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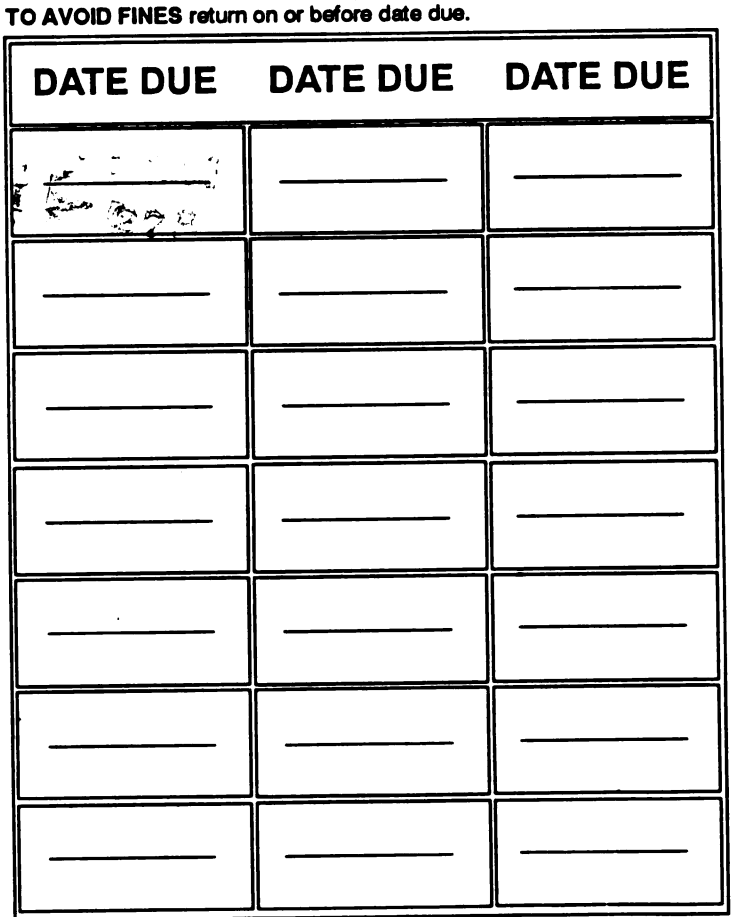

FARM EXPANSION PATTERNS AND THE STRUCTURE OF AGRICULTURE IN MID-MICHIGAN

by

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ABSTRACT

FARM EXPANSION PATTERNS AND THE
STRUCTURE OF AGRICULTURE IN MID-MICHIGAN

By

Michael George Dorow

This research paper derives from a study of the changing structure of agriculture in selected areas of rural Michigan that are experiencing a gradual but steady increase in part-time farming, and a concomitant proliferation in numbers of small farms. Although still basically agricultural, many farmers in these areas are beginning to parcel off smaller acreages for sale to developers, city people, retirees, and young farmers. Both part-time and full-time farmers engaged in a variety of arrangements to manage (i.e., to operate) existing farmlands.

Data were collected from township records, official documents, and key informants. Ownership patterns, management arrangements, and non-farm employment patterns were determined.

We are dealing especially with the formal and informal arrangements that exist between various families to farm the land they own, rent, or share. Kinship, of course, is important as are contractual arrangements. Our main concern is with reciprocities involved and the organization of these arrangements.

INTRODUCTION

In recent years there has been a renewal of interest by sociologists in what is often called "the structure of agriculture." The research activity that resulted has not been restricted to any particular focus, but has included such varied topics as the organization of work and labor on farms, the economic productivity of various enterprises, and of course, the impact of part-time farming on the agricultural scene (Congress of the United States, 1978; Bergland, 1979; GAO, 1978). One issue that deals with an underlying element in the structure of agriculture is the form of organizational activity as it relates to land tenure. The land tenure issue implies some concomitant concerns such as the increase of corporative agriculture, foreign ownership of land, and the trend toward more part-time farmers. Each of these and related questions suggests the general problem of who controls American agriculture (United States Department of Agriculture, 1979).

The study reported here was designed to explore certain facets of this complex issue and, insofar as possible, to do so from a broad perspective. In order to understand current structural features in American agriculture, it is necessary to briefly trace the general characteristics of land tenure as they have existed or been previously reported.

Throughout the early history of American agriculture, farm ownership by farm operators was the expected general norm. The Jeffersonian ideal of a rural American society included in it the notion of full ownership of land by farmers. When land ownership by farm operators became more difficult with rising land values and generally low farm income, land ordinances in the late 1700's and later with the Preemption Act of 1841, and the Homestead Act of 1862, provided opportunities for the acquisition of full title to farmlands by farmers. But it was still becoming increasingly difficult for farmers to finance their operations.

Expanding markets, out-migration from the rural sector, and a steady flow of major innovations in farm equipment stimulated change in the structure of American agriculture. While the farm equipment innovations appeared as "labor saving" devices, they invariably demanded increased farm inputs. In time, capital investments by farmers had to be diverted more directly into the purchase of a variety of farm inputs. Decisions had to be made about expanding the scale of operation by putting more capital into the purchase of land or through rental or mortgaging. Average farm size was increasing, but it was facilitated through various land rental arrangements and not just through the purchase of more land. The pattern of land tenure began to reflect new social structural arrangements as a result of increasing capital needs; it is no longer simply a factor associated with and essential to the agricultural ladder.

In an effort to evaluate overall tenancy changes, the Bureau of Census developed and revised tenancy types and classifications during the 1880's. The categories included: full owners, mortgaged owners; part owners (those who farmed their fully owned land plus rented additions);

tenants renting their farmland; and managers (hired by farm operators to manage their properties). The U.S. Bureau of Census (1974 and 1975), Kelso (1933), Wehrwein (1933), Moyer, et al., (1964), and Wilcox (1947), acknowledged these types while reporting on the changing family farm. The concern of these authors was to explain the economic functioning of various farm structures. It was reported that the farm, under various forms of tenancy arrangements, generally continued to be a viable operation whether the farmer held title or was purchasing the land. The ownership pattern appeared to play little, if any, part in the overall economic operation of the farm. Research into tenancy, however, remained more a byproduct of these inquiries.

This is not to say that tenancy was a matter ignored by researchers. The shifting patterns of tenure relations have been well documented over the past fifty years (Johnson, 1933; Bell, 1942; Ackerman and Harris, 1946; Farm Foundation, 1956; Berry, 1963 and 1964; Kelso, 1933; Dorner, 1963; Reinsel, 1970; Hurlburt, 1964; Rohrer, 1970; and Rodefeld, 1978). These reports provide some insights into the changing tenancy patterns. They showed a decrease of tenants and an increase of full owners while at the same time there was an increase in part owners. Of key interest and concern in these studies was the question of what would happen to the farmland in terms of improvements and shared cost of farm operations between the part owners and their landlords. It has been pointed out that due to legal fees, rental arrangements were usually informal agreements with the part owner (renter) taking over the cost of land maintenance (Penn, 1979; Timmons, 1972). Again, much of this research focused on cost efficiency of the farm unit within the particular land tenure type.

Some research began to pay particular attention to the social significance of land tenure arrangements when it was suggested that the organization of land tenure represented a series of social interactions akin to a social system (Loomis and Beegle, 1950). Other clues surfaced to provide information as to the underlying social organization in farm tenure relations. Cotner, et al., (1965), Moyer, et al., (1969), Reiss (1968), Winters (1978), and Johnson (1972 and 1974), reported that in various forms of tenure relations part owners (renters) and full owners will often be related family members. Furthermore, these authors indicated that this feature has increased since the early 1950's. The idea suggested was that the older family member, usually the full owner, would be sup- portive and pass along farming knowledge and experience to the younger family member.

Certainly another important consideration is that not all tenure relations involve related family members. This is especially the case as the number of rental pieces of land is increased by a farmer. Rental arrangements may also take on the added dimension of non-owners farming rented land. Questions also have to be asked regarding the quality of land available for these individuals. It is therefore important to consider this in terms of the social linkages that make up land tenure arrangements. In and of themselves, the linkages that exist between land owners and renters in farming communities are an important concern. What are the character of these linkages? Who are the participants in these arrangements and what does each participant bring into the relationship? By exploring these social organizational elements we can perhaps more

fully understand the nature of a farm and farming community in contemporary American society and this may serve to modify our traditional conceptualizations. We also need to ask about control of agriculture through reciprocities that become established within the farming sector.

