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THE AMERICAN AGRICULTURE MOVEMENT: ITS CAUSE, SPREAD, AND IMPACT

The University of Oklahoma PH.D. 1979

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THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

THE AMERICAN AGRICULTURE MOVEMENT: ITS CAUSE, SPREAD, AND IMPACT

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

BY

DONALD MILLER GREENE

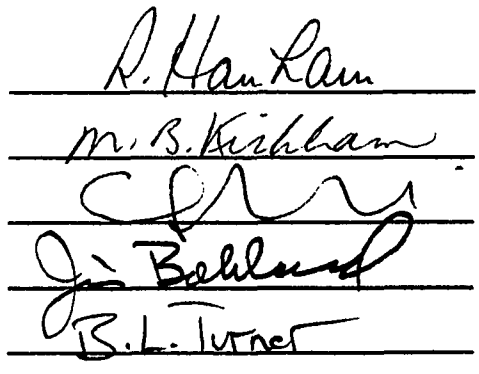
Norman, Oklahoma

1979

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ITS CAUSE, SPREAD, AND IMPACT

APPROVED BY



DISSERTATION COMMITTEE

The heart of her husband trusts in her, and he will have no lack of gain.

Proverbs 31:11

Dedicated in sincerest appreciation first to my loving wife Alison for her support and encouragement necessary for concluding the degree, and secondly to my daughter Meredith for the joy she has brought to my life.

ACKNOWLEDGEMENTS

The author wishes to express sincere appreciation to the following people:

Dr. Robert Hanham, for his guidance during the execution of each stage of the dissertation. As committee chairman, he has provided encouragement and valuable advice.

Professors James Bohland, Edward Malecki, and William Turner, the remaining committee members from the University of Oklahoma, for their helpful suggestions and assistance.

Professor Mary Beth Kirkham, adjunct committee member from Oklahoma State University, for her counsel and enthusiasm in research.

Mr. Harvey Gardner and Marti Chadwick, President and secretary, respectively, of the American Agriculture Movement of Oklahoma, for their time, patience, and cooperation.

Viola Shivers, Linda Compton, and Gay Sikes for typing the manuscript.

Pam and Randy Reynolds, Lesley and Marianne Price, for special help during my research.

Both of my families for their faith and support of my efforts throughout graduate school.

My wife, Alison, for her unwaivering love, patience, and confidence.

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THE AMERICAN AGRICULTURE MOVEMENT: ITS CAUSE, SPREAD, AND IMPACT

CHAPTER I

INTRODUCTION

General Objective

The overall purpose of this study is to increase our understanding of some problems confronting the American farmer. Clearly, the relationship between the farming sector and society at large is a dynamic process, a continually changing relationship which contributes to a disequilibrium in goods and services, labor opportunity, and financial resources between the agricultural community and society as a whole. Thus, in an attempt to better understand the farming problem, three topics will be explored. First, historical examples of farmer problems and protest will be given. Second, an empirical example, focusing on the American Agriculture Movement will be provided. Finally, the discussion will be presented in a spatial context to contribute to rural diffusion studies. In turn, each of these three topics will be expanded.

In order to integrate commonly shared farmer experiences into a generalized pattern of farm protest, discussion of past agricultural movements will be presented. Reviews such as that by Tweeten [61] indicate the desirability of synthesizing previous protest movements into a common theme. Among the specific factors which can be generalized from past agricultural movements is the list of causes impelling farmers to protest. While farmer protests have typically been justified on the basis of economics, a complex of social and environmental reasons have served as justification as well. Another interesting feature of previous farmer protests is the point of origin of a protest movement and the subsequent diffusion of the movement through time. The diffusion of a protest movement is an important phenomenon to be studied in the empirical example provided in this research. Of particular interest will be the spatial variation in the level of commitment by farmers toward the protest movement. The structure of the protest oganization and the changes the organization adopts to insure longevity will serve as the third factor of farmer movements to be probed. Finally, the effectiveness of farmer protests in achieving their stated objectives will be discussed.

The empirical example offered in this research is an analysis of the American Agriculture Movement (AAM).

The specific objective of this analysis is to study the cause, spread, and impact of the AAM. Clearly, the implications resulting from this analysis include a better understanding of the diffusion of protest in the rural setting. Furthermore, the strength of protest should behave in direct proportion to the seriousness of the socioeconomic forces which cause the farmer protest. Specifically, the strength of farmer protest should vary geographically in accordance with the geographic variation of the forces which caused the protest.

A presentation of the American Agriculture Movement in the context of its spatial development will rank as the final point of interest in this research. While innovation diffusion literature has focused primarily on the urban or industrial setting, most contributions to the literature of rural diffusion have concentrated on examples of technological innovation. Instead, this study, dealing specifically with a farmer protest movement, will contribute to an understanding of the rural diffusion of a social innovation.

1.2 Description of Text

This discourse, presented within the framework of eight chapters, includes a literature review, statement of research justification, background on the American Agriculture Movement, data sources and methodology, analysis, and conclusion. The content of these eight chapters is described below.

Chapter One provides a statement of the general objective and a description of the sequence of ideas to be discussed in this study. The literature review included in this chapter is designed to provide a theoretical context for the research. This review presents current ideas on the diffusion of innovation. Additionally, the initial chapter offers a brief history of farmer movements and protest, with emphasis on common features of farmer movements and patterns of development. Identification of potential variables which explain farmer behavior patterns are also emphasized.

In Chapter Two, the causes, origin, development, and purpose of the American Agriculture Movement are introduced. Moreover, a comparison is developed between earlier farmer movements and the American Agriculture Movement. Finally, the AAM is characterized as an empirical example of rural innovation diffusion and adoption.

Chapter Three presents a series of maps which illustrate the diffusion of the movement through time and space. Two map series are provided in order to present two scales of diffusion. The spread of the American Agriculture Movement through the United States is shown in the first map series. The second series of maps illustrate the spread of the AAM through Oklahoma.

Chapter Four explains the sources of data used in this study, the methodology by which the data is analyzed,

and a discussion of the survey results. The primary source of information is a mail survey of randomly selected members of the AAM in Oklahoma.

Chapters Five, Six, and Seven provide the analysis of the survey data. The analysis in Chapter Five is concerned with identification of those variables which influenced the time of individual farmer adoption of the AAM. An analysis of farmer commitment toward the AAM is conducted in Chapter Six. The objective of Chapter Seven is to assess the impact of the farmer's strike upon the future plans of Oklahoma farmers.

Finally, Chapter Eight gives a verbal description of the results of the analysis. Conclusions about time of adoption, commitment, and impact of the AAM on Oklahoma farmers are given. The significance of these conclusions are placed in a theoretical context to explain the contribution of this study to the literature on diffusion and adoption of innovations.

1.3 Explanatory Framework and Literature Review

The literature relevant to this study is subsumed in two different themes. The first theme is concerned with farmer movements and protest. Farmer movements of the past lend a perspective through which the present empirical study is given its context. Although every farmer uprising is different by time and location, most of the protests share

common experiences. Accordingly, the emphasis of this discussion is in combining these common elements to form a coherent whole. The second theme of this review considers the literature of innovation diffusion and the adoption process. The evolution of this literature has yielded empirical regularities which describe diffusion and motivations behind adoption behavior. As a result, this literature is beneficial in pointing out important variables significant to rural studies.

1.3.1 History of farmer organization and protest

This discussion enumerates many events in farm history. As these examples will reveal, agricultural organizations and farmer protest have always been interfused. In most cases, dissatisfaction among farmers eventually led to an alliance to express commonly shared problems. In other instances farmer organizations, such as the Farmers' Wheel, converted from an educational society into a protest organization. In this review, each case includes both elements of protest and organization. In addition, the origin and progress of the four current farm organizations are presented.

