farming is not a new method of farming and rural living. It has evolved through many centuries and generations.

The pattern of part-time farming has changed with the economic and technologic conditions.

2. Part-time farming represents a growing segment of U.S. agriculture. This study indicates that the number of farm families engaging in part-time farming is far greater than revealed by U.S. Census data, which is based on out-dated definitional concepts.
3. Part-time farming constituted 27 percent of the 183 classifiable farm operations in the Blackwater area in 1959, even though it is far removed from any major industrial development.

In addition, almost 20 percent of the commercial farm operators reported an average of 45 days of off-farm employment. As compared to full-time farmers, part-time operators averaged considerably younger and they and their families comprised 28.5 percent of the labor force in the area.

4. Both commercial and part-time operators approached full employment (300 work days per year). However, commercial operators spent 97 percent of their working days at farm labor, compared to only 27 percent by part-time operators.

Part-time farmers were more efficient than full-time operators in the utilization of farm labor. Their PMWU per man-equivalent averaged 310 days in contrast with 247 for the commercial operators.

5. Part-time farmers control a substantial part of the farm land acreage in the area (17.6 percent), more than any other single economic class. However, this ownership represents smaller farm units and land of lower quality as measured by value per acre and productivity.

6. Resources (excluding labor) on part-time farms were used less intensively than those of commercial units. This helps explain the relatively low contribution made by part-time units to total area production.

Both crop and livestock production patterns closely paralleled those of full-time farmers in the area. However, the analysis revealed an inverse relationship between the amount of time spent at off-farm work and the intensity of farming operations.

Part-time operators who concentrated their efforts on only one or two crop enterprises and one livestock enterprise realized highest returns from their scarce resources (labor, capital, and management).

7. Total farm assets of part-time farm operators averaged considerably lower than those of full-time farmers in the area—\$28,454 as compared to \$50,264 per farm unit. However, distribution of farm assets was quite similar for both types of operations.
8. Livestock and livestock products accounted for more than 80 percent of the cash receipts from both part-time and full-time farming operations in the Blackwater Area in 1959.

Cash expenditures were high for all classes of farms in the area but one-half of these cash outlays were for new farm investments.

9. Farm and family earnings (a measure of net farm income) for all commercial farms averaged about \$2,000 per farm but part-time operators just about broke even with negative earnings of \$18.00 per farm.

Part-time farm families, however, fared much better in terms of total net family income. Their combined total of farm and nonfarm income amounted to \$4,400 per family, placing them in the high income Group within the two-township study area.

10. The higher net family income available to farm families on part-time farms permitted a level of living

above that of other farm units of comparable size and investment.

11. The large amount of time required by the division of the family labor force between farm and nonfarm employment restricted the participation and leadership of part-time farm families in community activities.
12. For most farm families operating on a part-time basis in the Blackwater area, the combination of farm and nonfarm work is not a short-term, transitory situation. They have operated on this basis for an average of 12.5 years per family.

13. Individual family motives for entry into part-time farming varied greatly but all were closely related to pressures for more income and to family background, experience, and interests.
14. With no major industry to provide employment near at hand, part-time farm operators and other family members performed a wide variety of off-farm jobs.

Likewise, the prevailing situation required considerable travel to nonfarm work, averaging more than 20 miles per day for all family members engaged in off-farm employment.

Conclusions

Part-time farming is becoming a way of life for a growing number of farm families. It is being used by those in the Blackwater Study Area, as elsewhere, for a dual purpose: (1) To supplement a declining farm income resulting from the cost-price squeeze in agriculture and (2) as a defense against the rapid commercialization of the family farm which threatens to push many former full-time family farm operators from agriculture. This strategy has met with increasing success as witnessed by the growing number of part-time farming operations.

However, part-time farmers are faced with the problem of readjusting their farming operations to a new work pattern. The difficulty of changing old established habits is evidenced by the fact that the majority of them try to operate now as they did before entry into part-time farming. This often creates imbalances among resources and inefficiencies which restrict earnings. This study indicates that over-diversification in numerous small crop and livestock enterprises is a major organizational prob-

lem for many part-time farmers in the area. It emphasizes the need for follow-up analyses to explore alternative part-time farming systems and to determine those which are most profitable and which synchronize most closely with different types of off-farm employment.

In the rural Blackwater area, almost 50 percent of the real income of all farm families is derived from non-farm sources. More than 25 percent of the family farms classify as part-time operations and many others are influenced by off-farm employment by some family members. These families face unique problems in farm organization and operation, in family living, and in participation in community affairs.

This indicates that many educational and "action" agencies need to re-appraise and re-orient their concepts and programs if they are to help solve the problems and serve the needs peculiar to the part-time farm—the type of operation predominant in many rural areas today.

Appendix

Description of Study

PURPOSE

The central thesis throughout the part-time farming evolutionary process described in the Introduction has been a continual adjustment motivated by changing conditions: the more abrupt the change the more disrupting the adjustments. In line with this premise, the Missouri College of Agriculture initiated in 1909, under the leadership of Professors D. Howard Doane and O. R. Johnson, a "whole farm and whole family" planning concept directed toward helping Missouri farm families adjust their farm operations and family living to meet changing conditions.

Expansion of these early efforts in aiding farm adjustments was spearheaded during the 1930's by Mr. Don Ibach, Extension economist of the College of Agriculture. With the cooperation of extension specialists in other departments of the College, Mr. Ibach developed a planning guide "Replanning Missouri Farms" which greatly facilitated the procedure for planning and organizing improved farming systems. Such coordinated efforts laid the foundation for the "Missouri Balanced Farming Program" initiated in 1941 and the "Balanced Farming Associations" launched in 1946. Early recognition of the need for close integration of Extension, teaching, and research activities in coping with the multiple inter-relationships between college and farm played a big role in the continued success of the state-wide program.

However, in recent years, the rapid pace of modern technology has so transformed the adjustment process that it is increasingly difficult to keep abreast of all the complex problems arising on the farms and in the homes of rural communities. To help assure an "up-to-date" extension and teaching program, the College of Agriculture recently formulated a "whole college and whole family unit" research program. This approach proposes that part of the research activities of the institution be set up on a "functional basis" rather than a "subject matter basis" and that certain research activities should be centered on major adjustment problems farm families face. Research workers from various departments coordinate their efforts in seeking solutions to these problems.