Part-time farming, of course, has become a relatively permanent fixture in American agriculture. Its rapid increase, especially in areas near our major metropolitan areas, represents an enormously complex phenomenon that will have an impact not only upon agricultural markets and the overall productivity of agriculture, but especially on land-use patterns and land values.

Early reports on part-time farming during the 1930's tended to show that it did not threaten the traditional commercial markets and that many part-time farmers came from urban areas (Alter and Diehl, 1940). Later research tended to be more issue-oriented and aimed at particular aspects of part-time farming (Frauendorfer, 1966).

Generally, though, most studies on part-time farming have tended toward defining part-time farming, the motivations behind it, and the characteristics of off-farm work patterns. In the process, research on part-time farming has created an awareness that the phenomenon is a more or less regular feature within the agricultural sector and that it manifests itself in several respects. From this perspective, part-time farming is seen as a way by which an individual family can make the transition into or out of agriculture.

Another consideration emerging from this research is that each possible outcome of part-time farming has policy implications and impacts on the changing structure of agriculture. During the 1930's, it was viewed

as a direct threat to the full-time farmer. This was especially true again in the 1950's and 1960's when the emphasis was on farm consolidation for greater production and efficiency. Research into this area, especially when the issue of land tenure was being considered, tended to focus on comparing the efficiency of part-time versus full-time farming.

Currently, decisions over the proper definition of part-time farming are still in the forefront of research concern. Additionally, though, there is a tendency to label and link part-time farming with what has often been called "small farm problems" (Brown and Justus, 1974; Loomis, 1965; and Fuller, et al., 1977). Theoretically, one of the more interesting new perspectives is the location of part-time farming within a political economy framework (Buttel, et al., 1982).

While there are certainly a large number of complex issues related to land tenure and part-time farming, the study reported here is limited. It deals with land tenure arrangements in two Michigan areas that have been subjected to rapid growth in part-time farming. The principal concern is with the formal or informal arrangements that exist between the various families in these two areas to farm the lands they own, rent, or share. In particular, attention is focused on the reciprocities involved and the "organization" of these arrangements. By this inquiry some doors may be opened for further useful study of the changing structure of agriculture and perhaps additional lights can be shed on who owns and controls agriculture in the mid-Michigan context.

STUDY SITE AND RESEARCH PROCEDURES

This study focuses on two rural townships, Venice and Brookfield, in mid-Michigan (Figure 1). The counties in which the study sites are located are adjacent to metropolitan areas. Consequently, a variety of farm types was expected and, in particular, a large number of part-time and hobby farms. The excellent road system allows for commuting to the city for work while residing in the countryside.

Over the years, these townships have seen great changes in the pattern of farming. They were heavily involved in animal production up until the late 1950's. Dairying was especially important along with some beef, poultry and hog enterprises. Some sugar beet, truck farming and general cash crops also were located here. Changing markets and forms of production, however, and the draining away of agricultural labor to industrial jobs, led to more emphasis on cash crop production (corn, soybeans, and field crops). At the same time, the surviving dairy farms had grown considerably larger in scale and herd size. Gone now are most of the small silos and poultry buildings that used to be so commonplace. There has been a definite transformation in the appearance of many farmsteads as the old houses and wooden barns have been replaced with modern homes and metal sheds. Now, too, there is greater variety in the size of holdings and scale of farming in the area.

The study sites are reasonably representative of mid-Michigan agriculture. To the south of this area, of course, as one gets deeper into the "corn belt" region of the midwest, cash grain production appears more intensive. To the west, along Michigan's shoreline, fruit crop production is far more important. And to the north, soils and climate

are not as favorable for farming. Venice and Brookfield townships, however, are not unlike a large segment of the mid-Michigan area. The urban fringe pressure on the study sites, one could say, may hinder our ability to generalize to other situations. Nevertheless, it is precisely because of this pressure that the social structural features of land tenure with respect to both full- and part-time farmers may have implications that reach far beyond the given study boundries.

Brookfield Township, with a population of approximately 1500 people, is located in Eaton county about twenty miles south and west of the Lansing area. There are no villages in the township. Charlotte, with a population of approximately 8200, is five miles from the township's northwest boundaries. Battle Creek, a major urban center with businesses, manufacturing, and a population of 38,000, lies approximately twenty miles to the west. Battle Creek's accessibility to Brookfield Township is enhanced by a four-lane limited access highway that passes within one mile of the township and connects Lansing, Charlotte, and Battle Creek.

Venice Township, with a population of approximately 1500, is located in Shiawassee County thirty-five miles north and east of the Lansing area. It contains one small village on its eastern boundary with a population of approximately 600. Aside from residential property, this village has several small businesses and grain elevators that cater to the surrounding farm community. On the other side of the township is the town of Owosso with a population of 17,000 and the commercial center of Shiawassee County. Twenty miles to the west is the city of Flint, a major manufacturing and business center. Venice Township is connected to

Flint by a limited access highway that runs through three southern sections of the township and is part of the system that connects Flint and Lansing.

Data Collection

The initial phase of field work began in the spring of 1978. A main goal was to do a census of agriculture and to obtain information on family farm operations in the study areas. We wanted to map the location of farms and we wanted to know what land parcels were being farmed, who was doing the farming, the ways in which that was accomplished, and the kinds of enterprises involved. In effect, we wanted to determine the social organization of agriculture in these townships and to focus attention on both full- and part-time farmers.

County and township officials made available public tax records that documented land ownership, location and size of parcels, and the classification (residential, commercial, and agricultural) of all real property in the townships. A similar procedure was followed in each township using the same year tax roll information. From this information, lists of property owners (taxpayers) were drawn up based on the classification of their land holdings. In addition, platt books were used to help organize this information by township sections and to assure complete coverage. The names and addresses of land owners and the parcels involved were compiled systematically and arranged for field specification and review.

Tax roll information provided an overview of farms in the study area in terms of size and scale. At this point, however, we wanted to remain

open as to our definition of a "farm". We did not want to restrict the focus by imposing any hard and fast definitions. We wanted to obtain specific information on the structure of households associated with each and every parcel of farmland. Also, the farming activities of all households in the specified area were to be noted so that the farming situation could be examined holistically.

To gain a clearer understanding of the social structure of agriculture in the study areas, it was decided that information on age and off-farm employment patterns would be sought for principal adults in each household owning or operating agricultural land. To supplement these research efforts, the project requested and was granted permission by the United States Department of Agriculture Soil Conservation Service to use a list of names of farmers participating in these programs in the study areas. This helped specify addresses, locations of farmland parcels, acres owned, and cropland operated by participating farmers. Since the list contained only information of SCS program participants, it served as background information but provided only a partial listing of non-owner operators farming in the study areas. The role of non-owning operators and the ways in which they form linkages with non-operating owners is an important consideration.

With the corrected list of all agricultural land owners and operations, county extension agents, local government officials, and neighborhood informants were consulted to help in verifying and elaborating these records. Numerous neighborhood informants throughout the area were interviewed and in several cases knowledgeable locals were hired to help in a more concentrated fashion. Information from various sources was

cross-checked for accuracy. This procedure of contacting and questioning many informants entailed numerous visits to the study areas.

To provide consistent coverage and recording reliability by research team members and neighborhood informants, additional procedures were established for processing the information once it was brought from the field. All field notes were transcribed onto standard form data sheets which were reviewed at the research office. Information was compared for consistency and completeness. Any missing data were obtained on return visits to the study areas.

Factors Examined

Utilizing information available from this survey we focused on the social organizational aspects of agriculture in these two mid-Michigan townships. We were especially concerned with the organization of all land holdings that were classed as agricultural. Four general areas of information were specified: family households, farming enterprise, farming status, and off-farm work status.