During the last 300 years, the business of farming and agriculture has been complicated by the variety of people involved in agriculture [60]. Major groups interested in agriculture included governments, consumers, businesses, farmers, and farm laborers. The objectives sought

by one group often contradict goals of other interested farm groups. As a result, a strict delineation between a farm organization and a farmer protest movement needs to be clearly defined. For the purpose of the following discussion, a farmer protest movement is an informal association of farmers seeking a common beneficial objective. A farm organization is defined as a formal association of farmers requiring membership. By this definition of terms, other farm groups such as agri-business, farm laborers, and the U. S. Department of Agriculture can be eliminated.

The major American farm organizations and protest movements are chronologically listed in Table 1. These events span 350 years to the present. Only a handful of farmer protests occurred before the 1800's. A partial explanation for the increase in farmer activity during the 1800's is found in the transition from an agrarian society to an industrialized nation. As industrial cities grew, a larger demand was placed on the farmer to commercialize his output to meet the needs of an increasing non-agricultural sector. Problems attendant with commercialization were often the cause of farmer protest activity. Typical problem areas included capital outlays required for production above self-sufficiency, transportation, and marketing of commodities.

Table 1 indicates 22 events in farmer activity. Among these 22 events, thirteen of them are designated as

TABLE 1

AMERICAN FARMER ACTIVITIES SINCE 1630

Time	Organization or Movement	Type*	Origin	Early Purpose	Later Purpose+	Commodity
1630	Tobacco farmers	CH	Virginia	Economic		Tobacco
1682	Tobacco riots	P	Virginia	Economic		Tobacco
1786	Shay's rebellion	P	New England	Economic		General
1810	The cooperative movement	C	Connecticut	Economic		Dairy
1830	New England Assoc. of Farmers	O	New England	Political		General
1867	Patrons of Husbandry (Grange)	OPCH	Washington, D.C.	Social & Educ.	Bus. & Polit.	General
1873	Texas Farmer's Alliance	OH	Texas	Economic	Political	General
1880	Northern Farmer's Alliance	OC	Illinois	Economic	Political	General
1882	Agricultural Wheel	O	Arkansas	Social & Educ.	Econ. & Polit.	General
1902	National Farmers Union	OCH	Texas	Econ. Educ. & Pol.	Business	Cotton
1902	American Society of Equity	OH	Indiana	Economic		General
1904	Southern Cotton Association	OH	Texas	Economic		Cotton
1905	The Night Riders	PH	Kentucky	Economic		Tobacco
1907	Equity Cooperative Exchange	C	Mid-west	Business		Wheat
1910	Farmers Equity Union	OC	Mid-west	Business		Wheat
1915	Non-Partisan League	OC	North Dak.	Econ. & Pol.		Wheat
1919	American Farm Bureau Fed.	OC	New York	Econ. & Educ.	Business	General
1920	Farm Labor Union	OC	Texas	Economic		Cotton
1932	Farmers Holiday Movement	PH	Iowa	Economic		General
1953	Cattleman's Caravan	P	Mid-west	Economic		Cattle
1955	National Farmers Organization	OH	Iowa	Economic		Corn
1977	American Agriculture Movement	PH	Colorado	Econ. & Pol.		Wheat

* O=Farmer Organization, P=Protest Movement, C=Farm Cooperatives, H=Holding Actions

\+ A blank space indicates that the purpose of the activity has not changed through the years.

farmer organizations. The activities farmers became involved in included farm organizations, protest movements, cooperatives, and holding actions. As Table 1 illustrates, many farm organizations developed into protest movements and many protest movements evolved into organizations. The original purpose of most of these farmer activities was primarily created by an economic problem. In point of fact, every farmer protest movement or holding action developed from a financial cause. More often than not, farmer organizations began for non-economic reasons. Justification for these farmer organizations cited social, political, or educational reasons for their development. Of the thirteen farm organizations cited, only four are currently viable. These four organizations owe their longevity to a transition into self-sustaining business activities.

The origin of these events in American farming history trace the westward sweep of American migration into the Great Plains. From 1630 to 1830, every farmer protest occurred in states along the Atlantic seaboard. Farming activity into the interior accelerated by the middle of the nineteenth century. Land prices continued to drop as new areas were opened to farming and railroads allowed easier access [61, p. 114].

> The settlement of the great heartland of America was coincidental with the spread of the railroad. This was of tremendous significance,

> because it made possible more rapid settlement and a more commercialized agriculture. If the settlement technology and transportation had permitted only subsistence farming for several years, farming would have been difficult to transform later into a commercial operation.

The Federal land policy of 1800 required a minimum purchase of 640 acres at $2.00 per acre. By 1862, the Homestead Act gave a settler clear title to 160 acres after paying $10.00 registration and residing on and working the land for five years. Over the next few decades following the Homestead Act, farmers continually experienced low prices for their commodities. Rapid settlement created overproduction of food with a consequent drop in prices.

After the Civil War to the present most farmer activity centered in two locations. Texas was prominent for the creation of four farm organizations. Arkansas and Louisiana were also involved in the Farmer Alliance [61, p. 65].

> The Louisiana Farmers Union originated following a discussion between twelve men cleaning a graveyard in 1880. By 1887, it had grown to 10,000 members. Meanwhile the Texas Farmers Alliance had grown to approximately 100,000 members. The two organizations merged in 1887.

The second area of farmer activity was in Illinois and the adjacent states of Indiana and Iowa. Six farming organizations originated in this tri-state area. Three of these farm groups are still in existence.

Most of these farming activities can be attributed to economic problems in a single commodity. The well known

agricultural regions of tobacco in Virginia, cotton in the South, wheat in the Great Plains, and corn in Iowa figure prominently in farmer activity. As a case in point, the international level of trade in cotton slowed expansion of the Farm Bureau into the South. Farm Bureau expansion was greatest in the Mid-west where dairying and corn was produced for domestic consumption. Since cotton was an international commodity, growers enjoyed a larger market with a resultant stability in prices. However, when cotton prices fell after World War I, cotton farmers created the Farm Labor Union which represented their particular interests [54, p. 259].

> Under the leadership of M. W. Fitzwater, a farmer living near Bonham, Texas, a small group of farmers met on October 30, 1920, in the Fannin County courthouse for the purpose of founding this organization. With marketing as its major objective, the Farm Labor Union appealed to the same kind of farmer that would have joined the Farmers' Alliance or the Farmer's Union at an earlier date.

The Farm Labor Union failed after six years due to inefficient marketing, a rise in cotton prices, and an unstable membership comprised of frequently migrating tenant farmers. The Farm Bureau was finally able to make inroads into the South during the early 1930's. One of the common features of the longer lasting farm organizations is expansion into multiple commodities. Hence the Farm Bureau insured its longevity and gained stature in international trading through the "marriage of corn and cotton."

The remainder of this presentation focuses on the four currently existing farm organizations. These four groups are the Grange, the National Farmers Union, the American Farm Bureau Federation, and the National Farmers Organization. The beginnings, organizational structure, and trends in the diffusion of each organization is discussed.

The Grange.--The Grange, or, as it is less popularly known, the Patrons of Husbandry, was organized in Washington D.C. on December 4, 1867. The Grange was founded by Oliver Kelly, a U.S.D.A. employee. The rapid acceptance of the Grange followed a drop in farm prices in 1874. The purpose of the Grange was to be a family organization satisfying the social and educational needs of the rural community. However, many members saw the Grange as a mechanism to voice protest, to create farmer cooperatives, and to initiate farmer holding actions.

The voice and direction of the Grange is from the farmer toward the national officers. The smallest organizational unit is the Subordinate Grange which typically conducts bimonthly meetings. These regular meetings hold a business session, an educational hour, and entertainment or recreation. The Pomona Grange is a grouping of Subordinate Granges within a county. These county-wide meetings are held quarterly or monthly. The Pomona Grange emphasizes

educational or community work and cooperatives are sponsored at this level. The State Grange is a delegate body representing farmer opinion of the smaller units. The annual State Grange convention consider matters of legislation and public policy. Finally, the National Grange is a delegate body with two representatives from each state [38, p. 164].

> The trend in membership of the Grange is not unlike the trend for many rural organizations: a tremendous peak soon after organization, then a precipitous decline; with a leveling off and gradual progress forward and upward from then on.