OBJECTIVES

To institute such a program, the current problems and issues must first be identified. An "Area Study of Farm Family Adjustments" was proposed for this purpose by a joint research committee. The proposal called for an intensive study of all the farm family units in a selected rural area. The primary objectives of this study were: (1) to identify the major problems which confront farm units in adjusting to changing economic, sociologic, and technologic conditions; (2) to determine ways in which the college program might be adjusted to more effectively resolve these problems; and (3) to establish "benchmark data" from which future studies might determine the manner and effectiveness of farm families in making necessary adjustments.

In line with these objectives, the research program was activated in 1959. This part-time farming study is one of a series of published reports on the "benchmark data" collected for the project. The more specific objectives ascribed to the part-time farming facet of the over-all study were:

- (1) to determine the magnitude and importance of part-time farming in the study area;
- (2) to inventory the quantity and quality of resources controlled by part-time farmers;
- (3) to determine the effect of part-time farming on farm operations and family living levels;
- (4) to analyze shifts in farm production patterns due to varying amounts of off-farm work;
- (5) to identify the problems part-time farmers face in agricultural adjustments;
- (6) to determine the types of off-farm employment utilized by farm families;
- (7) to analyze the commuting patterns of part-time farmers; and
- (8) to determine the source and amount of disposable family income of part-time farmers.

SELECTION OF THE AREA

Upon the official approval of the proposed "whole college" research program the first step was the selection of a suitable study area. The criterion which was to guide the research committee in the selection of the study area was given much consideration, since it would affect the ultimate success and usefulness of the project. It was decided that the area should be small, preferably no more than one or two townships. The community was to be reasonably convenient to the University in order that staff members might more readily coordinate their activities in this initial study effort.

The agriculture of the area was to be as representative of that of the state as possible. Extremes were to be avoided—both sub-marginal, low income area with practically no potential for development and very progressive areas which possess superior natural resources or are unduly influenced by industrial developments. In other words, it was to be an area of diverse farming operations, soil types, levels of income and living and quality of human resources. Other desirable prerequisites included a strong Agricultural Extension Service program with capable personnel—devoid of conflicting interests and dissension—and, most important of all, the area needed local leadership capable of promoting community-wide acceptance of the program.

Sites in Boone, Cole, Audrain, Monroe and Cooper counties were considered. Visits were made to some of these areas and county road maps, soil surveys, topographic maps, and other types of basis information were collected to aid in the selection process. Blackwater and Lamine townships in the Northwest corner of Cooper County ultimately were considered best adapted for the kind of study contemplated.

DESCRIPTION OF THE "BLACKWATER" AREA

The Blackwater-Lamine area is located 32 miles west of Columbia and 15 miles west of Boonville on Interstate 70 and U.S. 40, providing both University and county personnel quick, convenient access. The only other urban areas which extend any appreciable influence over the area are Marshall, 22 miles Northwest, trade center and light industry, and Sedalia, 35 miles Southwest, county seat and light industry. Three major livestock and grain terminal markets serve the area: St. Joseph, Kansas City, and St. Louis, with lesser local markets at the aforementioned cities.

The climate of the area is favorable to almost any type of cornbelt farming. The average annual rainfall ranges from 35-40 inches with the distribution over the growing season averaging a little over 4 inches per month. The growing season over the years has averaged 192 days; April 10 through October 19. The temperature over this growing season ranges about a mean of 67.6 degrees Fahrenheit.⁹⁸

Lamine Township

Lamine township is in the northern-most tip of Cooper County, bounded on the northeast by the Missouri River; on the East and Southeast by the Lamine River; on the southwest by the Blackwater River, and on the northwest by the Saline County line. These water boundaries give the area the appearance of a 24,463 acre peninsula. The topography of the township runs from level bottomlands to high rolling ridge lands. Within these extremes there are three dominant land types—bottomland, benchland and rolling upland. Bottomland soils include Westerville, Carlow, Chequest, Sarpy, Haynie, and Onawa. The benchland soils are largely Chariton, Moniteau, and Blockton. Among the upland soils, the more productive Loessial soils such as Winfield, Ladoga, Pershing, and Grundy predominate. These soils are inherently fertile and respond well to modern soil treatments.⁹⁹

The economic history of this township goes back a century and a half.

"Louis and Clark. on their exploring expeditions across the Rocky Mountains and down the Columbia River to the Pacific Ocean. —arrived at the mouth of the Lamine River on the 8th of June 1804 and on the 9th at Arrow Rock. (Lamine Township) was settled first in 1812, by a few pioneers. In the year 1812 or 1813 there was a fort, called 'Fort McMahan' built somewhere in this township but the exact location cannot now be ascertained."

The soil of this township is excellent and the inhabitants are in a prosperous condition (1876). It is noted as one of the most wealthy townships in the county.—lead has been found and worked in paying quantities in this township. It has an abundance of timber of the very best quality, and a large quantity of lumber and cordwood is shipped every year by means of the Blackwater and Lamine Rivers. These streams abound with fish of very fine quality. and the Boonville market is principally supplied by them.¹⁰⁰

⁹⁸Decker, Wayne L., Monthly Precipitation in Missouri; Climate Atlas of Missouri No. 1, University of Missouri, Agricultural Experiment Station Bulletin 650, March, 1955.

⁹⁹Scrivner, C. L., and Baker, J. C., Soils of Blackwater and Lamine Townships, Cooper County, Missouri, University of Missouri Ag. Exper. Station Bulletin B772, August, 1961.

¹⁰⁰Levens, H. C. and Drake, N. M., *History of Cooper County Missouri*, 1876.

Early crop production was in the main, corn, oats, and timothy and clover hays. Livestock enterprises were highly diversified with horses, beef and dairy cattle, hogs, and poultry on most farms. Modern technology has shifted these early production patterns until the 15,000 plus crop acres now grow corn, soybeans, wheat, milo, and various types of hays. Livestock enterprises are becoming more specialized with beef cattle, hogs, and sheep predominant.

The only "urban" influence within the township is the town of Lamine which in 1960 had a population of 60 people, and one general store. There are three other rural trade centers, Nelson (population 126), Arrow Rock (population 245), located just beyond the Saline County line, and Blackwater.

Blackwater Township

Blackwater Township, like Lamine township, is a peninsula-shaped area containing 15,686 acres. It is bordered on the north and northwest by the Blackwater River; on the east and south by the Lamine River and on the west by the Pettis County line. The topography of this township is much more irregular—the ridge lands "break off" very steeply and the bottomland tend to be narrow and "tighter." The soils also are more representative of the south and south central Missouri farmlands, with the less productive Weldon, Bewleyville, and Stony land predominating. The bottomland soils are Westerville silt loam with Chequest and Carlow clays which have only moderate to poor drainage. These soils generally are less productive and thus require better management for good production.