1) Family Households

Not all farm households, of course, are constituted by complete or traditional families. Nevertheless, for present purposes no distinction is made in unit designation and we simply use the term "family household" to refer to the basic social entity within which ownership and/or control of a particular parcel of farmland is located. We understand, of course, that not every individual in a family household enjoys equal ownership rights or control over the land that is designated as belonging to that household.

Information was gathered for each farm family household that owned or operated some agricultural land in the specified township. We took a family household to be any collection of individuals who reside at the same address and share the same home and living arrangements. A determination was made as to which type of family organization a given household represented. Three basic kinds of family housholds were noted: lone adult household (single adult male or female with or without dependent children and in a very few cases with an elderly parent); nuclear family households (conjugal family with or without dependent children); and complex families (all other non-nuclear family types, such as an elderly mother living with her unmarried adult son, two adult brothers, etc.)

For each lone adult household situation, a special effort was made to establish whether or not it was connected closely with an adjacent household on the same property (particularly in cases where the lone adult household is a mobile home adjacent to the main farmstead home). If not connected in an obvious manner, it was classed as a lone adult household.

2) Farming Enterprise

For each family household associated with farmland in the study areas, information was collected on the farming activities being conducted by members of that household on that land. Several major enterprise categories were specified: cash grains (corn, wheat, soybeans); beef cattle (feeder steers, breeding stock); dairy; other livestock (hogs, pigs, and sheep); and a variety of "other" farming activities (including horse farms, onion farms, and home-use operations).

3) Farming Status

For each household, we sought to determine which principal adult(s) "farmed the land" and was in some way actively involved in the farming operation. Several categories were used to describe types of statuses in terms of the particular farmland parcels:

(a) Resident owner and operator. In this case the family lives on, adjacent, or relatively close by its farm property and one or more members of the household are active in farming the land.

(b) Resident owner; operation idle. Here the family lives on, adjacent to, or relatively close by its farm property but the farmland is idle.

(c) Absentee owner and operator. The family resides more than six miles from its farmland but nevertheless, farms the land.

(d) Owner non-operator. The owner of the farmland is not actively engaged in the farming enterprise. Land owned by this family is operated by someone else.

(e) Non-owner operator. In this case, the farm operator family does not own the primary core of the farming unit with which it is associated. The land is rented or share-farmed.

4) Off-Farm Work Status

For each household in the study areas, we determined from neighborhood informants which principal adult(s) worked off the farm. Off-farm work status implies at least 120 days or more off-farm work per year in a full-time job although, given these data collection procedures, we could not be sure.

Focus of Analysis

For this study we need to draw as complete a picture as possible of the farmland situation in these two townships and the people who own and operate those lands. Information was derived from tax roles, plat books, and discussions with neighborhood informants. A main consideration is the farming status of each household in the two study areas. Who is farming each parcel, and do they own and live on the land? In addition, especially for present purposes, the relationship between operators and non-operating owners of particular parcels was a key consideration. To round out our coverage of the structure of agriculture in these areas, we determined for each case the kind of farming enterprises being pursued, the off-farm employment pattern of household members, and who was doing the farming.

While government documents provide a complete legal description of farmland parcels, one must go beyond this narrow view in order to comprehend the nature of a farming operation. For instance, we should take into account the land rental market and the ways by which farmers increase the size of their operations. The nature of these arrangements are of key importance for the present study. We explored these arrangements by focusing on two main variables which we have called "relational style" and "bonding basis."

1) Relational Style refers to the nature of the association that exists between farm operators or renters and the non-operating owners. What is the degree of socioeconomic integration that bonds these parties together? Three main forms of relational style are posited:

(a) A tightly integrated exchange is one that involves more than just a simple owner to renter arrangement. This is generally a family partnership where the factors of production (land, labor, and capital) are inextricably interwoven. A legalistic cohesion is impled. It would be very difficult to separate the contributions of the parties involved.

(b) A loosely integrated exchange is one where no labor and/or managerial interlock is evident. Generally, the relationship between the farm operator and the non-operating land owner is a simple land rental agreement. This type of exchange may involve more than two farms; i.e., where an owner/operator of an ongoing farm rents adjacent farmlands from his neighbors in order to expand his operation.

(c) A tightly integrated core and loosely integrated periphery is also possible. In effect, this type of situation occurs when some kind of partnership arrangement, which constitutes the core of a farm business, expands its operation by renting farmlands from neighbors. The core linkages exhibit attributes of the tightly integrated exchange and the remainder of the rented farmland linkages are loosely connected. A simple owner to renter agreement exists between the core unit and the periphery with no overlap of equipment, labor, or capital in evidence.

2) Bonding Basis is another dimension to be considered in analyzing the relationship between the farm operator and the non-operating owner of farmland. The concept of bonding basis focuses our attention on additional attributes involved in the expansion of farm units beyond the simple exchange of land used for rent. For each farmer who expands his operation by entering into a rental arrangement, we take into account the parties involved and their social relationships to each other. In cases

where a farm operator expands his operation by renting farmland from one other family, we look at the nature of the bonding between the operator and the non-operating owner. Since there is only one bonding, we call this the primary bonding. A primary bonding may involve one of the following kinds of linkages:

Familial -- close parental or sibling (father to son, brother to brother, etc.)

Kinship -- secondary kin (aunt to nephew, cousin to cousin, etc.)

Neighbor -- nearby farmland owner (could be distant kin)

Contractual -- part of a corporative system (a form of contractual)

When there are additional linkages with other farms beyond the main two that constitute a core, we similarly examine the bonding basis for these secondary linkages.

Farm Size: An Important Condition

Considering farm size, one of the limitations of our data is that we were not able to obtain detailed information to specify scale of the farming operation. Hence, we had to rely on the total acreage involved, including all rented land, as an indicator of scale. This figure, "acres managed", represents an aggregate total of land without regard to land value, soil quality or actual scale of operation (i.e., capital investment). Acres managed is reduced into three categories which parallel in a reasonable sort of way the differentiation (in terms of farm size and scale) that exists in the study areas.

1) Mini-Sized Farms

Mini-sized farms are those units that range from a few acres to fifty acres. Many farmland units of this size are rented by the owners to

neighboring farmers. If they are being farmed directly by owners, however, we expect them to be mainly home-use production oriented and operated by part-time (weekend or twilight) farmers. In that case, care must be taken to insure that the grouping does not include any specialty crop operations, which of course would mean a larger scale operation. Unlike Michigan's western half of the state with its berry and fruit production, the mid-Michigan area where the study sites are located consists primarily of cash grain and dairy operations.

2) Small-Sized Farms

The next group of farms range from fifty to three hundred acres. One expects these smaller-sized farms to be operated mainly by part-time farmers. Our use of the terms "part-time", "weekend", and "twilight farmers" in no way should be taken to suggest or claim anything about the quality of farming being carried out. The designations merely indicate those farmers who work off the farm a goodly portion of the year, usually 180 days or more, at a full-time job. In most cases, this category does not include dairy or animal production farms (the exception being where the operation is mainly for home-use production or a modest commercial enterprise).

3) Larger-Sized Farms

This grouping, larger-sized farms, refers to farming operations with over three hundred acres. We expect these larger-sized farms to be geared more toward market production along with cash grain production, commercial beef farms and dairy operations.

Summary

A main goal of the study is to examine the social organizational features of agriculture two mid-Michigan areas which have experienced a rapid growth in part-time farming during the past decade. Agriculture here consists mainly of cash grain farming for market production plus a few scattered dairy operations; it has undergone a gradual transformation toward greater specialization from the more diversified pattern of the previous generation. This region differs considerably from the western shore area of Michigan which continues to be more diversified, supporting a variety of fruit and berry enterprises.

Identifying all farms, farmsteads and farm family homesteads in the two townships, the aim is to explore patterns of ownership, management, and non-farm employment. A main focus is on the kind of land rental arrangements that exist between the various farm families; i.e., the relational style and bonding basis involved in the creation of some kind of exchange of user/owner rights to farmland parcels.

STUDY POPULATION

Information on patterns of ownership, management, and non-farm employment provides a basis for analyzing and better understanding the formal and informal arrangements that exist between various families to farm the land they own, rent, or share. A main concern in exploring these tenure relations is with the reciprocities involved and the organization of such arrangements. Before dealing with the nature of specific arrangements, however, it is necessary to assess more fully the land tenure situations in these townships, as revealed by the results of our census survey, and

to delineate more systematically the study population for the purposes at hand.