The Grange membership from 1880 to the present reveals a logistic S-curve typical of adoption patterns. However, the rapid rise and precipitous fall of membership prior to steady growth is also characteristic of farmer movements. The spike is likely caused by a host of farmers who see the organization as a cure for their immediate economic woes. After a few years, the financial problem disappears or else farmers no longer believe in the organization as a solution for their problems. The strongest support for the Grange was found in the northeast, near its origin. Grange membership spread from east to west across the United States. The Great Plains states from Texas to Minnesota supported the Grange to a lesser degree. California, Oregon, and Washington actively supported the Grange. Although the Grange was once powerful in the South, the Farmers Alliance supplanted it by 1900.

The Farmers Union.--The Farmers Educational and Cooperative Union, or the Farmers Union, was created in the little town of Emory in Rains County, Texas in 1902. Inspiration for the development of a farmer organization came from Newt Gresham, a local newspaper publisher [2, p. 103].

> Newt Gresham was sitting on a log one day at a crossroads country store, and observed the few woebegone and debt-depressed farmers who came and went. Doubtless Newt Gresham recalled the time when the Grange, the Wheel and the Farmers' Alliance had made heroic but unsuccessful effort to break away from such conditions as he was then witnessing, and in his heart of hearts he desired to aid them. There came to him, as if by inspiration, a hope that he might be able to assist them and thus redress their many wrongs. He, too, was poor and, like them, had faced the credit and mortgage system then cursing the South.

The objectives of the Farmers Union included social fellowship, education, and the prospects of higher prices for the goods they sold and lower prices for those they purchased. However, the Farmers Union also pursued the concept of unionism and often aligned themselves with urban labor unions for political support. Their lobbying efforts met with success in getting the New Deal farm program through Congress. Other successes included crop insurance, tenant farm purchase, surplus commodity purchase legislation, and establishment of both the Resettlement Administration and the Rural Electrification Administration [16, p. 173].

The programs of the Farmers Union are carried out on a local, county, state, and national basis. The national

organization is composed of executive officers and one delegate for each 5,000 members. A state charter is given when any state reaches a membership of 5,000 men. A county union is chartered when five local unions are created. Finally, a local union must have at least ten male members.

Farmers Union membership climbed rapidly during its first ten years to a peak in 1917. World War I caused a rapid drop in membership to one fourth of its former size. Membership has remained stable ever since. The spread of the Farmers Union occurred in two stages. During its initial expansion, the Union concentrated in the South and Southwest [54, p. 189].

> State unions appeared in Texas, Louisiana, Arkansas, and Georgia in 1905; Mississippi, South Carolina, and Tennessee in 1906; Florida in 1907; Kentucky and North Carolina in 1908; and Virginia in 1910. Meanwhile, the order spread into the states of the Middle and far West.

The second growth of the Farmers Union, during the depression, also noted a change in the purposes of the organization. Emphasis had shifted from cooperation and education to pressure for remedial legislation and the use of direct action. The strength of the Farmers Union shifted from the South to the Plains states during this time [38, p. 207].

The Farm Bureau.--Any discussion of the American Farm Bureau Federation must include details on agricultural

extension and development of the county agent. The extension, U.S. Department of Agriculture, and the Farm Bureau have been inextricably linked ever since the creation of the Farm Bureau in 1918.

The Government's agricultural policy turned to the education of farmers through a Department of Agriculture established in 1862. In that same year, the Morrill Act granted Federal Land to the states for the establishment of "land grant" colleges for the teaching of agriculture and the mechanical arts. The Hatch Act of 1887 authorized funds for the development of experimental stations in agricultural research. First development of the county agent was precipitated by a boll weevil attack in Texas cotton fields in 1903 [32, p. 72].

> In the spring of 1903 the businessmen of Terrell, Texas, called a mass meeting to consider the boll weevil situation and to take action to try to avert the panic which always followed its invasion of new territory. Dr. Knapp was sent for and addressed the meeting. His explanation of the situation and his ideas of the proper remedy convinced those people that he was right, and they then and there determined to give Dr. Knapp's demonstration plan a thorough trial.

After a guarantee against loss was assured, a local farmer cultivated forty acres of cotton which netted $700.00 profit. By 1915, there were over 1,000 county agents employed in demonstration work in the U.S. The areas of earliest county agent adoption were in the southern states.

The first Farm Bureau was created in 1910 in Broome County, New York by Byers Gitchell, secretary of the Binghamton Chamber of Commerce. An agricultural committee was formed after a tour of the neighboring countryside indicated the need for agricultural assistance. This committee later became known as the "bureau" after two farmers and a representative of the Lackawanna Railroad enlisted their services. Through the association with state educational institutions, the county bureaus rapidly expanded. The idea of a state organization of bureaus seems to have developed from the annual conferences at the state agricultural colleges which were attended by bureau officers. The bureau members quickly realized that a state federation independent of the education institutions "would provide a powerful influence in securing liberal appropriations from the legislatures for further extension work" [32, p. 111]. Two years later, in 1919, representatives of twelve state bureaus convened in Ithaca to create the national organization.

The rapid diffusion of the Farm Bureau was concentrated in the Northeast, Midwest and far Western states. In the early days a limiting factor was finding enough men to serve as county agents. The general plan soon developed that the agricultural colleges submitted prospects for the extension position while the local Farm Bureau either accepted or rejected the candidate. The membership trend of the Farm Bureau was similar to other farm organizations in

one respect. After an initial rise in membership, the Farm Bureau roles dropped to half their number within ten years. Unlike other farm groups, the Farm Bureau experienced a steady climb in membership after the depression. This is explained in large measure by the direct ties between the Farm Bureau and the U.S. Department of Agriculture.

The Farm Bureau has evolved into the largest farming enterprise and one of the most influential lobbies in Washington, D.C. Its evolution from a true farm organization into a business conglomerate was first noted in 1948 by its divergence from the attitudes prevalent among the other farm groups [3, p. 107].

> Although the organization had been edging away from support of the government's general farm program for some time, after strenuous debate a clean break was made. This decision caused a rupture in the Farm Bureau's relations with other farm groups which has not healed to this day. It also marked the beginning of the Farm Bureau's continuing crusade to purge the Federal government from agriculture, to return the farm economy to the "free market."

Soon afterwards, the Farm Bureau actively sought the removal of both the National Farmers Union and the National Farmers Organization. By 1950, the Farm Bureau plotted the destruction of the National Farmers Union by linking it with communism. The Farm Bureau helped to create and support the 1969 Agricultural Adjustment Act which would have outlawed the National Farmers Organization by making some of their activities a crime.

Early Farm Bureau profit came from development of its insurance industry. Initially, Farm Bureau insurance benefited farmers by offering lower rates than could be obtained by city dwellers. Insurance enabled the Farm Bureau to expand into other business activities. Other business interests currently include oil, communications, advertising, travel agencies, and shopping centers [3, p. 86].

> Its principal purpose is no longer "the betterment of the conditions of those engaged in agriculture and the improvement of their products and their occupational efficiency," except insofar as selling insurance, fertilizer, gasoline and seed to farmers achieves those purposes. But that is the same purpose of John Deere or International Harvester, or the agricultural division of any major insurance company, which do not share the Farm Bureau's financial privilege of tax exemption.

The tax exemption status of the Farm Bureau is connected to their earliest ties with agricultural education and the extension service. While a few of their business activities are taxable, a considerable part of this income is diverted to the tax-exempt state and county Farm Bureaus as "sponsorship fees," rents, dividends, and advertising fees.

Another real concern is the control exercised by the Farm Bureau in preventing the farmer from voicing opinion. While claiming to be the "voice of the American Farmer" for the last sixty years, there is a noticeable lack of democracy within the organization. Its self-perpetuating leadership controls policy from the top [3, p. 129].

> "The Farm Bureau's cherished belief that its policy was made at the grass roots and adopted by a democratic process turns out to be partly illusion," concluded Christiana McFadyen Cambell in her study of the organization's New Deal period. There appears to be no reason to change that assessment today.