The economic history of Blackwater township, like that of Lamine is long and colorful.

"William Christie and John G. Heath temporarily settled in this township in 1808, but only remained long enough to manufacture a small quantity of salt, when they returned down the river. James Broch the first permanent settler, arrived in 1816; Enoch Hambrich came in 1817; David Shellcraw in 1818 and planted an acre of cotton which yielded very well."

"There is at this time (1876) no store or mill in the township although both are much needed by the citizens. There are two warehouses, from which the surplus productions of the township are shipped. There are four public schools for white, and one for colored children, supported by the inhabitants of this township. There are two churches—; one a Cumberland Presbyterian Church, established in 1850; and the other a Baptist Church, established in 1853."

"The bottomland is low and swampy, and the ridgeland fertile and susceptible of early cultivation. In the bottom, corn and timothy are grown in large quantities; on the ridgeland corn, wheat, oats, tobacco, potatoes, and all kinds of garden vegetables are produced in great abundance. The different kinds of wood are ash, beach, blackoak, black walnut, cherry, cottonwood, elm, maple, hickory, redbud, sugar tree, white oak, and white walnut."¹⁰¹

Present Crop production centers around corn, soybeans, wheat, milo and hay. With a higher percentage of rough pastureland, the livestock enterprises are geared more toward roughage utilization than are those of Lamine township. Beef

¹⁰¹Ibid.

cow herds and feeder cattle predominate, although there are several sheep and swine operations.

The town of Blackwater is the only trade and community center within what has become known as the Blackwater study area. Located in the northern edge of the township on the Missouri Pacific railroad, Blackwater reached its peak in the 1930s, and has since lost population to the larger cities. The 1960 population was down to 284 from the peak of 506 in 1930, indicating that the impact of modern agricultural adjustments pervades urban as well as rural segments of the community.

These rural and urban characteristics indicate an area undergoing a progressive reorganization: a reorganization which produces complex adjustment problems, both economic and social, which must be confronted and solved by the area inhabitants.

METHOD OF STUDY

Collection of Data

After the study was approved by the State staff of the Experiment Station and Extension Service, the Cooper County Extension agent took the lead in making contacts and in setting up a meeting of the County Extension Council to consider appropriate ways and means of initiating the study. It was decided that the entire project idea should be presented to the farm families of the study area for their consideration. Since this met with favorable response, a local advisory committee of farm men and women from the two townships was elected at a general meeting to work with the county agent and college personnel in developing a long-range study program. At the same time, the Dean of the College of Agriculture appointed a permanent research advisory committee within the College staff to advise with the project leader in developing the program. Likewise, the Director of Agricultural Extension appointed an Extension Advisory Committee to advise in formulating and developing the extension program for the area.

These joint committees decided that in order to obtain as much base information as possible with the least amount of bother to the farmers and least cost to the departments, a single initial enumeration would be most desirable. Cooperating departments aided in preparing a schedule which would provide data most essential in the respective fields. This enumerating schedule consisted of eight parts: Sector I; Land Use: Sector II; Livestock Production and Management Data: Sector III; Financial Management: Sector IV; Family Activities and Recreation: Sector V; Facilities for Home and Family Living: Sector VI; Household, Family and Labor Data: Sector VII; Inventory of Resources: and Sector VIII; Farm Business Summary.

Before the actual interviewing began, 1958 aerial photos of the entire area were secured through the State ASC office and a county ownership plat map was used for further locational reference. These aided formation of an organized enumeration procedure for the area and later proved to be of much help in accounting for all farmland in the area. During the early spring of 1960 intensive efforts were made to obtain a complete schedule for every farm operation within the

study area for the preceding year (1959). A special effort was made to account for all the land and corresponding production in 1959, even in the cases of absentee owner-operators and/or absentee tenant-operators, operators who had moved away or died during the year, and non-cooperators. Using various methods to supplement the personal interviews, complete land use data was secured for all farm land in the study area.

Data Processing

Upon completion of the interviews, 220 separate farming operations had been identified, ranging in size from 2 acres up to 1,040 acres. Complete schedules were obtained on 151 of these operations and 32 more were over 80 percent complete. The remaining 37 operations consisted of 25 partial units with headquarters out of the study area (no attempt was made to get a complete schedule in these cases), and 12 non-cooperators who refused to be interviewed. Thus, of the 195 complete farm units located in the study area 77 percent were full-cooperators, 16 percent were partial cooperators, and 7 percent were non-cooperators. After the interviews were completed the "benchmark" data were coded and stored on IBM cards, expediting summarization and analysis.

Since one of the primary objectives of this study was to delineate the major adjustment problems confronting the modern family farm, some method of segmenting the aggregate data was necessary. Recognizing the fact that there are wide variations and differentials in adjustment problems within an agricultural area, it was decided to group the farms into economic classes in much the same manner as the U.S. Census of Agriculture. The theory behind this method of segregation is that farm operations within each economic class should have comparable adjustment problems.

The criterion used for placing a farm operation in any given economic class was based on one or more of four factors: (1) total value of all farm products sold; (2) number of days the farm operator worked off the farm; (3) the age of the farm operator; and (4) the relationship of income received by the operator and members of his household from non-farm sources to the value of all farm products sold.¹⁰² All farms were grouped into two major categories—commercial farms and other farms—and then sub-divided into specific economic classes according to the pre-designated criterion. This breakdown of the area farm units produced 95 "commercial farms" and 125 "other farms." However, before further analysis is made, there are several important definitional explanations which should be clearly understood.

DEFINITIONAL FRAMEWORK

General Definitions

In general, the definitional framework of this analysis has been patterned after that of the United States Census of Agriculture. However, the discrepancies are very important in interpreting the study results. Therefore, the following descriptive summary will give the more important census definitions and then give the study definition where a difference exists.

¹⁰²United States Bureau of the Census, *United States Census of Agriculture, 1959*.

Farm

The 1959 Census of Agriculture definition of a farm was based on a combination of "acres in the place" and the estimated value of agricultural products sold. The word "place" included all land on which agricultural operations¹⁰³ were conducted at any time in 1959 under the control or supervision of one person or partnership. Control may have been exercised through ownership or management, or through a lease, rental, or cropping arrangement.