Some Special Circumstances

Using data collection procedures described earlier, a population of 454 family households was located and surveyed; each of the households is associated in some way with farming in the two mid-Michigan townships (through the ownership and/or management of farmland). In the process of further delineating the population for present purposes, some interesting situational patterns were uncovered that although somewhat peripheral to our main concern are quite relevant to an understanding of land tenure in the area.

1) Absentee Farmland Owners

One of the more intriguing questions often asked about such farming communities has to do with the pattern of absentee land ownership. Are there any significant outside interests? From official records, it was determined (Table 1) that approximately 81 percent (N=368) of the survey households reside within the township boundaries (168 of the 211 Brookfield households and 200 of the 243 Venice households). The remainder, a total of 86 households owning or operating agricultural land in the townships, resides outside. But of course many of these "outside" owners are just over the boundary which, very often, means "just across the road" (since township boundaries are invariably demarcated by roads). Indeed, 53 households located outside the specified study areas are generally no further than two sections from the border.

When a distance criterion of six miles or more from the township boundary is employed to distinguish a "true" absentee owner, we find that 13 households owning farmland in Brookfield and 20 households in Venice township can be designted "absentee owners." The six mile criterion is certainly an indicator of some difficult logistical problems for the farm owner; but even this does not specify what the literature has come to call an "absentee landlord."

Only two families living further than six miles from Brookfield farm their agricultural land in the township; eleven do not. Only two of the twenty households beyond six miles from Venice township farm their land in the township; eighteen do not. Distance from an absentee farm owner household to the township ranges from a minimum of ten miles to a maximum of thirty miles one way. Farming by such absentee owners consists of cash grain production; it would be exceedingly difficult to manage a livestock enterprise.

All farm family households located more than six miles beyond the township boundaries were omitted from further analyses. With the exception of two out-of-state owners with relatives living in the townships, most absentee owners reside near the Lansing or Flint area. Thus, the base population is reduced to 421 households.

2) Jointly Owned Land (farm partnerships)

Surprisingly, only eight cases of farm partnerships in Brookfield and Venice townships were noted. The four partnerships in Brookfield involve family members who participate in management of the farm. Only two cases in- volve jointly owned land. A similar situation exists in Venice; there are two cases of jointly owned land with the remaining partnerships in- volving individually owned land combined in joint management.

3) Other Land Use Patterns

Some agricultural land, of course, is not being used for farming purposes. A number of such situations in these two townships was observed.

One situation is where agricultural land is owned by corporations, not by individuals or families. In Brookfield township, for instance, the Farm Bureau owned a 40 acre parcel of land that had not been farmed for years. At the time of this study, the property was in transition and probably being sold to a farmer. The non-farm use of land is more extensive in Venice township. A power company owns over 200 acres of land as the right-of-way for a high voltage power line and there is a 120 acre commercial gravel pit in the township. Also, a modern recreational campground is being established by flooding 60 acres of farmland to make a lake. In the northwest section of Venice township, a brick company owns 35 acres, but this is being used by a local farmer. At the time of this study an extremely controversial issue in the community was the conversion of a farmstead into a landfill for the city of Flint.

Delineation of Farm Operator Population

The distribution of households in terms of farming status is reported in Table 2. Of the base population (resident owners/operators), a total of 238 households participate directly in farming the agricultural land in these two townships; there are 119 (59.6 percent) such farm operator units in Brookfield and 119 (53.5 percent) in Venice. Since our analysis of the social organization of agriculture is keyed to the pattern of land holdings, the study population for further analysis will consist of these 238 households that are directly involved in farming the agricultural

land. That is, the study focuses on the operating farmers in the two townships.

The two townships were observed to be very similar in their agricultural and farm family characteristics. For the sake of analytic clarity township data were combined in order to explore the variety of farming arrangements. Table 3 reports the distribution of families in terms of acres managed; one should note the distribution within each of the three scale types: mini, small, and larger operations.

FINDINGS

One aim of this study is to take into account the various types of families associated with the operation of farms in mid-Michigan. For ease of explication family-household structures were divided into three main groups: lone adult households, complex or irregular households, and the common nuclear family household. Nuclear families presuppose a certain type of family organization (family of procreation) that is not easily transferable to other forms of household organization. Because of this, we will discuss lone adult and complex or irregular households as a separate set of circumstances.

Lone Adults and Complex or Irregular Families

1) On Mini Sized Farms

There are four cases in this study population of lone adult households on mini sized farms. Three are lone males and one, a lone female. One of the lone adult males is a retired farmer who rents out most of his farmland. He, himself, manages only a few acres of cash grains. The other two lone adult males grow cash grain crops; the lone female has a

few head of beef cattle. In all cases, every effort was made to determine that these households were independent and that other family members living nearby on the same property (in a house trailer or small house) were not overlooked.

There are no complex or irregular type family situations operating mini-sized farms.

2) On Small Sized Farms

The complex family situation involves living arrangements that include two or more adults living together in a non-nuclear family unit. Of the 15 households organized along non-nuclear family lines and operating small-sized farms, nine are lone adults and six are complex or irregular family living arrangements.

The nine lone adult households are all adult males who work off the farm. In terms of their farming activities, six of them grow cash grains while the other three engage in beef cattle operations.

It is interesting to note that five of the nine adult males rent additional farm land. Two pick up additional farm land from nearby family members. These two cases, it appears, are more than a simple owner to renter exchange. The linkages involved suggest a tightly integrated unit of operation between the renter and the owner; there is an exchange of equipment, labor and some capital, as well as the fact of kinship bonding that holds the relationship together. The other three lone adult households that expand their farming operations through rental of land do so through simple owner to renter agreements.

There are six complex or irregular family situations within the small sized farm category. By complex or irregular, we mean those arrangements

that involve two or more adults living together, but not as a simple nuclear family unit. Examples of complex households are: adult brothers living together; adult brother(s) and sister(s); single adult children living with an older parent; etc.

In five of the complex households there is a principal adult male and, in each case, he works off the farm and is responsible for the farming operation. (In one case we could not determine the information.) Four of the cases are cash grain operations, one is a beef cattle operation, and one is a dairy operation. Two of the complex households rent additional farmland. The one case for which we have more information is an interesting example of a core-periphery unit of operation. The farmer resides in a complex family household; he rents two additional farms from owners. One of these owners is a family member who provides more than just farmland; he assists with labor and provides some capital. Together, they form a tightly integrated core that links to the third farm in a simple owner to renter arrangement. The linkages in this particular example suggest a tightly integrated core and a loosely integrated periphery.

3) On Larger Sized Farms

The larger sized farm category includes five complex families and two lone adult households. Four of the complex family households have no principal adults working off the farm. (There is one case of no household information.) Three of the farm operations are cash grain production and two are dairy farms. In terms of social organization of these households as farming units, we found three cases where the farm unit is expanding via rental. Each farm household increasing the size of

its operation does so in ways that help explicate the kinds of attributes that are to be found in the study areas. One farmer increases the size of his operation by renting an additional farm from a family member. The family member, although a non-operator, provides capital, equipment, and some labor to the operating farmer. We call this type of farm organization a tightly integrated unit. In another case, the farmer rents an additional farm from a non-kin neighbor. This simple owner to renter exchange is based on a contractual bonding and is an example of a loosely integrated style of social bonding.

There are also two cases of lone adults who operate farmland. Both are males managing individual farming units. One farmer who does not work off the farm is operating a dairy. We were unable to obtain specific off-farm employment information for the other lone adult but he is operating an onion farm.

Nuclear Families and Work Organization

Where the previous discussion concerned lone adult and complex family situations, here we examine relationships between scaled farming and work organization in the case of nuclear family households. Of the total study population of 238 family households, 211 (88.7 percent) are nuclear families. The ways in which they arrange their time and schedules can have an impact on the organization of the farm. Who works off the farm, thereby increasing the household income, can play a role in how much farming activity a farm family can undertake (Table 5). If, for example, both husband and wife work off farm, they may be able to afford (or to risk investing in) newer/faster equipment to farm more land. Due to the

location of factories in the area and the nature of work shifts, those working the afternoon shift have until 3:30 p.m. before they are due to report; this gives them time to do some farming in the morning. Those on the day shift find several hours of daylight remaining in the summer months to get out into the fields.