The Farm Bureau even attempted to thwart direct communications between farmers and the U.S.D.A. In 1949, Charles Brannan, Secretary of Agriculture, planned a series of meetings throughout the country. The purpose of these meetings was to hear farmer opinion on how farm policies should be improved to help the family farmer [3, p. 128].

> Farm Bureau President Allan Kline strongly denounced the plan to get "grassroots" sentiment. The plan was "fraught with dangers" he proclaimed. "It is the sort of procedure which would recommend itself to an authoritarian government. . . . It does not seem to us to be consistent with true democratic processes or with the local responsibility, without which self-government cannot be expectecd to survive."

A final note is the assistance given by the Farm Bureau in contributing to rural poverty in America. The conservatism of the Farm Bureau has been a relentless force against social improvements of the lower economic classes [3, p. 175].

> Even more reprehensible, however, has been its failure as the country's largest rural organization to dramatize the dimensions of rural poverty, to demand corrective action, to cry out for equal opportunity for rural Americans, to commit the kind of energy and resources to the development of rural areas and the alleviation of rural poverty that it has marshalled for the elimination of the government farm program. The

> national policies of the American Farm Bureau Federation cover everything from financing political campaigns to the international balance of payments. But the Bureau never mentions rural poverty.

The National Farmers Organization.--The National Farmers Organization started in an Iowa farmyard during the late summer of 1955. One of the initial leaders, Jay Loghry, was a feed salesman. Within the first week Loghry managed to gather 1,200 farmers to attend an organizational meeting in Corning, Iowa. The purpose of the organization was to generate higher prices for farmers through legislative action. The catalyst for the creation of the National Farmers Organization was low hog prices during 1955.

As a consequence of token cooperation in Congress, the 1957 NFO convention adopted collective bargaining as a cure for their economic problems. Over the years, the National Farmers Organization has adopted two types of holding action. The test holding action is of short duration with the aim of sampling farmer support. The all-out holding action has the goal of obtaining purchase agreements with the processors [47, p. 14]. The NFO holding actions have met with both success and violence in achieving higher prices for their commodities.

> In March 1967, NFO members in 25 states sought to increase milk prices for farmers by 2 cents a quart through milk withholding and dumping. Going to court against the wishes of Agriculture

> Secretary Orville L. Freeman, the Department of Justice obtained a temporary order in Des Moines, Iowa, barring the NFO from any use of threats or force to gain outside support for its milk strike. The milk dumping ended early in April [62, p. 114].

Membership in the National Farmers Organization climbed rapidly. After three months of existence, membership was over 55,000 and by April 1956, 140,000 members had joined. Although membership is kept a secret, most estimates place current membership from 200 to 250 thousand. The National Farmers Organization neither owns nor operates any independent business. As such, the internal structure of the NFO is aimed toward collective bargaining. The major effort is to organize farmers into bargaining units that can deal with buyers, processors, and retailers of their farm products.

1.3.2 Regularities in farmer organization and protest

From the discussion presented, certain regularities are apparent in the history of American farmer activities. More often than not, nonfarmers have acted as catalysts in the creation of farmer movements or organizations. Protest movements or holding actions usually disintegrate when farm prices rise. However, disintegration of farmer movements can be avoided through the creation of a structured, farm organization. Finally, the longevity of farm organizations appears to be related to the extent of investment in business activities to generate revenue.

> A characteristic pattern of each protest movement is apparent: Low farm prices and growing feelings among farmers that they were exploited by nonfarm groups helped create a new organization or commandeer an established one to deal with the issues. The movement was likely to be led by a nonfarmer--a feed dealer, newspaperman, Department of Agriculture employee, Socialist Party organizer, or former grain exchange worker. When legislative attempts failed, the entire organization including its business interest was stifled and the demise of the organization was as rapid, if not dramatic, as its rise [61, p. 82].

Meanwhile, what has happened to the individual farmer during these last 300 years? A dozen organizations have claimed his allegiance and spoke in his behalf. Outside of farmer organizations and protests, the business of farming controls farmer activity. In order to remain financially viable, the American farmer has sacrificed his agricultural independence to remain in farming.

The trend in farming is a move from self-contained, autonomous farms toward vast monocultures producing for a specific company. The mechanism of this trend has been accomplished through the cooperative movement and contract farming. By 1964, one-third of all farm output was marketed in the cooperative system. Independent cooperatives as well as farm organization cooperatives seek to create a more efficient marketing system and to control supply of production. The precedence of the cooperative movement is a relinquishing of farmer control over his individual production.

Contract farming has not only usurped control over marketing of farmer production, but also controls the mechanism of production. The Farm Bureau estimates that half of all the farming in the U.S. will be done by contract in 1979.

> The clearest example of contract farming today is the poultry business, which previously consisted of independent poultry farmers. Now, the giant companies that supply the feed to the poultrymen--Pillsbury, Ralston-Purina, and a few others--control the whole process. They have vertically integrated the industry. About 90 percent of the broilers sold in the United States today are raised under such contracts with only five giant companies [3, p. 111].

The current mechanism of contract is for the farmer, as an individual, to supply his production to the contracting agri-business firm. The conditions of the contract are largely determined by the company and the grower is paid for a service rather than a product. Contract farming reduces middleman expenses to the agri-business and guarantees an income to the farmer. Always quick to make a profit at farmer expense, the Farm Bureau is attempting to assume a role as bargaining agent on behalf of the farmer. The Farm Bureau has noted that contract farming is the "wave of the future" and that farmers need to be organized to strengthen their bargaining power. To president Shuman, this means a call for greater expansion of the Farm Bureau which is only in the beginning stages of its marketing effort.

The unfortunate feature of contract farming is the reduction of individual pride and farmer responsibility toward his farming activities. The contract farmer, supplying a service as an employee, is less concerned about the health of his farm and the long-term effects of soil depletion characteristic of monocultures. As Berry [4, p. 90] notes, plant productivity soon becomes an extractable resource to be mined much like coal.

1.3.3 The diffusion and adoption process

This section provides a short introduction to the literature concerned with innovation diffusion and the adoption process. Contemporary diffusion theory, which rests upon a conceptual framework subsumed in three points, has as its first point a consideration of the provision and availability of the innovation to be diffused. The second point of this framework is concerned with the strategies used by the propagator to induce adoption. The third point of the diffusion framework is concerned with the behavior of the individual adopter. Each of these three points, in turn, is expanded.

Provision and availability of an innovation.--For a variety of reasons, the diffusion of an innovation is sometimes limited by the propagator. Research most often cites an economic justification for limiting the release of an

innovation [23, 33, 12, 35, 22]. Specific economic factors which determine innovation availability include the profitability of the investment as well as the ability of the potential adopter to purchase the innovation. In the case of hybrid corn adoption, Griliches [23] has demonstrated that initial release of the hybrid cultivars by the propagators was determined exclusively by profitability, with his measures of profitability including market size, marketing cost, and cost of innovation. Also, the individual farmer behaved rationally with respect to profit maximization: individual adoption rates of hybrid corn increased with increasing profit potential of the hybrid. Research by Hanham [27] has also distinguished economic factors controlling the spread of artificial insemination of cattle among farmers in southern Sweden. In this empirical example, the spread of bovine artificial insemination was controlled by the availability of the innovaton. In early stages of diffusion, bovine artificial insemination was largely unavailable, implying an exorbitant cost to the individual farmer adopter.

The presence or absence of a supporting infrastructure is also related to the cost of an innovation. Brown [8] has noted that there is little additional expense to an innovation that is independent of supporting infrastructure. An example of an innovation requiring supporting infrastructure is a home heating unit requiring an energy source. Such infrastructure constrained innovations may have additional

costs of utilization which are continuous with distance. In this case of a propane-fueled heater, a distance bias is introduced. For example, more distant customers on the service route of a liquid propane dealer may encounter an additional delivery fee. Depending upon his ability to control the innovation infrastructure, the propagator can exert a varying influence upon adoption behavior.