*Places of less than 10 acres in 1959 were counted as farms if the estimated sales of agricultural products for the year amounted to at least \$250. Places of 10 or more acres in 1959 were counted as farms if the estimated sales of agricultural products for the year amounted to at least \$50.00. Places having less than the \$50.00 or \$250.00 minimum estimated sales in 1959 were also counted as farms if they could normally be expected to produce agricultural products in sufficient quantity to meet the requirements of the definition.*¹⁰⁴

This is a more realistic definition of a farm than that employed in 1950 and 1954, when "places of 3 or more acres were counted as farms if the annual value of agricultural products, whether for home use or for sale, but exclusive of home-garden products, amounted to \$150 or more." The 1959 census definition was used in this study.

Farm Unit

A farm unit is equivalent to the census term "acres in the farm" determined by adding total acres owned and total acres "rented in" by an operator and then subtracting the total acres "rented out" by that operator. The remainder constitutes the number of acres in the farm or the "farm unit." In this study, farm units were included in the complete analysis either if the majority of the land were located in the area or if the headquarters of the unit were so located. Farm units with either a majority of the land or the headquarters located outside the area were not included in the complete analysis.

Family Farm

"Family farm" is a term which is used almost daily by agricultural educators, researchers and policy makers. Yet very few can give an "on-the-spot" definition of the term. In fact, hundreds of articles and speeches are presented each year in which the term "family farm" is used repeatedly, but never once is the concept defined. The interpretation is left to the reader's imagination which often-times is not in line with the author's views. Confusion and misunderstanding has sometimes clouded an otherwise excellent study due to this definitional omission.

The rapid trend toward larger commercialized farms has fostered the notion that a size limitation (maximum and

minimum) should be placed on the "family farm," i.e. Large-Scale, Family-Scale, and Small-Scale. The premises behind the idea of scale limitations are based on different standards.

The early Jeffersonian concept of the family farm as a small unit in terms of size was exemplified by the 160 acre limit in the Homestead Act, establishing acres as the first limitation base. When the increased use of capital inputs became widespread, pressure was applied from many quarters for the census to divide farms into "economic classes" based on gross sales.

Benedict suggested an income criterion which would place the family farm in an income range between \$600.00 and \$10,000.00 per year (gross farm income adjusted to 1939 prices).¹⁰⁵ Income then became the new scale limitation. The Department of Agriculture built upon the income criterion by adding labor as another limitation in its definition of the family farm:

*"A farm on which the operator, devoting substantially full-time to farming operations, with the help of other members of his family and without employing more than a moderate amount of outside labor, can make a satisfactory living and maintain the farm plant."*¹⁰⁶

In 1946 at the International Tenure Conference, an eleven-man committee on family farm policies gave a more refined interpretation of the family farm:

"Our definition of a family farm consists of the following characteristics:

- 1. The entrepreneurial functions vested in the farm family.*
- 2. The human effort required to operate the farm provided by the farm family with the addition of such supplementary labor as may be necessary, either for seasonal peak loads or during the developmental and transitional stages in the family itself. (The amount of such regular outside labor should not provide a total labor force in excess of that to be found in the family of "normal" size in the community.)*
- 3. A Farm large enough, in terms of land, capital, modern technology, and other resources, to employ the labor resources of the farm family efficiently. (The labor resources of a family farm are deemed to be employed efficiently when the rewards of their efforts are equal to rewards for comparable human efforts in other occupations. Rewards in this context are in real terms in contrast to monetary rewards and include the value that members of the farm family place on leisure, working close to nature, 'independence' and other nonmonetary values ascribed by them to farming.)"*¹⁰⁷

Thus management was added as a factor along with income and labor, and the definition of a family farm became more inflexible and restrictive. Finally, in 1957, J. V. McElveen in his analysis of family farms, formulated the "Family-Scale" concept to coincide with the economic classifications of the census.

¹⁰³Agricultural operations were considered to exist if:

- any livestock (hogs, cattle, sheep, goats, horses or mules) were kept on the place;
- a combined total of 20 or more chickens, turkeys, and ducks were kept on the place;
- any grain, hay, tobacco, or other field crops were grown on the place;
- a combined total of 20 or more fruit trees, grapevines, and nut trees were on the place;
- any vegetables, berries, or nursery or greenhouse products were grown on the place.

¹⁰⁴Ibid.

¹⁰⁵Benedict, M. R., "Need for a New Classification of Farms", *Journal of Farm Economics*, Vol. 26, 1944, pp. 694-708.

¹⁰⁶USDA, Interbureau Committee on Postwar Agricultural Problems, "Farm Opportunities in the United States" July, 1945, p. 44.

¹⁰⁷Salter, L. A., Jr., *Family Farm Policy*, University of Chicago Press, Chicago, 1947, pp. 387-389.

*"As an average for the United States, it is believed that \$2,500 to \$25,000 gross sales in 1954 are fairly realistic limits for approximating what might be thought of as a family-sized farm".*¹⁰⁸

Farms with over \$25,000 gross sales were considered "larger-than-family-farms" or "large-scale-farms" while farms with gross farm sales between \$250 and \$2,500 were classified as "smaller-than-family-farms. This classification has been used quite widely in the past few years in family farm studies. Yet, a growing number of researchers do not believe that it is realistic, in terms of modern agriculture, to place such restricting limitations on the "family farm."

*"Most of the turmoil over the family farm concerns a problem of measurement rather than of substantive meaning. This misplaced emphasis upon precise measurement has been aggravated by reliance upon, and widespread misuse of, data from the U.S. Censuses of Agriculture. Too often the careless use of census data has led to the conclusion that the family farm is in process of destruction, either from the growing concentration of holdings in a few hands or from the parcellation of farms into units of exceedingly small size, or both."*¹⁰⁹

Because this study is concerned with family farm adjustments, the foregoing bounds would have eliminated almost one-half of the farms in the area from consideration. This did not meet with the approval of the researchers or the farmer's themselves whose views were exemplified by one farmer's reply: "This farm has been in the family for three generations and the addition of two hundred acres an a hired hand ain't changed things much considering the changin' times." Thus the researchers began to examine these "family farms" to discover what durable characteristics had withstood the evolutionary assault of the "technological revolution." The size of farms had increased; capital investment had changed; mechanization and technology had advanced; types of farming had shifted; size of the farm family had decreased; the amount of hired labor had increased; and the level of farm family living had improved. However, there were four distinct characteristics of these farms which had not changed over time: (1) the management (decision-making) was still vested in the farm operator and his family; (2) the farm operator and his family still resided on the farm unit; (3) the farm operator and his family still provided at least a part of the farm labor; and (4) the farm operator and family *alone* bore the financial responsibility of the farm operation and shared the benefits from that operation.