1) On Mini Sized Farms

As one would expect, for a very small scale farming operation, 22 of 25 nuclear families (88 percent) have at least one principal adult working off the farm full-time (refer to Table 4). From all indications these mini sized farms are being farmed by individuals who are dabbling with agriculture on weekends or in the evenings while their main employment is in off-farm work. We believe only a few of these farmers plan to enlarge their farming operations as long as they remain secure in their off-farm employment. On the other hand, it is probable that the mini category includes some older farmers and other individuals moving out of agriculture who want to maintain some connection with farming. The three cases where neither adult works off the farm are retired couples.

2) On Small Sized Farms

Within the small size category, 62.6 percent of the nuclear family households have at least one principal adult working off the farm full-time. This is not too unusual given the proximity of the study areas to urban centers and industrial employment. Considering the general characteristics of farming activities in mid-Michigan, predominantly a cash grains area, farming activities can be conducted before or after a work shift, on weekends, and of course shared by spouses.

3) On Larger Sized Farms

Among the larger-sized farming oprations with 300 or more acres managed, 51.6 percent of the households have at least one principal adult working off the farm in full-time employment. We would like to point out that in cases where one spouse works off the farm, whether husband or wife, that individual can make a significant contribution to the operation and viability of the farm in the form of capital inputs from off-farm employment. In marginal farming operations, this could make the difference between continuing to operate the farm or having to abandon farming (and being forced to rent out the land).

Nuclear Family Situations

When we consider the possible combinations for off-farm employment by spouses in nuclear families in terms of scale of farming operation (Table 4), we note that as the size of the operation increases, the proportion of principal males working off the farm decreases considerably, while the proportion of principal females working off the farm decreases only slightly (Table 4). Situations where both spouses work off the farm also vary inversely with size; both work off in 36.0 percent of the mini-farm, 28.8 percent of the small farm, and 14.0 percent of the larger farm situations. This probably reflects the increased amount of labor needed to operate larger-sized farms.

The husband or principal adult on mini, small, and larger-sized farm operations is (as observed by his neighbors) the person doing the farming in approximately 75 percent of the cases (Table 6). The only unusual case among these various farming operations is a smaller farm where a

woman, by herself without her husband's help, was managing a beef cattle operation. (The husband teaches school.) Among the larger farms, there are slightly more cases where both husband and wife participate in the farming activities. It should be pointed out that these informant data will tend to reflect publicly visible farming activities. No doubt there is much greater female involvement in farming than is often recognized or admitted by local informants.

As previously mentioned, the primary form of farm enterprise in the mid-Michigan area is that of a cash grain operation. We found no exception to this in our study areas (Table 7). Among the nuclear families situated on mini-sized farms, 60 percent are engaged in cash grain production, while 20 percent are involved in home-use production. One could speculate that these families are mostly dabbling in farming as a part-time or hobby activity, and not necessarily managing their operations for a substantive profit. Most so-called mini farms produce less than $1300 gross farm sales annually.

Among the small-scale farms, a similar emphasis on cash grain production is noted. Some of the small farms are involved in animal production with dairy, beef cattle, and mixed livestock. While these animal production farms are more intensive forms of operation than are the cash grains, they are often small enough so that an operator can work off the farm. Given the fact that 63.6 percent (N=81) of these households have at least one adult working off the farm full time, a cash grain enterprise allows for the expansion and contraction of farming operations with more ease than would dairying and livestock production.

Among the larger-sized farms, cash grains account for 57.8 percent (N=37). There is more dairy farming, of course, and in general these farms have gross sales of from $20,000 to above $100,000 annually. On the average they own 277 acres, which is more than double the amount of land owned by small size farms. The large sized farms operate an average of 396 acres, and rent through various means an additional 216 acres from neighbors.

Farmland Expansion Patterns

To begin with, we focus on all farm family households that are expanding their operation through some kind of rental or share cropping arrangement. Among the mini-sized operations, we find no case of a farm family expanding its unit of operation via a rental or share cropping arrangement (refer to Table 8); hence, reference to mini-sized operations is omitted from the remaining discussions.

Among the small-sized farms, only 36 percent are renting or expanding their farming operation in some way, compared with 80.3 percent of the larger farms. The fact that some farmers expand their unit of operation through rental is not unique in itself. What is interesting is the scope of such rental activity by farmers and the nature of the social linkages that serve to reinforce these arrangements (Table 9). A main aim of the present inquiry is to explore the attributes that are associated with a particular relational style and basis for bonding.

1) Expansion Strategies

Increasing the size of a farming unit can be accomplished by securing additional farm land through rental, share cropping, lease, or simple use

agreements. As noted, (Table 8), we found that 36.0 percent of the small farmers and 80.3 percent of the larger farmers are adding at least one additional parcel of land to their farming operation through some form of rental. We further observed (Table 9) that about 37.0 percent of the small farm and 59.6 percent of the larger farm "expanders" are adding two or more parcels. Indeed, some of the larger farms are adding up to nine separate parcels of land by rental. Generally, these additional units of land are being attained from non-operating owners of farmland; note that 33.7 percent of the total number of families owning some agricultural land in these two townships was not farming their land at the time of this study. However, much of this land is being rented and farmed by others. Increasing a farming operation or maintaining and controlling agricultural production may hinge on the availability of and access to land held by non-operating owners.

It is of key interest in this baseline study to determine the kinds of relational styles and bonding bases that exist in the study area. This provides a unique opportunity to view the roles and attributes of non-operating owners and the farmers to whom they rent their lands. The expansion and contraction of available agricultural land not only influences a given farm operation over time but also directly affects the structure of agriculture in a rural community. Considering the rapid changes coming about in these areas that are adjacent to metropolitan counties with their enormous potential of rural residents, there is every reason to be concerned about the future availability of agricultural land.

2) Relational Attributes of Expanding Farms

In terms of actual farm linkages beyond the number of connections a farmer makes, it should be pointed out that there are several attributes that

represent a social style of linkage between the family farm unit and non-operating owner. The tightly integrated family farm unit is one in which exchanges between the operator and the non-operator are linked in a way that is more complex than a simple owner to renter exchange. The degree of involvement in this type of exchange suggests that equipment, land, and/or labor are being provided by the non-operator.

Among the small-sized farm operators who are expanding their units of operation, 38.8 percent are doing so in terms of a tightly integrated relational exchange (Table 10). These are one-unit exchanges that involve kin group members. For instance, a number of cases exist where a younger operator is farming his parents' land. The parents in these cases are retired farmers or are in the process of reducing their farming operations. Their equipment, land, and in some cases, labor are a key feature in the exchange. This represents a key organizational characteristic and social attribute in the farming operation.

An intra-family strategy can add an element of stability to the farm operator's business organization. It may especially be the case if the younger operator does not have to increase outputs for purchase of additional farmland. Yet the operator is somewhat secure if a family member is the landowner.

At some point, however, a notion of what constitutes the farm and who is controlling agricultural production and decision making must come into the discussion. The more information we have on the relational style and basis of social bonding between the operating farmer and the landowner from whom they rent, lease, or associate with in a share cropping arrangement, the more firm we can fix our definition of a farm. Once this dimension is included in discussions of farms and farming, we may be better

able to assess the direction and stability of farming in metropolitan fringe areas. It would be especially useful to know if some form of agricultural ladder is in place provided by some form of social bonding. Or, whether the various forms of social bonding offer some form of continuity for the farmer who rents, leases, or sharecrops land. With unemployment figures running high, especially in the mid-Michigan area, it would be useful to know if changes in the farming sector are being brought about by unemployed auto workers who also participate in some form of part-time farming.