Propagator strategies.--The second aspect of the diffusion framework is the strategies used by the propagator to induce adoption. For example, the time at which a potential adopter can adopt will be constrained by the time and place in which the diffusing agency is established. In the case of Mexican dairy farmers [11], the opportunity for adoption was controlled exclusively by the propagator. The innovation was a monopolistic control of dairy products caused by a transport-dependent market area. In this instance, the dairy farmer was unable to sell his production to the propagator unless his farm was a part of the transportation canopy operated by the agent.

The location of the diffusing agency may also be established through two processes [12, 8]. Agency establishment is either mononuclear or polynuclear. In the mononuclear case, locational decisions are made by a single propagator for multiple agency facilities. The mononuclear agent establishes a facility based upon expected profitability. Since profitability is based upon both expenses

and market potential, the mononuclear agent considers a large spatial area for facility placement. In contrast, polynuclear agencies are single facilities established and controlled by the innovator. As a result, the polynuclear agent generally limits his facility location within an area known personally by him.

Awareness of the innovation by the potential adopter is influenced by the proximity of the diffusing agent. When distance between potential adopters and the diffusing agent is minimized, awareness of the innovation increases. As a result, increased awareness augments the likelihood of adoption. Entrepreneurs attempting profit maximization will market an innovation in large cities. According to Hanham and Brown [28], marketing a product in large cities enlarges the adopter pool while it minimizes the distance between entrepreneur and adopter. In a more recent article, Semple and Brown [57] have also noted the role of the diffusing agent in spreading an innovation in the marketplace. Propagator strategies to maximize profits include agent selection of market areas. In addition, the agent will partition market areas into subunits to meet his organizational needs and to customize communication between the potential adopter and himself.

Awareness of an innovation by the adopter is also more overtly controlled by the publicity strategy of the agent. Meyer [42] has noted that the publicity image of an

innovation is manipulated by the type of propagator used. In his study, Meyer has cited the expansion of Montessori education through opinion leader advocates. Desiring to appear as a democratic, grass-roots movement, opinion leaders relied most heavily on interpersonal communication. In contrast, profit motivated innovations require change agents and advertising to sell an innovation. A variety of models on mass communication have been reviewed by DeFleur [17]. These communication models seek to explain the criteria a propagator may employ to contact a specific adopter group. Such models are based upon either personal relationships (two-step flow of communication), or upon broad collectives of social categories such as age, sex, and income. In addition, applications of communication models have been fitted to empirical data [36]. Influence can be exerted upon the potential adopter through external or internal sources. Internal peer group communication tends to reveal an adoption pattern conforming to a logistic curve. External communication from salesmen tends to accelerate adoption rates and conform more closely to an exponential function.

Individual adopter behavior.--The third, and most widely studied point of the diffusion framework, is concerned with the behavior of the individual adopter. Studies on the behavior of individual adopters reveal two primary considerations. One area considers the stage of development

of the diffusion process with respect to location. The second type of individual adopter research has studied the role of interpersonal communication in determining the time of adoption. With respect to the diffusion process, typical studies indentify the diffusing source and its primary, diffusing, and condensing stages of development. A typical pattern of the adoption of an innovation is characterized as normally distributed and approximated by the logistic function [6, 13]. In an early study, Rogers utilized the logistic function in the identification of adopter groups [51]. A plethora of literature soon followed in which adopters of various innovations were categorized as either innovators, majority, or laggards. Subsequent research sought to identify additional socio-economic factors which might explain patterns of behavior of individual adopters [33, 34, 30, 19], while more recent studies have considered the effect of spatial influences on the pattern of individual adoption. In particular, Hagerstrand [24] noted that distance from the origin was critical in the timing of adoption. Casetti and Semple posited that more distant individuals not only adopted an innovation later, but that the rate of adoption decreased with distance [14]. These conclusions laid the groundwork for the concept that the movement of an innovation moves through both space and time in a wave-front pattern [44, 29, 9]. Brown, Malecki, and Spector have verified that adoption behavior is partially

determined by locational and spatial characteristics of the individual. The implication of a wave-front movement is that adoption begins later at farther distances, proceeds more slowly, and reaches lower levels of final acceptance. A primary argument supporting this conclusion is that enthusiasm for announcing or accepting an innovation falls with time and distance from the origin.

The second area of research on individual adopter behavior considers the role of interpersonal communication in determining the time of adoption of an innovation [17, 49, 5]. Rogers and Shoemaker [49] have noted that the traditional stages of the adoption process (e.g. awareness, interest, evaluation, trial, and adoption) are often short-circuited by the influence of interpersonal communication. More specifically, Rogers found that personal influence is more important at later adoption stages and, furthermore, that it is more important to late adopters [52]. Informal social contact networks, or acquaintance circles, also control interpersonal communication. In effect, these communication links demonstrate a regularity which includes a distance-decay function measured either as a spatial or social distance between communicants [25, 15]. In addition, Spector, Brown, and Malecki [59] have shown that the intensity of communication varies inversely with the number of interactions and the number of acquaintances per person.

1.4 Research Justification

The study of the cause, spread, and impact of the American Agriculture Movement receives justification from two research needs: first, an analysis of the AAM as a significant social event in its own right deserves exploration; and second, this analysis may serve as a vehicle to test the usefulness of current geographic diffusion theory in explaining the rural diffusion of a social innovation.

1.4.1 The social significance of the AAM

The American Agriculture Movement is, of itself, an important event in rural social history. The magnitude of the rapid rise of the farmers' strike ranked as a significant event for the multitude of farmers who participated in the movement. For example, within the first three months after its inception, the AAM sponsored its largest tractorcade. On December 10, 1977, an estimated 100,000 tractors participated in a well-orchestrated tractorcade to most of the state capitals. Moreover, the political impact of the AAM dominated U.S. Congressional hearings for five months during 1978. And finally, the magnitude of participation in the American Agriculture Movement accounted for the return of four billion dollars back to agricultural producers.

Another dimension of the AAM warranting research is the role of communication in the agriculture sector. The successful development of the AAM is symptomatic of a breakdown in communication flow between the agricultural producer

and the U.S. Government. This communication failure occurred in two areas. First, for many years farmer opinion has not been represented, or at best mis-represented, by "farm organizations" that claim to speak in behalf of the farmer. Claiming the largest membership list of any farm group, the Farm Bureau has manipulated Federal legislation for decades. Very few people realize that a "farmer member" of the Farm Bureau is anyone who purchases Farm Bureau insurance. Furthermore, the Farm Bureau is partially subsidized by the U.S. Government. As Berger [3] has noted, the individual farmer has virtually no voice in Farm Bureau policy.

> Though organizations may state that they have solicited opinions from the grass roots level, there is a strong tendency for the top officials to influence the outcome. It is very difficult for rank and file members to express opinions in an organization contrary to those of a few strong leaders. If grass roots opinions are at variance with those of the officers, the only way to express them is through a vigorous power struggle that damages the organization [61, p. 20].

The second communication failure of scientific interest is the flow of information from authorities to the agricultural producer. Particularly intriguing is the apparent contradiction between the popular theory on the two-step flow of communication [36, 46] and its failure to materialize in practice. According to Katz [31, p. 61], the two-step flow of communication arises when the media message "first reaches opinion leaders who, in turn, pass on what they read and hear to those of their every-day

associates for whom they are influential." In the U.S., the mechanism of communication from authority to producer is placed in the U.S.D.A.-subsidized Agricultural Extension Agency. The method of communication used by the extension agent is identical to the two-step flow of communication theory. Through long experience the agent has learned to direct his message to the local opinion leader. Nevertheless, the extension agent has been almost universally abandoned by the farmer. As of 1978, less than 1,000 Oklahoma farmers participated in the Oklahoma State University extension bulletin program. Despite this minimal cooperation, 77 county offices, agents, and staff are maintained at taxpayer expense. Berry [4, p. 150] offers this explanation for the failure of extension programs to reach the modern farmer.