Therefore, the main consideration should be based on these "durable characteristics" retained through the years and embodied in the "whole farm-whole family" concept. Census takers, professional farm managers, and extension personnel recognize this fact when they classify farm families among the self-employed.

"Farm families . . . have no set income and their work is devised and dependent upon their own initiative. The farm family is responsible for acquiring and combining

*the resources of production to provide the living and income for the family's benefit A farm family is a self-employed and self-directed social and economic unit."*¹¹⁰

In this study, as long as the "place" qualified as a farm and met the four "durable characteristics" the farm unit was classified as a family farm.¹¹¹ These qualifications place neither a ceiling nor a floor on the scale of a "family farm" with respect to acres, income (gross or net), labor, or investment. It does not eliminate subsistence, part-time, or part-retirement farms as did most of the previous definitions. It does, however, eliminate integrated units, share cropper units, professionally managed farms and "hobby or investment farms."

Farm Operator

According to the census a farm operator is:

*A person (male or female) who operates a farm, either doing the work himself (theirselves) or directly supervising the work. He (they) may be the owner, a member of the owner's household, a hired manager, or a tenant, renter or sharecropper. If he (they) rent(s) land to others, he is (they are) considered as operator only of the land which he (they retains for his (their) operation. In the case of a partnership only one partner is counted as an operator. The number of farm operators is considered to be the same as the number of farms."*¹¹²

As previously mentioned, farm units with hired managers and sharecropper operations were eliminated from this study. The study definition of a farm operator included the plural form (in parentheses) since there were several women operators who "operated" as much as 200 acres. *In the case of a partnership*, the study definition differs greatly because, in most of the area partnerships, both partners contributed their labor, capital and management to the farm operation and shared on a pre-arranged basis the farm's profit or loss. *Each partner is an operator in his own right and was so counted. In this study the number of farm operators does not equal the number of farms.*

Economic Classification of Farms

Commercial Farms

These farms were divided into six "economic classes" on the basis of the total value of all farm products sold as follows:

Economic Class	Value of Farm Products Sold
Class I	\$40,000 and over
Class II	\$20,000 to \$39,999
Class III	\$10,000 to \$19,999
Class IV	\$5,000 to \$9,999
Class V	\$2,500 to \$4,999
Class VI*	\$ 50 to \$ 2,499

*Provided the farm operator was under 65 years of age, and (1) he did not work off the farm 100 or more days, and (2) the in-

¹⁰⁸McElveen, J. V., "Family Farms in a Changing Economy," *Agricultural Information Bulletin 171*, USDA, Washington, D.C., 1957, pp. 47-55.

¹⁰⁹Motheral, J. R. "The Family Farm and the Three Traditions," *Journal of Farm Economics*, Vol. 33, November 1958, p. 526.

¹¹⁰Malone, C. C., and Malone, L. H., *Decision Making and Management for Farm and Home*, The Iowa State College Press, Ames, Iowa, 1958, pp. 2-3.

¹¹¹In cases where the family resides off the farm unit, the farm operation must utilize a major portion of the available family labor and must be the primary source of family income.

¹¹²United States Census of Agriculture, 1959.

come that he and members of his household received from nonfarm sources was less than the total value of farm products sold.¹¹³

The study definition of commercial farms was the same as that of the census but the method of ascertaining the gross value of products sold was different. The census obtained the quantity of individual products sold and multiplied these quantities times the state average prices for each product. In this study, gross value of products sold was the actual amount of cash receipts the farm operator received from sales of farm products.

Other Farms

The census segregates "other" farms into three economic classes as follows:

A. PART-TIME FARMS

"Class VII; Part-time—*Farms with a value of sales of farm products of \$50 to \$2,499 were classified as 'part-time' if the operator was under 65 years of age and he either worked off the farm 100 or more days or the income he and members of his household received from non-farm sources was greater than the total value of farm products sold.*"¹¹⁴

This study does not completely subscribe to this restrictive definition because it does not accurately represent the true picture of part-time farming. In the first place, the ceiling of \$2,500 gross sales automatically places the part-time farmer in a low income class—a carryover of the "subsistence farm" concept of the 1930s. With today's modern equipment and technology, a farmer can handle an 80-160 acre farm and still have time for a non-farm job. Even many of the less efficient farmers today can handle 15 acres of wheat, 30 acres of soybeans, and 55 acres of corn, and feed out 50 head of feeder pigs with 100 days labor and still work off the farm 200 or more days. Such an operation would surely gross \$3,500 to \$4,000 in farm sales.

Therefore, in this study the census definition of a part-time farm was used with this supplement:

If the Farm Operator (the primary decision-maker) worked off the farm 200 or more days the farm was considered to be part-time regardless of the amount of gross farm sales: or, if the combined household non-farm income was larger than the gross farm sales it was a part-time farm regardless of the amount of farm sales.

B. PART-RETIREMENT FARMS

"Class VIII; Part Retirement farms with a value of sales of farm products of \$50 to \$2,499 were classified as 'part-retirement' if the farm operator was 65 years old or over."¹¹⁵

Again, the placing of a low-income ceiling on this type of unit is not necessarily correct and the study area interviews revealed that the age limit also is unrealistic. Several residents under 65 had "earned their retirement" and bought small farms on which they could "make themselves useful"

or "keep busy." Eleven farm operators over 65 received more than \$2,500 sales from their farm units, yet insisted that they only "worked when they felt like it" and considered themselves retired. Therefore the following supplement was added to the Census definition of a part-retirement farm:

If the farm operator was 65 years old or older and considered himself retired, the farm was classified as part-retirement regardless of gross farm sales; or, if the farm operator were under 65 and considered himself to be retired, the farm was classified as part-retirement if he reported less than 150 days farm work regardless of gross farm sales.

C. ABNORMAL FARMS

"Class IX, Abnormal.—*All institutional farms and Indian reservations are classified as 'abnormal', regardless of the value of sales*".¹¹⁶

There were two "abnormal" farms in the study area and although they are not family farms, they were included in the land use section to help account for all the land in the area.

Unclassifiable Farms

Class X; Unclassified—As mentioned in the method of study, there were 37 farm units on which no financial data could be collected, i.e. partial units and non-cooperator units. Since the absence of financial data prevented researchers from placing these "farm units" in a census economic class, a new class was conceived so the information from these units could be recorded in the "benchmark data." This new class was Class X or the "unclassifiable group."