When there are more than two farms connected, there is the possibility that a tightly integrated family farm unit forms the core of a farming operation. The remaining farm connections can be readily broken down into other types of owner to renter styles. Among the small-sized farming operations, we find ten family farms interlocked in tightly integrated farming operations or core farming units. The additional land the core picks up can be readily broken down into owner to renter styles. The third type of relational exchange is what we call a loosely integrated style of farming operation. Here, the type of exchange between the owner and the renter can be easily broken down into a simple rental exchange. There is nothing in this arrangement to suggest anything beyond a simple owner to renter exchange. We find 40.8 percent of the small scale operations linked in this way (Table 10).

Among the larger sized operations, 26.3 percent of the farmers are expanding their unit of operation in a tightly integrated relational style (Table 10). When we consider at farms expanding out from a core operation to pick up additional farmland through rental arrangements, we

find 15.8 percent of the operators involved in this multiple farm expansion. In other words, the core consists of the operator and a non-operator who provide some land, labor, capital, and/or equipment. Together, as a core operation, additional land is picked up in a simple owner to renter agreement. In the tightly integrated relational style, we find related family members involved in some aspect of the farming operation besides bringing the land into the operation. However, it is not only relational exchanges that involve relatives contributing in this manner.

3) Relationships Between Operating Families and Non-Operating Owners

Another important aspect to consider in terms of land tenure arrangements associated with expanding farm units is the nature of the social bonding involved. The basis of social bonding goes a step beyond the social organizational aspects we've referred to as relational style (Table 10). While consideration of relational style provides some notion as to how members of the agricultural community are arranged in terms of ownership and control of a community's land resources, i.e., the form of organization, consideration of the nature or basis of these bondings permits us to understand more clearly who the participants in these arrangements are. The previously discussed "tightly integrated" unit of organization showed, in some respects, that this common type of relational style is based upon family ties.

In assessing the bonding basis of rental market participants both primary and secondary bondings must be taken into account. The focal point for this analysis is a farm operator family and the nature of its bonding with landlords.

We conceptualize the bonding basis as involving the possibility of two lines of relationships. "Primary bonding" is that connection between a farm operator family and the main or primary source (landowner) from which additional land is acquired. This takes into account the nature of the bonding between the owner of farmland and the farm family operating their land. Table 11 shows the types of primary bonding and the nature of the bonding between those farm families expanding their operation via the rental market. We see that farmers managing smaller farms are more inclined to expand their operations through land acquired via rent or shares from family members. In this case, the type of bonding indicated is familial; that of a close family member such as a father, son and/or brother. The larger sized farmers draw more upon neighbors to expand their operations (55 percent of the small farms expanding their unit of operation via the rental market do so from close family members; only 39 percent of the larger farms expand via close family members).

When the primary bond involved in the expansion of a farm operation is a familial or close family member, the family farming the land often is part of what can be conceptualized as an extended family.

When more than one piece of land is acquired, we must similarly consider the social bonding involved.

Our previous discussion of relational exchanges combined the nature of support provided by non-operating owners in the rental exchange in addition to the land. In multiple farm expansion, we have looked at the social basis of additional rental land (Table 11). This provides us with a notion of the social bonding that exists in these rural areas especially on the secondary parcels of land that go to make up the operating

farm. We asked the question; what is the nature of the social bond between operators and non-operating owners when farm unit expansion exceeds one parcel of land picked up in the rental market? Table 12 reports the types of secondary bondings between expanding farm units and their added units. We found that over 10 percent of the small farmers and 12 percent of the larger farmers have a kinship basis even for secondary bondings.

Expansion Patterns: Summary

Rental market participation by members of the farming community in mid-Michigan is not uncommon nor is it necessarily a new feature in the structure of agriculture. What is interesting is to consider the ways by which these farms enlarge their operations through rentals and to explore the social relationships that bind owner and operator together into an accommodating unit. It was noted that 36 percent of the small and 80 percent of the larger sized operations engage in some form of unit expansion (Table 8). Of those that are expanding, 59 percent of the smaller operations are very closely tied organizationally to family members who share, rent, or lease land and provide in varying degrees the labor, equipment, and/or capital for the operation. Similarly, 42 percent of the expanding larger sized farms do so through the acquisition of additional land from members of their close kin group (Table 10).

Whereas only 37 percent of the expanding small farms are acquiring two or more units of land to expand their total operation, nearly 60 percent of the larger sized farms are adding two or more units. These reciprocal relationships are very important for stabilizing the agricultural community in this mid-Michigan area. The nature of these

expansions and the degree to which they involve kin group members say something about the importance of family members in farming. Movement of older people out of agriculture into retirement can make way for younger farmers to get a foothold. Through rental, sharing, or leasing of land, farm operators have an opportunity, whether they are young or old, to expand their operation with or without the high cost and risk of land purchase. It appears that participating in the land rental market is a viable option for all sized operations; thus, it adds to the overall stability of the agriculture community.

SUMMARY AND CONCLUSIONS

This has been a study of the social organization of agriculture in a mid-Michigan area. It is based upon information pertaining to 454 families who, through the ownership and/or management of farmland, are associated in some way with agriculture. Specifically, it focuses on 238 of these familes who are actively engaged in farming.

The study sites, two townships on the fringes of major metropolitan centers, are very similar in demographic composition and are reasonably representative of the mid-Michigan area in terms of types of agriculture (cash grain production) and average size of farming operations. This area differs of course from the southwestern part of Michigan where fruit and berry crop production are especially strong. And it differs considerably from the more marginal farming activities characteristic of the northern section of the Lower Penninsula of Michigan.

Total acres managed by a farm family was used as a measure of farm scale. Cropland acreage and other indicators of farm scale were not

available from neighborhood informants or from township documents and records. The three categories of farm scale were: mini farms (1-49 acres); small farms (50-299 acres); and larger sized farms (300 plus acres managed). These were considered useful divisions for this base-line, exploratory study.

The mini sized farms generally were comprised of part-time farmers doing farm work on weekends or in the evenings. From all indications, these farms were oriented mainly toward home-use production with an occasional beef steer or cow. We found no indication of attempts to expand the farm units through rental of neighboring lands and we would speculate that these farms all have less than $2500 gross sales per year.

Among the small sized farming operations, we found a little more variety in farm enterprises with a few more dairy and beef cattle operations. These operations range from marginal to full-scale commercial operations. Like the mini sized farm families, the majority of small farm households have at least one adult working off-farm. It appears that this size operation, over 50 acres, allows an owner/operator who is often also working off-farm to take advantage of modern farm equipment so as to operate the farm in a reasonably efficient manner. Small sized farm operations average less than $10,000 gross farm sales per year.

The larger sized operations are generally "full-time" enterprises. They are organized around a great variety of farming enterprises, although cash grain production is the most typical. This category, as expected, contains several large dairy and animal production operations. The gross farm sales range from $10,000 to over $100,000 per year.

We observed that as the farming operation gets larger, there is a tendency for a smaller proportion of husbands (in nuclear family households) to work off the farm. However, a rather large proportion of wives work off the farm on the larger sized farms. This interesting effect should be taken into account by county extension agents and others who are attempting to communicate directly with farm family households.

Part-time farming is a characteristic of all types and scales of farming. In many cases, it appears, the off-farm job allows for the continuation of farming activity, particularly among smaller farms, in light of low gross sales.

One important question for further study is whether there are any measurable differences in the kind and quality of farming practices carried out by those who work off the farm and farm the land compared with those for whom farming is the sole occupation. From outward appearances noted during fieldwork for this study, there seems to be little difference. Indeed, there is some reason to suspect that those who hold off-farm jobs are better able to deal with the vagaries of the market and consequently, do a better job of soil conservation and farm development.

Another question arises: At what point, if any, does the distinction between full-time and part-time farmer become blurred when actual farm sales are taken into account? This question is especially relevant in the mid-Michigan area given similar scales of operation, modern equipment and the seasonal nature of cash grain operations. Indeed, the part-time farmer may be better able to finance higher farm inputs derived from off-farm earnings. In many cases, these higher inputs may come from the employment of either husband, wife, or both in off-farm work.