> Independent family farmers also have been largely ignored by the land grant colleges. Mechanization research by land grant colleges is either irrelevant or only incidentally adaptable to the needs of 87 to 99 percent of America's farmers. The public subsidy for mechanization actually has weakened the competitive position of the family farmer. Taxpayers, through the land grant college complex, have given corporate producers a technological arsenal specifically suited to their scale of operation and designed to increase their efficiency and profits. The independent family farmer is left to strain his private resources to the breaking point in a desperate effort to clamber aboard the technological treadmill.

Hence, as Berry suggests, communication has ended as a result of the divergence between what the independent farmer wants and what technology offers him. What communication remains between extension agent and farmer may actually

represent a dialogue between extension agent and the corporate farmer who can afford technology. If this is true, then a major split has occurred in the farm community. In effect, the independent farmer is no longer homophilous with his local opinion leader.

One aspect of this research measures levels of communication between the extension agent and the independent farmer. In addition, personality variables and economic resources of the farmer are studied for their influence in level of communication toward the local extension agent.

1.4.2 Research on social innovation

The second justification for this study is the need to evaluate the effectiveness of current geographical diffusion theory in explaining the rural diffusion of a social innovation. In his digression on the importance of diffusion research, Warner emphasizes the attention needed in social diffusion studies [67, p. 449]. "Despite the valuable work done to date, many aspects of the diffusion of innovations remain virgin territory. Both conceptual work and empirical research cry out for attention and promise rewards in the forms of enhanced theoretical understanding of dynamic social phenomena and of useful new knowledge." In recent years many theoretical concepts have been developed which have improved our perception of rural life. Found concludes

that until empirical testing of our theoretical formulations have been accomplished, our understanding of rural development will be greatly impeded [20, p. 168].

> Important theorizing remains to be done, particularly in the behavioral field. But an essential step in the process is the testing of conceptual hypotheses in the real world. In many cases, theoretical models have been well developed, yet little empirical testing has occurred. Models of comparative advantage, of general spatial equilibrium, and almost all behavioral formulations are examples. Numerous references are available on game theory, learning, decision environments, and related concepts; but practically no testing of these concepts in the real world has occurred.

Many theoretical concepts in the literature receive attention within this study. As mentioned earlier in this section, a need exists for further amplification of the two-step flow of communication hypothesis in explaining rural communication behavior. Empirical research on innovation diffusion has primarily focused on commercial or social innovations. The relatively high level of documentation related to commercial innovations has permitted abundant research of both contagious and hierarchical diffusion patterns. In contrast, the nature of the spread of a social innovation is ephemeral. The occasional glimpses of the diffusion of a social innovation are so short-lived that adequate documentation is seldom achieved for large spatial areas. As a result, virtually every study of social diffusion patterns is constrained to contagious diffusion by the limited spatial scale. As Brown and Cox [9, p. 544] have

noted, there has been little opportunity to study the behavior of hierarchical diffusion of a social innovation. "Empirical examples which exhibit the hierarchy effect consist only of innovations of a commercial nature adopted by individuals; to our knowledge there is no such example for a 'social' innovation. These disparities suggest orientations for future research."

CHAPTER II

THE AMERICAN AGRICULTURE MOVEMENT: AN OVERVIEW

The specific objective of this study, to describe the cause, spread, and impact of the American Agriculture Movement, may be advanced by a review of the impetus for the AAM protest. The causes of the AAM protest had been building for many years. Problems which caused farmers of earlier movements to organize and protest are similar to the problems farmers face today. Primarily, low prices for farm produce has served as the catalyst then and now for farmer protest action. However, since low prices are the end result of poor planning and marketing, responsibility for poor market conditions must be placed on both the U.S. Department of Agriculture and the farmer. Establishment of international markets should be an area of more direct farmer activity. Furthermore, the U.S.D.A. must maintain a firm agricultural policy which permits farmers to achieve long-range planning.

Although the spread of the AAM strike grew to national proportions, farmer involvement in the strike varied geographically. The winter wheat growers, the primary

farming group supporting the AAM, met its strongest farmer commitment near the origin of the strike in Springfield, Colorado. Accordingly, the two-fold purpose of this diffusion analysis is to identify the geographical distribution of local AAM offices and to determine the influence of sociological, economic, and communication variables upon this diffusion process.

The American Agriculture Movement began on September, 1977, with the purpose of increasing farmer income by striking. Those farmers adopting the AAM strike believed that higher prices could be obtained by withholding their products from the market place. In addition, farmers sought to reduce consumer purchases such as farm equipment and other services. Accordingly, the impact of the AAM was to be felt in the reduction of commodities placed on the market and in the reduction of farm equipment purchases.

The cause, spread, and impact of the AAM is expanded in Chapter Two. This chapter highlights the agricultural situation which precluded the strike movement. Finally, the organization and events of the AAM are also given.

2.1 Events Preceding the Strike

The following discussion reveals a series of events which are related to the AAM. These occurrences, following a logical progression, strongly suggest the inevitability of the farmer's strike. The discussion provides a context

for public attitude in the early 1970's toward world food prospects. The massive Soviet grain purchases in 1972 to 1974 are discussed, along with the resultant policy of the U.S. Government toward grain production. In addition, the farmer response to the U.S. Government policy of expanded production is given. Finally, the discussion concludes with the production and marketing of wheat during the mid-1970's and its closely allied price fluctuations.

2.1.1 Attitudes toward world food prospects

Recent attitudes toward world food supply have varied in relationship to time and location. Thus the level of concern may extend from optimism about ample food supplies to pessimism amid bleak conditions reminiscent of a Malthusian apocalypse. Such desultory attitudes appear to be closely related to conditions of war and drought. In a 1975 article, Sanderson [55, p. 503] indicates that alarm about world food supplies is a recurring theme in modern world history.

> At least three waves of pessimism have swept the world since the end of World War II: in the late 1940's and early 1950's, in the mid-1960's, and in the past 3 years. In each case, the concern was prompted by temporary shortages in the aftermath of war, or a series of droughts in major grain growing areas.

In both affluent and developing countries, grain production rises approximately three percent a year. However, a one percent population growth has given affluent countries a two percent annual increment in grain supplies. By contrast,

developing countries have accomplished little progress in grain stockpiles caused by an average annual population growth rate of 2.5 percent. Although more grain is produced than consumed in third-world countries, the grain surpluses are sold to other countries in order to return more money to developing nations. Little or no growth in grain stockpiles in developing countries is particularly unsatisfactory for that large portion of the population already suffering from marginal subsistence.

Hence, under current conditions, the primary concern of developing countries is the world balance of grain supply and demand. In the early 1970's, however, the world balance of food supply seriously deteriorated as a result of U.S.S.R. grain shortages.

2.1.2 The Russian grain purchases

During the 1960's the stage was set for a crisis in grain shortages. Major grain producing and consuming countries grew complacent in the belief that grain production levels would remain stable--a view partially supported by the evidence. For example, grain yields in the U.S.S.R. and North America had continued to rise as a result of introduced agricultural technologies. Yet, increasing productivity, caused primarily by new grain varieties and fertilizer, had led to the mistaken conclusion of the diminishing influence of climate on productivity. As a result, surplus margins were reduced to low levels.

> The crisis was touched off by the failure of the Soviet grain crop in 1972. The crop was 161 million tons, 13 million tons down from 1971. The shortfall from the trend was severe--of the order of 20 million tons--though not quite as large as in 1963 (about 30 million tons) or in 1965 (24 million tons). However, in contrast to the mid-1960's, when it absorbed most of the shortfall by reducing grain consumption by livestock, the Soviet Union decided to make up the entire 1972 deficit by imports [55, p. 504].

Table 2 [55, p. 504] indicates the world grain trade statistics for the major producers and consumers. Particularly interesting in this table is the indication of dramatic growth in U. S. grain exports during the four year period 1971 to 1974.