The economic classification is designed to classify farm units only for a given year. Shifts in gross farm sales, off-farm work, health of the farm operator or advancing age may cause considerable change in the actual number of operators within any given class in succeeding years. However this does not nullify the value of the classification in analyzing the problem of adjustments within the given year, or over time.

Definition of Income Terms

Several types of "income" terms should also be mentioned as they are sometimes defined differently. The following definitions explain their use in this study:

Cash receipts—Total cash receipts accruing from the operation of the farm business.

Cash Expenses—Total cash outlays made in the operation of the farm business.

Inventory change—Ending year inventory minus the beginning year inventory.

Home-use products—Farm produced products used for farm family living.

Cash Balance—Cash receipts minus cash expenses.

Farm Income or Farm and Family Earnings—Cash balance plus or minus the inventory change plus the value of home-use products.

Off-Farm Income—Earnings received for work or services at a non farm job or occupation.

¹¹³Ibid.

¹¹⁴Ibid.

¹¹⁵United States Census of Agriculture, 1959.

¹¹⁶Ibid.

Non-Labor Income—Income received from sources which require no physical effort, i.e. interest, rent, dividends, social security, retirement, etc.

Non-farm Income—Off-farm income plus non-labor income.

Total Net Family Income—Net farm and family earnings plus non-farm income.

Other terms which may need clarification will be defined in footnotes as they are used.

Bibliography

- Andrews, W. H. *A Case Study of Rural Community Development and Leadership*. Agricultural Experiment Station Research Bulletin 808. Wooster, Ohio. Ohio Agricultural Experiment Station. May, 1958.
- Andrews, W. H., W. W. Bauder, and E. V. Rogers. *Benchmarks for Rural Industrialization—A Case Study of Rural Development in Monroe County, Ohio*. Agricultural Experiment Station Research Bulletin 870. Wooster, Ohio. Ohio Agricultural Experiment Station. November, 1960.
- Bachman, K. L. and R. W. Jones. *Size of Farms in the United States*. USDA Technical Bulletin No. 1019. Washington, D.C.: United States Department of Agriculture, July 1950.
- Baldwin, Wilbur and L. F. Carey. "Part-time Farming in the Twin City Area of Minnesota," *Journal of Farm Economics*, XVII (May, 1935), pp. 383-85.
- Barger, Harold and H. H. Landsheig. *American Agriculture, 1899-1939: A Study of Output Employment and Prosperity*. New York: National Bureau of Economic Research, Inc. 1942.
- Benedict, Murray R. *Farm Policies of the United States, 1790-1950*. New York: The Twentieth Century Fund, 1953.
- Benedict, Murray R., F. F. Elliott, H. R. Tolley, and Conrad Taevher. "Need for a New Classification of Farms," *Journal of Farm Economics*, XXVI (November, 1944), pp. 694-708.
- Bertrand, A. L. and H. W. Osborne. "The Impact of Industrialization on a Rural Community," *Journal of Farm Economics*, XLI (December, 1959), pp. 1127-1134.
- Bird, Ronald and Frank Miller. *Profitable Adjustments on Farms in Eastern Ozarks of Missouri*. Agricultural Experiment Station Research Bulletin 745. Columbia: University of Missouri, July 1960.
- Bird, Ronald, Frank Miller and S. C. Turner. *Resource and Levels of Income of Farm and Rural Non-Farm Households in Eastern Ozarks of Missouri*. Agricultural Experiment Station Research Bulletin 661. Columbia: University of Missouri, March 1958.
- Black, J. D. and David Rozman. *Part-time Farming*. Social Research Council Bulletin No. 13. Committee for Research in Farm Management, 1932, pp. 284-287.
- Black, W. B., L. J. Connor and W. F. Lagrone. *Farm and Non-Farm Income of Farm Families in Western Oklahoma*—1956. Agricultural Experiment Station Research Bulletin B-552. Stillwater: Oklahoma State University, March 1960.
- Bonsler, H. J. *Part-Time Farming in the Knoxville City-County Fringe*. Agricultural Experiment Station Research Bulletin 270. Knoxville: University of Tennessee, September 1957.
- Brewster, J. M. "Technological Advance and the Future of the Family Farm," *Journal of Farm Economics*, VI (December, 1958), pp. 1596-1909.
- Burkett, W. K. "Effect of Non-Farm Employment on Agricultural Development," *Journal of Farm Economics*, XLIII (December 1961), pp. 1215-16.
- Crecink, J. C. and Herbert Hoover. *Part-Time Farming; Its Role and Prospects in the Clay-Hills Area of Mississippi*. Agricultural Experiment Station Bulletin 627. Starkville: Mississippi State University, August 1961.
- Crecink, J. C. and Herbert Hoover. *Incomes and Resources of Rural Families in the Clay-Hills Area of Mississippi*. Agricultural Experiment Station Bulletin 604. Starkville: Mississippi State University, September 1960.
- Dean, G. W., E. O. Heady and H. H. Yeh. *An Analysis of Returns From Farm and Non-Farm Employment Opportunities on Shelby-Grundy-Haig Soils*. Iowa State College Research Bulletin 451. Iowa City: Iowa State College, May 1957.
- Decker, Wayne L. *Monthly Precipitation in Missouri; Climate Atlas of Missouri No. 1*, Agricultural Experiment Station Bulletin 650. Columbia: University of Missouri, March 1955.
- Diehl, L. F. and L. A. Salter, Jr. "Part-Time Farming Research," *Journal of Farm Economics*, XXII (August, 1940), pp. 581-600.
- Ducock, L. J. "Classification of the Agricultural Population in the United States," *Journal of Farm Economics*, XXXVII (August 1956), pp. 511-523.
- Goldman, E. F. *Rendezvous with Destiny*. New York: Vintage Books Incorporated, 1959.
- Greve, R. W., J. S. Plaxico, W. F. Lagrone. *Production and Income Variability of Alternative Farm Enterprises in Northwest Oklahoma*. Agricultural Experiment Station Bulletin B-563. Stillwater: Oklahoma State University, August 1960.
- Halcrow, H. G. "Part-Time Farming" *Special Report: 1954 Census of Agriculture*. Washington, D. C.: Bureau of the Census, G.P.O., 1956.