Among all size operations, we found part-time farmers an integral part of the setting. Perhaps the term "part-time farmer" is an incorrect one to use for those who operate a viable, full-scale farm yet work off the farm as well. Often the income from off-farm employment brought into the household through both husband and wife can provide an important source of development capital. The term "part-time farmer" may conger up visions of someone not completing farm tasks because of time constraints, or that such part-timers operate small farms of little or no consequence to the agricultural community or to the process of food production. We would suggest a more appropriate designation for many of these individuals and their families; many are really "split-time farmers." This is an especially appropriate term when we note that over 60 percent of the small-sized operations and nearly 50 percent of the large sized farm operations have at least one adult working off the farm full-time. These "split-time" farmers and farm families are really multiple job holders managing two occupations at one time (either as individuals or households).

One of the factors that must be taken into account to more fully comprehend the changing structure of agriculture, especially in metropolitan fringe areas, is the diversity of farming arrangements and the time-splitting of farmers with dual occupations. Pressure of non-operating owners to sell smaller pieces of land due to the influx of rural residents and increased taxes must be weighed in light of the fact that these smaller pieces of land may be an integral part of a family's efforts to arrange a commercially viable operation. We have explored these arrangements by focusing on the social relationships and strategies of farmers who are expanding their operations through land rental.

When we examine the social linkages between operator and non-operating owners, we are concerned with the relational style (form) and bonding (nature of the social relationship) involved. Three kinds of relational style were observed in the mid-Michigan area. A tightly integrated style, whether connected with one or more farms, appears as the primary organizational form. The key element here is the fact that a majority of farm families expand their operations by linking with non-operating owners in a way that has the non-operator providing some labor, equipment, and/or capital. Since these tightly integrated styles invariably involve close kin and family members, this arrangement suggests something on the order of an extended type of family farming operation in the American context.

Some expanding farm operators may pick up additional farmland beyond the initial arrangement; in this case, the tightly integrated arrangement is best regarded as the core of such an operation while the other farmland parcels added to the operation generally consists of simple owner to operation exchanges. It is this core that will generally provide labor and/or equipment; and, to some degree, management decisions (concerning the overall farm operation) may be made by participants in the core. A third type of relational exchange consists of a simple owner to operator arrangement. In this case, there is no overlap of labor, equipment, or capital.

The nature of the bonding among families expanding their farm operation is another attribute we examined. This focus adds a useful dimension toward gaining a better understanding of who farmers link up with when they attempt to increase the size of their farming operation. The availability of additional farmland (for purchase, rent, lease, or own shares),

of course, impacts on the nature and eventual size of the farms. Added improvements or rented lands, or the lack of them, influences considerably the agriculture output. In tightly integrated relational styles and where social bondings are along close family lines, problems of continuity and land care may be less severe or brothersome than with other forms of relational style and bonding. If there is uncertainty over continuity of farmland rental, the likelihood exists that a farmer may be unwilling to build improvements into or onto the land. The fact that land is available to the operating farmer without having to purchase it would tend to reduce farm inputs and allow operators to adjust their farming operations according to time constraints, market conditions, and the previous year's income. The renter still has to consider the upkeep of rental land during periods of changing conditions.

Given the relative stability of the land tenure situation in these mid-Michigan settings (and a reasonable degree of equilibrium or accomodation); i.e., with the available farmland being farmed by owners or renters, we are led to ask about the kinds of opportunities available for newcomers to farming. Certainly, for family members in a tightly integrated relational arrangement and in a familial bonding style, the social network provides a means by which the new farmer can be introduced to farming.

With regard to newcomers in the area, our survey did locate two transitional situations. In one case, farmland was being sold to another farmer who lives in a nearby area. The other case is the consideration of sale of a farm for the purpose of converting it into a county or regional landfill. During the period of our observations, we saw no

clear indication of movement into the area by "new" farmers. This particular question, for the time, must remain unresolved. Nevertheless, the problem is important: how do individuals and families new to the area enter into farming and become stable members of the agricultural community?

Agricultural land in metropolitan fringe areas is subject to various kinds of pressures and conditions which can affect changes in the nature of farm production, especially among farm operators who must rely on the rental of farmland. These interstitial rural areas, being ever more pressed by metropolitan expansion, merit continued and closer examination in order to gauge changes in the structure of agriculture over time. To conceptualize and research the relational styles and the nature of social bondings involved as farm operators struggle to expand their size of holdings through rental, leasing, and share farming arrangements will add to our understanding of the functioning of modern farming operations. In many ways, it will help us to better comprehend what it is that constitutes a "farm." Further, it may provide insights into the kind of continuity that exists in the rental market and the movement of people that might be expected into or out of farming in the area. In light of the current economic downturn in mid-Michigan and the high rate of unemployment, it would be most interesting to know whether those who were formerly part-time farmers working full-time in industry have turned toward greater involvement in farming. And, if so, what will be the impact on the agricultural sector in and on rural communities located in or near depressed industrial centers?

TABLE 1. Residence Location of Families Associated With Farmland in Venice and Brookfield Townships (Percent).

Residence Location of Farmland Owners and/or Operators	Venice Township (N = 243)	Brookfield Township (N = 211)
Within township	82.3	79.6
Nearby, in adjacent township	9.5	14.2
Further away, more than 6 miles from township	8.2	6.2
Total Percent	100.0	100.0

TABLE 2. Farming Status of Farm Families in Venice and Brookfield Townships (Percent)*

Family Farming Status	Venice Township (N = 223)	Brookfield Township (N = 198)
Owner and operator of farmland	45.7%	48.5%
Farm owner/non-operator	44.4	26.8
Non-owner/farm operator	7.6	11.1
Owner of idle farmland	2.3	13.6
Total Percent	100.0	100.0

*Note: This table excludes those families associated with farmland in Venice and Brookfield townships who live further than 6 miles away from the townships.

TABLE 3. Acreage Managed by Farm Operator Families, by Scale of Farming Operation (Percent)

Acres Managed Farms	Percent of all (N = 238)	Scale of Farming Operation (Percent of Scale Category) Mini (10-49 Acres) (N = 31)	Small (50-299 Acres) (N = 136)	Larger (300+ Acres) (N = 71)
10-19	2.9%	22.6%		
20-29	0.8	6.5		
30-39	2.1	16.1		
40-49	7.2	54.8		
50-99	20.2		35.3%	
100-149	10.9		19.1	
150-199	10.5		18.4	
200-249	10.9		19.1	
250-299	4.6		8.1	
300-399	10.9			36.6%
400-499	7.6			25.4
500-599	4.2			14.1
600-699	3.4			11.3
700-799	1.3			4.2
800-899	1.7			5.6
900-999	0.0			0.0
1000+	0.8			2.8
Total Percent	100.0	100.0	100.0	100.0

TABLE 4. Off-Farm Work Status of Husband and Wife in Nuclear Family Households, by Scale of Farming Operation

Off-Farm Work Status of Husband and Wife	Scale of Farming Operation* Mini (N = 25)	Small (N = 118)	Larger (N = 64)
Husband only works off-farm	48.0%	28.0%	18.8%
Wife only works off-farm	4.0	6.8	18.8
Both husband and wife work off-farm	36.0	28.8	14.0
Neither Husband or Wife work off-farm	12.0	36.4	48.4
Total Percent	100.0	100.0	100.0

*Note: There are 2 cases of no information for mini-farms and 2 cases for small farms.

TABLE 5. Age Characteristics of Nuclear Families Operating Farms, by Off-Farm Work Status of Husband and Wife and Scale of Farming Operation (Percent)

Age Category* of Families	Smaller Farms (Hobby/Small Combined)		Larger Farms	
	One or the other or both work off-farm (N = 77)	Neither husband nor wife work off-farm (N = 43)	One or the other or both work off-farm (N = 33)	Neither husband nor wife work off-farm (N = 31)
Under 30 years	3.9%	2.3%	12.1%	9.7
30 to 49 years	53.3	23.3	51.5	38.7
60 to 64 years	38.9	62.8	36.4	48.4
65 and over	3.9	11.6	-	3.2
Total Percent	100.0	100.0	100.0	100.00

*Note: In most cases the age range applies to both husband and wife. In the few cases of discrepancy, the husband's age was used.