TABLE 2

NET EXPORTS (+) OR IMPORTS (-) OF GRAINS

Millions of Metric Tons

	1970-71	1971-72	1972-73	1973-74
United States	+38.3	+41.3	+70.7	+74.9
Canada	+15.8	+18.4	+18.9	+14.4
Australia	+12.3	+10.7	+ 5.1	+ 7.2
Western Europe	-27.6	-19.0	-18.7	-21.6
Japan	-15.3	-15.2	-17.5	-19.4
U.S.S.R.	+ 7.5	- 1.0	-19.6	- 4.6
Eastern Europe	- 7.9	- 8.9	- 8.0	- 5.2
China	- 3.7	- 3.3	- 6.1	- 7.7
Developing countries	-15.4	-26.9	-23.2	-30.3

The final net grain imports for the U.S.S.R. and Eastern Europe tallied 28 million tons in 1972-73. This purchase of grain, primarily from the U.S., Canada, and Australia, accounted for the reduction of U.S. grain supplies from 92 to 58 million tons. As a result, grain prices increased dramatically.

2.1.3 United States policy and farmer response

According to Sanderson [55, p. 504], "Farmers in the United States, Canada and Australia responded to the shortage and high prices by increasing the grain area by 22 million acres (10 percent)." During the summer harvest of 1973, U.S. wheat production alone increased 12 million tons (19 percent). The bumper crop in the United States coincided with an increasing grain demand by the developing countries of China, Japan, and Western Europe (which more than offset the declining Soviet purchase from the previous year). The continued high grain sales stimulated U.S. grain acreage another seven percent (ten million acres) in the 1973-74 growing season. In anticipation of a second bumper crop, grain prices began to fall in the spring of 1974. However, the drought and early frost during 1974 created the worst growing season in a quarter century. United States average grain yield fell 20 percent below normal as 50 million tons of grain were lost to the vagaries of climate. As a result, consumer prices for grains rose again to levels observed during the Soviet grain purchases. Hence, high grain prices in 1975, together with stagnating consumer incomes, discouraged demand [55, p. 504].

> In the United States, grain consumption for feed is expected to be down by 33 million tons (22 percent) from 1972-1973. Grain imports by Japan, which had been rising by 2 million tons annually in 1972-1973 and 1973-1974, are expected to decline for the first time in many years. The Soviet Union is again exporting about as much as it is importing.

Moreover, the policies of the United States and Canada from 1967 to 1974 aggrevated this grain shortage. During the early 1960's, excess grain stocks accumulated to such levels that a "soft market" had developed and a fear of surpluses was expected. In an attempt to restrain production, U.S. wheat acreage from 1967 to 1972 was cut back from 59 to 48 million acres. Likewise, Canada cut back wheat acreage from 31 to 22 million acres. The U.S. Department of Agriculture continued the policy of "dumping excess grain stocks" even after the Soviets began purchasing grain in 1972. In order to promote export sales to the Soviets, the United States committed $300 million in export subsidies. In addition, the U.S.D.A. continued to practice acreage restraints on U.S. producers until the 1974 crop.

The timing of the U.S. Department of Agriculture in lifting acreage restraints was three years too late. In 1974 world grain deficits had stabilized and consumer demand for grains was declining as a result of high prices. As wheat producers began to plant the 1975 crop, all acreage restraints were lifted by the U.S.D.A. with the instruction that farmers should plant "fencerow to fencerow." As a result of this practice during the 1975 and 1976 growing seasons, an avalanche emerged of new grain stocks without a market to sell the grain. By the 1977 harvest, the typical U.S. wheat farmer paid $3.55 to produce one bushel of wheat, while the best selling price available to the U.S. Department of Agriculture was $2.50 per bushel.

2.2 Wheat Producers Decide to Strike

A handful of disgruntled wheat producers in Springfield, Colorado developed the idea for an agricultural strike. On September 6, 1977, four farmers sat discussing the 1977 farm bill [64] in a Baca County coffee shop. While commiserating over the plight of the American farmer, they were challenged by an eaves-dropping truck driver who said they should stop griping and do something about it. Caught in the price squeeze of increasing expenses and declining wheat prices, these men sought to create a farmers' strike. Consequently, neighboring farmers were enlisted, and the concept of striking for higher prices rapidly spread through the wheat fields of Colorado, Kansas, and Oklahoma. Desiring to remain a grass roots movement, no membership or dues were required. Instead, local farmers simply decided to create a local AAM strike office and sent their mailing address to the originators in Springfield.

Within a few weeks, two of the originators, Gene Schroder and Bud Bitner, had generated enough farmer interest that the national media focused attention on Colorado. Agriculture Secretary Bob Bergland was scheduled to meet with the fledgling farmer group on September 22, 1977. At this meeting the concept of striking for 100% of parity was firmly voiced. Bergland defined parity as the farmers' economic position in comparison to what the farmer received for his agriculture products in relation to what he had to

pay for the items used to produce those crops. By this definition, parity meant that a farmer should receive $5.04 per bushel although wheat was currently selling for $1.90 per bushel. The implications of the 1977 farm bill projected that wheat would continue to hover at approximately $2.60 a bushel through 1982 [45, p. 35]. Meanwhile, farmers were paying $3.55 to produce every bushel of wheat.

The ranks of AAM farm members continued to swell as a concerted organizational campaign took hold, and on October 14 the first national strike meeting was called in Amarillo, Texas. By this time the AAM five-point plan (see Appendix A) had been formulated and the date of December 14, 1977 was set for the agriculture strike. During the fall, other organizational meetings were scheduled in Topeka, Kansas, and Statesboro, Georgia. Kansas organized early and teams of speakers targeted Iowa and Missouri for further expansion. In outlying states, personal acquaintances were often used to promote organizational meetings. Moreover, when AAM promoters did not know whom to contact in a new area, name similarities were often used to establish contact. Hence, "Farmers in Plains, Kansas decided to make personal contact with farmers in Plains, Georgia, to see if they, too, were not having economic problems which would warrant their joining the strike movement" [40, p. 27]. Similarly, Gene Short from Kansas called fellow farmer James Short of Georgia to arrange a meeting.

Farmer recruitment into the AAM proved to be slower in the South and the Pacific coast states. In the Gulf coast states, farms tended toward a wider diversity of crops, with cotton as the leading agricultural product. In the fall of 1977, production of cotton experienced the most abundant harvest in a decade. Clearly, the firmly established international level of trade in cotton helped the cotton price to remain stable. Although a major agricultural state, California also resisted the movement. The more commercialized producers in California enjoyed a more stable income as a result of contract farming and vertical integration into major food corportions. Likewise, Oregon and Washington spring wheat producers hesitated to join the AAM strike for wheat prices in the Northwest had remained high as a result of overseas markets in Japan. Hence, the strongest commitment toward the food strike was found in a region that was commodity specific with few international trade contacts.

Sentiment of farm-related organizations and businesses was mixed. While the vast majority of farm implement and fertilizer companies were supportive of the farmers' attempt to raise prices, these same companies were fearful of the farmer threat to stop the purchase of all farm implements and ancilliary supplies. Yet, the Farmers' Union and the National Farmers' Organization endorsed the farm strike. On the other hand, the Farm Bureau, whose

claim to represent the American farmer had long been suspect, openly opposed the strike. The linkages connecting the Farm Bureau to the U.S. Department of Agriculture made this contradictory position inevitable.

As the deadline of December 14, 1977 drew near, a difficulty emerged in fulfilling the proposed farmer strike [45, p. 34]. "The problem with this threat was that there was no agricultural production in December; spring planting wasn't for another three to six months. Congress missed its deadline, to no one's surprise, so the strikers began to organize their pilgrimage to Washington."

Prior to the march on Washington, D.C., each state had selected one delegate and one alternate to act as its representative in any national meeting. This decision to delegate representation at the state level, had been established during an earlier meeting with Bob Bergland in Omaha, Nebraska on January 6, 1978. Thus, with the convening of Congress on January 18, the enclave arrived in Washington.