- Hartmans, E. H., H. W. Herbison, Glen Pulver and B. F. Lanpher. *Part-Time Farming: Possibilities and Limitations*. Agricultural Experiment Station Bulletin 296. Minneapolis: University of Minnesota, June 1959.
- Hay, Donald. "A Scale for the Measurement of Social Participation of Rural Households," *Rural Sociology*, XIII (September 1948), pp. 285-94.
- Heady, E. O. "Changes in Income Distribution in Agriculture with Special Reference to Technological Progress," *Journal of Farm Economics*, XXVI, (August 1944), pp. 435-47.
- Heady, E. O., H. G. Dresslin, H. R. Jensen, and G. L. Johnson. *Agricultural Adjustment Problems in a Growing Economy*. Ames: The Iowa State Press, 1958.
- Henderson, H. A. *Resources and Incomes of Rural Upper East Tennessee Valley People*. Agricultural Experiment Station Bulletin 312. Knoxville: University of Tennessee, March 1960.
- Hendrix, W. E. "Income Improvement Prospects in Low-Income Areas," *Journal of Farm Economics*, XLI (December 1959), pp. 1065-75.
- Hood, Kenneth. "Part-Time Farming Near Industrial Areas," *Journal of Farm Economics*, XVII (February, 1935) pp. 67-75.
- Inman, B. T. and J. H. Southern. *Opportunities for Economic Development in Low-Production Farm Areas*. Agricultural Information Bulletin 234. USDA, Washington, D.C.: November, 1960.
- Iowa State University Center for Agricultural Adjustment, *Problems and Policies of American Agriculture*. Ames: The Iowa State University Press, 1959.
- Jenkins, Warden and H. E. Robison. "Part-Time Farming in the United States," *Special Report: 1935 Census of Agriculture*. Washington, D.C.: Bureau of the Census, G.P.O., 1935.
- Johnson, D. G. "Functioning of the Labor Market," *Journal of Farm Economics*, XXXIII (February, 1951), pp. 75-87.
- Johnson, G. L. *Sources of Income on Upland Marshall County Farms*. Agricultural Experiment Station Progress Report No. 1, Lexington: University of Kentucky, 1951.
- Johnson, G. L. *Source of Income on Upland McCracken County Farms*. Agricultural Experiment Station Progress Report No. 2, Lexington: University of Kentucky, 1952.
- Johnson, G. L. *A Study of 34 Multi-Enterprise Farms in Callaway County Kentucky*. Agricultural Experiment Station Progress Report No. 4. Lexington: University of Kentucky, 1953.
- Johnson, O.R. "The Family Farm," *Journal of Farm Economics*, XXVI (August 1944), pp. 529-548.
- Kanel, Don. *Opportunities for Beginning Farmers: Why Are They Limited?* Agricultural Experiment Station Bulletin 452. Lincoln: University of Nebraska, May 1960.
- Lagrove, W. F. and L. J. Connor. *Farm Adjustment Opportunities on Fine-Textured Soils of Southwestern Oklahoma*. Agricultural Experiment Station Bulletin B-538. Stillwater: Oklahoma State University, February 1960.
- Levens, H. C. and N. M. Drake. *History of Cooper County, Missouri*. Boonville, Missouri: (publisher unknown), 1876.
- Lindsey, Q. W. *Transforming Low Income Farms into Profitable Commercial Farms*. Agricultural Economics Information Series No. 76. Raleigh: North Carolina State College, May 1960.
- Lionberger, H. F. *Low Income Farmers in Good Farming Areas of Missouri*. Agricultural Experiment Station Bulletin 668. Columbia: University of Missouri, March 1956.
- Maitland, S. T. and L. J. Ducoff. "The Farm Labor Force: Recent Trends and Future Prospects," *Journal of Farm Economics*, XLIII (December 1961), pp. 1183-88.
- Malone, C. C. and L. H. Malone. *Decision Making and Management for Farm and Home*. Ames: The Iowa State College Press, 1958.
- Martin, J. R. and J. H. Southern. *Part-Time Farming in Northwest Texas*. Agricultural Experiment Station Bulletin 970. College Station: Texas A & M College, January 1961.
- McElveen, J. V. *Family Farms in a Changing Economy*. USDA Agricultural Information Bulletin 171. Washington, D.C.: United States Department of Agriculture, March 1957.
- McMurty, Gene, J. C. Bottum, R. L. Kohls, J. D. Dunbar. *Farmers Attitude Toward the Income Problem and Its Solutions*. Agricultural Experiment Station Mimeo EC-157. Lafayette, Indiana: Purdue University, August, 1958.
- Mehl, Paul. *Major Manufacturing Industries as Potential Sources of Employment in Low-Income Farm Areas*. USDA Agricultural Marketing Service Report No. 176. Washington, D.C.: United States Department of Agriculture, August 1957.
- Mellor, J. W. and Tichvio Takahashi. *Part-Time Farming, St. Lawrence County, New York*. Agricultural Economics Research Report No. 4. Ithaca, New York: Cornell University, September 1955.
- Metzler, W. H. and W. W. Armentrout *Farming, Farm People, and Farm Expansion in Fayette, Raleigh, and Summers Counties, West Virginia 1958*. Agricultural Experiment Station Bulletin 439. Morgantown, West Virginia: West Virginia University, December 1959.
- Metzler, W. H. and J. L. Carlton. *Employment and Underemployment of Rural People in the Ozark Area*. Agricultural Experiment Station Bulletin 604. Fayetteville: University of Arkansas, November 1958.
- Moore, H. R. and W. A. Wayt. *The Part-Time Route to Full-Time Farming*. Agricultural Experiment Station Research Bulletin 793. Wooster: Ohio Agricultural