TABLE 6. Participation in Farming Activities by Husband and Wife in Nuclear Family Households, by Scale of Operation (Percent)

Who does the farming?	Scale of Farming Operation Mini (N = 24)*	Small (N = 116)*	Larger (N = 64)
Husband only does the farming	75.0	75.0	70.3
Wife only does the farming	-	0.9	-
Both husband and wife do the farming	25.0	24.1	29.7
Total Percent	100.0	100.0	100.00

Note: There are 3 cases of no information for mini-farms and 4 cases for small farms.

TABLE 7. Main Farming Enterprises on Nuclear Family Farms, by Scale of Farming Operation (Percent)

Type of Farming Operation	Scale of Farming Operation Mini (N = 25)*	Small (N = 120)*	Larger (N = 64)
Cash grains	60.0	67.5	57.8
Dairy	4.0	11.7	26.6
Beef Cattle	12.0	7.5	4.7
Mixed Livestock (hogs, pigs, sheep)	-	9.2	7.8
Home use production	20.0	-	-
Miscellaneous**	4.0	4.1	3.1
Total Percent	100.0	100.0	100.00

*Note: There are 2 cases of no information.

**Note: "Miscellaneous" refers to: 1 mini-scale horse farm; 4 small farms (onion; sweet corn; tree farm; and home use production farm; and 2 large onion farms.

TABLE 8. Family Farm Expansion Strategy, by Scale of Farming Operation (Percent)

Nature of Farm Unit Expansion	Scale of Farming Operation Mini* (N = 31)	Small (N = 136)	Larger (N = 71)
Families expanding their farm unit by rental, share cropping non-operating owners	-	36.0%	80.3%
Families Managing their farms as single unit operations without any additional land rented	100.0%	64.0	19.7
Total Percent	100.0	100.0	100.00

*Note: One case is a family renting all their land from an absentee owner; the family does not own any land.

TABLE 9. Number of Farm Units Added (Via Rental, Sharecropping, or Other Means) by Farm Households Engaged in Expansion Strategy, by Size of Farming Operation (Percent)

Number of Farm Units Added for purposes of Farm Expansion	Scale of Farming Operation Small (N = 49)	Larger (N = 57)
One farm unit	63.3	40.4
Two units	22.4	19.3
Three units	6.1	12.3
Four units	8.2	19.3
Five units	-	3.5
Six units	-	1.7
Nine units	-	3.5
Total Percent	100.0	100.00

TABLE 10. Types of Relational Exchanges Between Expanding Farm Units and Added Units, by Scale of Farming Operation (Percent)

Relational Exchange Type	Scale of Farming Operation	
	Small (N = 49)	Larger (N = 57)
Two Farms, Tightly integrated (with non-operating owner providing labor, equipment, and/or capital along with the land)	38.8%	26.3%
Combination of tightly integrated multiple farm core with additional farm units acquired by simple owner to renter exchange	20.4	15.8
Three farms or more, loosely integrated by simple owner to renter exchange	40.8	57.9
Total Percent	100.0	100.00

TABLE 11. Types of Primary Bonding Between Expanding (Multiple) Farm Units and Added Units, by Scale of Farming Operation (Percent)

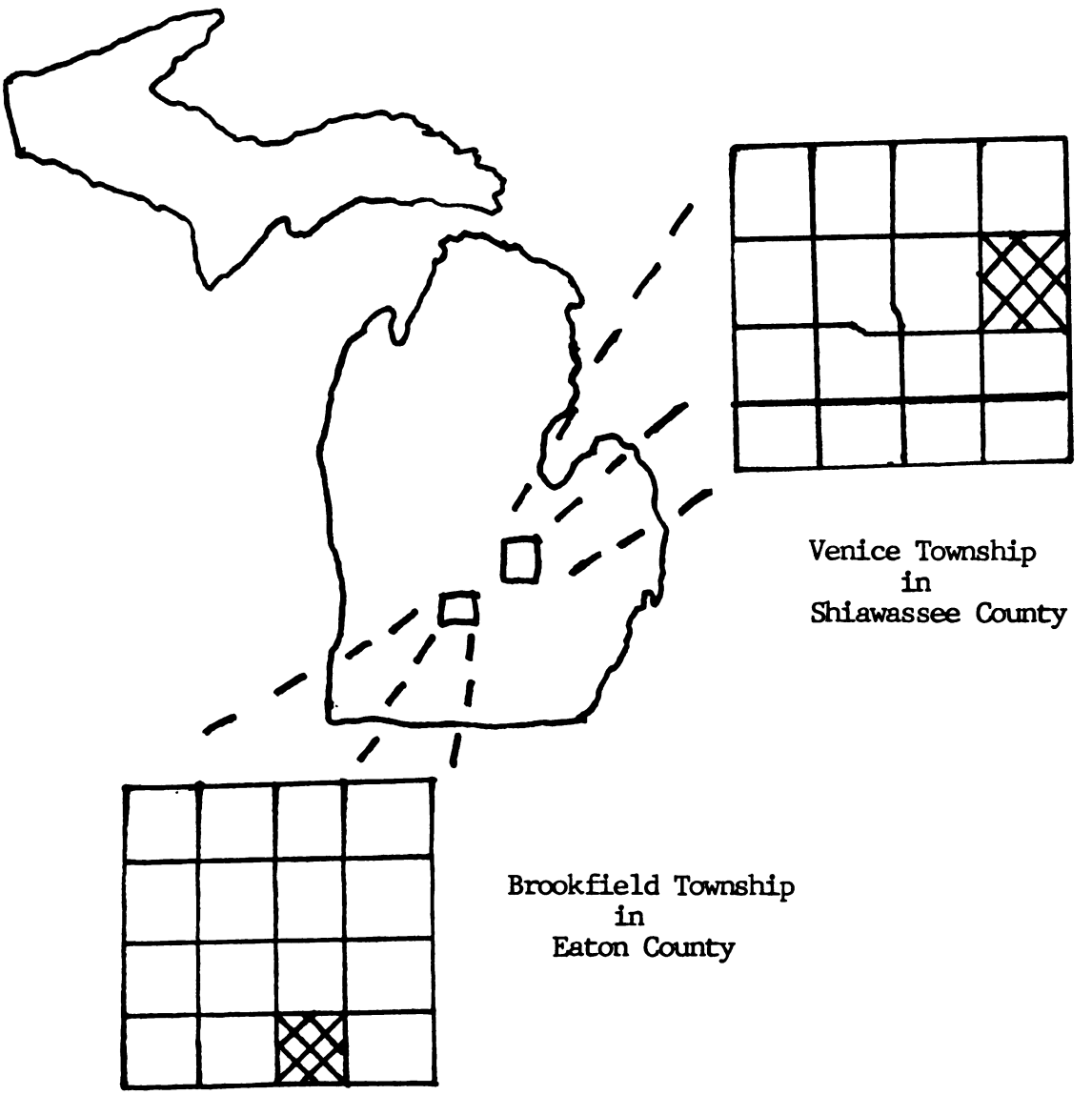
Basis of Primary Bonding Between Core Unit and Added Units	Scale of Farming Operation Small (N = 49)	Larger (N = 57)
Familial, close family members (father/son/brothers)	55.1	38.6
Kinship, secondary kin (aunts/uncles/nephews)	4.1	1.8
Neighbors (nearby)	20.4	45.6
Contractual (non-personal)	20.4	10.5
Corporative (part of corporative system)	-	3.5
Total Percent	100.0	100.00

TABLE 12. Types of Secondary Bonding Between Expanding (Multiple) Farm Units and Added Units, by Scale of Farming Operation (Percent)

Basis of Secondary Bonding Between Core Unit and Added Units*	Scale of Farming Operation Small (N = 49)	Larger (N = 57)
Familial, close family members (father/son/brothers)	6.1	8.8
Kinship, secondary kin (aunts/uncles/nephews)	4.1	3.5
Neighbors (nearby)	22.4	42.1
Contractual (non-personal)	4.1	5.3
Corporative (part of corporative system)	-	-
No secondary bonding	63.3	40.3
Total Percent	100.0	100.00

*Note: If more than two bondings, the general character of the periphery is specified.

FIGURE 1. Michigan Farm Family Study Areas



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