- Experiment Station, September 1957.
- Motheral, J. R. "The Family Farm and the Three Traditions." *Journal of Farm Economics*, XXXIII (November 1951), pp. 514-29.
- Nielson, James. *The Michigan Township Extension Experiment: Changes in Agricultural Production, Efficiency and Earnings*. Agricultural Experiment Station Technical Bulletin 274. East Lansing: Michigan State University, 1960.
- Nielson, James. *The Michigan Township Extension Experiment: The Experimental Program and Farmers Reaction to It*. Agricultural Experiment Station Technical Bulletin 284. East Lansing: Michigan State University, 1961.
- North Central Farm Management Research Committee. *Economics of Cropping Systems in the Cornbelt*. (NCR Publication No. 57.) Agricultural Experiment Station Bulletin 429. Lincoln: University of Nebraska, April 1955.
- Olson, P. G. *Job Mobility and Migration in a High Income Rural Community*. Agricultural Experiment Station Research Bulletin 708. Lafayette, Indiana: Purdue University, November 1960.
- Olson, R. O. *Some Opportunities for Improving Farm Income in Southeastern Ohio*. Agricultural Experiment Station Research Bulletin 832. Wooster: Ohio Agricultural Experiment Station, March 1959.
- Pugh, C. R. and C. E. Bishop. *Effects of Industrialization on Incomes of Farm Households, Northern Piedmont Area, North Carolina*. Agricultural Economics Information Series No. 46. Raleigh: North Carolina State College, September 1955.
- Puterbaugh, H. L. "Purchasing Power of Urban, Rural Nonfarm and Rural Farm Incomes, 1955," *USDA Agricultural Economics Research*, XIII (July 1961), pp. 89-97.
- Reiss, F. J. *Getting Started and Established in Farming*. Agricultural Experiment Station Circular 822. Urbana: University of Illinois, June 1960.
- Ruttan, V. W. "The Impact of Urban-Industrial Development on Agriculture in the Tennessee Valley on the Southeast," *Journal of Farm Economics*. XXXVII (February 1955), pp. 38-56.
- Ruttan, V. W. "Farm and Nonfarm Employment Opportunities of Low Income Farm Families," *Phylon*. Atlanta University, 1959.
- Ruttan, V. W. and R. D. Geschwind. *Job Mobility and Migration in a Low Income Rural Community*. Agricultural Experiment Station Research Bulletin 730. Lafayette, Indiana: Purdue University, September 1961.
- Salter, L. A., Jr. "What is Part-Time Farming?" *Journal of Farm Economics*, XVIII (February 1936), pp. 191-197.
- Schultz, T. W. "Transition Readjustment in Agriculture," *Journal of Farm Economics*, XXVI (February 1944), pp. 77-94.
- Schultz, T. W. "Reflections on Poverty Within Agriculture," *Journal of Political Economy*, LVIII (February 1950), pp. 1-15.
- Scoville, D. J. and K. A. Smith. *Part-Time Farming*. USDA Farmers Bulletin 1966, Washington, D.C.: United States Department of Agriculture, 1953.
- Scrivner, C. L. and J. C. Baker. *Soils of Blackwater and Lamine Townships, Cooper County, Missouri*. Agricultural Experiment Station Bulletin B-772. Columbia: University of Missouri, August 1961.
- Semple, E. C. *Geography of the Mediterranean Region; Its Relation to Ancient History*. New York: H. Holt and Co., 1931.
- Shoemaker, Karl. *Opportunities and Limitations for Employment of Farm People Within and Outside of Farming*. USDA Extension Mimeo. Washington, D.C.: United States Department of Agriculture, June 1958.
- Sisler, D. G. "Regional Differences in the Impact of Urban-Industrial Development on Farm and Non-Farm Income," *Journal of Farm Economics*, XLI (December, 1959), pp. 1100-1112.
- Smith, Eldon D. "Non-Farm Employment Information for Rural People," *Journal of Farm Economics*, XXXVIII (August, 1956), pp. 813-827.
- Southern, J. H. and W. E. Hendrix, *Incomes of Rural Families in Northeast Texas*, Agricultural Experiment Station Bulletin 940. College Station: Texas Agricultural Experiment Station, October 1959.
- Staniforth, S. D. and R. A. Christiansen. *The Role of Off-Farm Employment in Rural Development*. Department of Agricultural Economics Report No. 26. Madison: University of Wisconsin, June 1958.
- Steward, D. D. *Employment, Income and Resources of Rural Families of Southeastern Ohio*. Agricultural Experiment Station Research Bulletin 886. Wooster: Ohio Agricultural Experiment Station, June 1961.
- Sutherland, G. J., C. E. Bishop and B. A. Hannosh. *An Economic Analysis of Farm and Non-Farm Uses of Resources on Small Farms in the Southern Piedmont*. Agricultural Experiment Station Technical Bulletin 138. Raleigh: North Carolina State Sollege, May 1959.
- Taylor, C. C. "Social and Economic Significance of the Subsistence Homesteads Program: From the Viewpoint of a Sociologist," *Journal of Farm Economics*, XVII (November 1935), pp. 720-31.
- Taylor, C. C. and T. A. Burch, *Personal and Environmental Obstacles to Production Adjustments on South Carolina Piedmont Area Farms*. Agricultural Experiment Station Bulletin 466. Columbia: South Carolina University, December 1958.
- Taylor, M. M. *Rural People and Their Resources in North Central New Mexico*. Agricultural Experiment Station Bulletin 448. Albuquerque: New Mexico University, October 1960.
- United States Department of Agriculture. Agricultural Marketing Service. *The Farm Income Situation*, July 1960.

- United States Department of Agriculture. *Cut the Costs that Cut Your Farm Profits*. USDA Farmers Bulletin 2108. Washington, D.C.: United States Department of Agriculture, 1957.
- United States Department of Commerce, Bureau of the Census, *1959 Census of Agriculture; Preliminary*. Washington, D.C.: U. S. Department of Commerce, G.P.O., August 1960.
- United States Department of Commerce, Bureau of the *for Commercial Agriculture, Its Relation to Economic Growth and Stability*. (85th Congress, 1st Session), Washington, D.C.: Government Printing Office, 1957.
- Wayt, W. A. and T. J. Dix. *Adjusting the Commercial Family Farm to Part-Time Operation in Southeastern Ohio*. Agricultural Experiment Station Research Circular 97. Wooster: Ohio Agricultural Experiment Station, March 1961.
- Wayt, W.A. *Adjusting the Commercial Family Farm to Part-Time Operation, Eastern Corn Belt Area*. Agricultural Experiment Station Research Circular 98. Wooster: Ohio Agricultural Experiment Station, May 1961.
- Westerbrook, Lawrence. "The Program of Rural Rehabilitation of the FERA," *Journal of Farm Economics*, XVII (February 1935), pp. 89-100.
- Wiegman, F. H. "Farm Income—A Confused Picture," *Journal of Farm Economics*, XXXIV (May 1957), pp. 490-501.
- Willis, J. E. and H. L. Roeller. *Employment and Income of Rural Families in Southern Illinois*. Agricultural Experiment Station Bulletin 580. Urbana: University of Illinois, August 1954.
- Wilt, H. S. *Managing the Small Part-Time Farm*. Agricultural Experiment Station Bulletin 341. East Lansing: Michigan State University, July 1957.
- Zeuch, W. E. "The Subsistence Homestead Program: From the Viewpoint of an Economist," *Journal of Farm Economics*, XVII (November 1935), pp. 710-19.