In the second week of January, delegates and farmers began the tractorcade migration from diverse locations. The Texas tractorcade consisted of many thousands of tractors and campers. As these tractorcades pushed eastward toward Washington, D.C., their numbers continued to grow. When all participants had arrived, an estimated 50,000 farmers had infiltrated Washington.

The majority of delegates came with the intention of seeking legislation based upon the AAM five point plan. However, sympathetic congressmen emphasized that such sweeping legislation could not be achieved in time to help farmers for the approaching 1978 growing season. In an effort to assure parity prices for the 1978 harvest, delegates sought short-term legislation to amend the 1977 Farm Act. This legislative proposal became known as the Dole Flexible Parity Act.

During the first month of lobbying, striking farmers and delegates met with representatives of the Senate, the House, the U.S.D.A., and President Carter. The first official contact between farmers and legislators, a meeting with the Senate Agriculture Committee on January 23, 1978, afforded each committee member the opportunity to make a statement during the opening session. Senator Bellmon of Oklahoma, for example, offered the following statement [40, p. 138]:

> If I might speak for a moment personally, I am a farmer, and I know from my own personal experience that farmers are losing money--not only a little money, I mean a lot of money. I know that most of the rest of you do not have the senate salary coming in, as I do. I do not think that I could survive long on my farm if it were not for the fact that I have some outside income, and for those of you who do not have it, I fully understand and appreciate the problems that you have. In our area the cost of producing wheat now runs between $3.50 and $4.00 per bushel. The price, the last time I checked a local elevator, was $2.55. So, this means that producers of wheat are losing at least $1.00 and perhaps $1.50

> on every bushel they sell, and the same situation is true in other commodities. So I know that the farmers cannot long survive, and that action does have to be taken.

The House Agriculture Committee opened its hearings on February 1, 1978. Commentary from this hearing was similar to the Senate committee meetings. Testimony lasted for two weeks with representatives of the AAM testifying on the 15th and 16th of February. The result of the Senate and House committee hearings was recognition of the extent of farmer economic problems. Furthermore, Congressional legislators sought other economic initiatives as a cure for the agricultural price imbalance. Such initiatives took the form of increased loan rates to the producer or heightened target prices for various commodities.

The loan rate, that amount of money a farmer can borrow to help cover the costs of production, currently stands at $2.25 per bushel. Wheat producers are eligible for this loan if they have set aside 20% of their acreage previously planted in wheat. On the other hand, the target price may be defined as the "fair" market price of a commodity. The target price for wheat is $3.00 per bushel. Thus, if a farmer sells his wheat for $2.50 per bushel, the Government agrees to pay the farmer fifty cents per bushel in deficiency payments. For a more complete explanation of these terms, see Appendix B.

Meanwhile, a study was being prepared by the Congressional Research Service in response to a request by Thomas S. Foley, Chairman of the Committee on Agriculture for the U.S. House of Representatives. The study, entitled "Evaluations of Proposals Guaranteeing Full Parity for Farmers in the Marketplace," was delivered to the committee on February 21, 1978. The concluding remarks of this evaluation follow [62, p. 38]:

> Given parity prices, cash receipts would increase by over $40 billion annually which translates into $15,000 per farm for the 2.7 million farms in the United States. Larger farms would receive the largest income increases, although most larger farms are not among those with severely depressed income situations. Raising their incomes would provide them opportunity to purchase more assets from other, less economically strong farm operators.

On March 3, the Economics, Statistics, and Cooperatives Service of the U.S.D.A. issued an analysis of the impacts of the AAM 100% parity proposal. The U.S.D.A. concluded that a policy of setting U.S. farm prices at 100% of parity "would have significant impacts on foreign trade, domestic farm production, farm incomes, and other sectors of our domestic economy" [65, p. 1]. More specifically, the U.S.D.A. projected that retail food prices would rise by 20% during the year with nearly 75 million acres of farmland lying idle in an effort to bring crop supplies in line with domestic demand. Interestingly, the number of farms would continue to fall despite these measures.

The tenacity of the AAM lobbying effort surprised many veterans of Washington lobbying efforts. In mid-March, two months after the first tractorcade, 30,000 farmers still lobbied in Washington, D.C. In an attempt to remain in the headlines, many of the local AAM farm groups engaged in protest activities. Typical protests involved the blockading of bakeries, cattle feed lots, and trains hauling produce. Farmers also blockaded the McAllen bridge spanning the Rio Grande to Mexico. A blockade which, along with the subsequent jailing of 200 farmers, highlighted the U.S. trade agreement permitting Mexican meats and vegetables to enter the U.S. under a non-quota system. Once again national attention was directed toward farmer activities.

The Senate Agriculture Committee, after approving the Dole Flexible Parity bill on March 15 transferred it to the Senate body for consideration. Renaming this bill the Emergency Agriculture Act of 1978, the U.S. Senate finally approved the parity bill on April 10th. Two days later the House of Representatives received the bill [63]. Once freed from the House Agriculture Committee, the bill awaited the decision of the House body [40, p. 275].

> The hour of decision had come. The Speaker asked for a voice vote and announced that the "ayes" had won, the bill passed! Congressman Volkmer quickly asked for a roll call vote and the bill failed miserably one hundred fifty to two hundred sixty-eight!
>
> It was apparent that as long as the congressmen were not required to have their name on record, they were for the bill, but when it was required that each congressman be responsible for his own vote, he was against the bill.

Yet farmers still stood in desperate need of some adjustment to the Agriculture Act of 1977. With mounting pressure upon Agriculture Secretary Bob Bergland, an amendment to the Act occurred on May 10, 1978. Although the loan rate for wheat remained at $2.25 per bushel, the amendment raised the price from $3.00 to $3.40 per bushel of harvested wheat. Over the four month period of lobbying, the American Agriculture Movement had spent 25 million dollars. The U.S.D.A. estimated that the resultant forty cent increase in the wheat target price secured a four billion dollar return to the American farmer.

Although the AAM met success in obtaining short-term help, substantial long-term legislative changes still remained unaccomplished. For the harvesting of the 1978 wheat crop, the wheat producers failed to voluntarily decrease their harvested acreage [40, p. 281]. Clearly, farmers learned that a successful reduction in acreage would occur only when legislation assured farmers that all producers would share in the reduction of acreage.

In the fall of 1978, after the summer labors had ceased, farmer activity in the AAM rekindled. Currently the number of strike offices is approximately one-half the number of offices claimed by the AAM at its peak in the spring of 1978. Also, the AAM is becoming more organized. While a national headquarters remains, the individual state headquarters now serves as the main organizational unit.

Furthermore, many state headquarters have obtained state charters in order to be recognized as official organizations, with state organizations now soliciting individual farmer memberships.

CHAPTER III

PATTERNS OF DIFFUSION OF A SOCIAL INNOVATION

Thus far, the discussion of the American Agriculture Movement has focused on the cause and events of the farmer's strike. Chapter 3, in turn, presents two map series, presenting two scales of diffusion which illustrate the spread of the movement through time and space. The first series of maps illustrates the dispersal of the local AAM strike office throughout the United States. During the early development of the farmers' movement, the representation of the local AAM strike office varied. For example, representation within a local office might range from a single irate farmer to a well-funded local with over 100 members. Due to this variation, later analysis will not incorporate these data.

The second series of maps illustrates the diffusion of the AAM within the state of Oklahoma. In this series, the individual adopter within Oklahoma is represented. Not only does this series provide an indication of adoption through time, but also town location of individual adopters. Furthermore, towns are aggregated into clusters sharing

common local offices. Almost 1400 individuals are represented in this map series, and it is from this population that subsequent analysis is accomplished in Chapters 5, 6, and 7.

3.1 National Diffusion of the Local AAM Office

The location of AAM strike offices is offered in a mailing list frequently updated over irregular time intervals. Table 3 provides the dates for which office listings were compiled. This table also includes both the number of new offices and a cumulative total within the U.S. When the cumulative total is plotted against time as shown in Figure 1, a portion of an S-curve is distinguished from the point of inflection to the upper asymptote. Intervals of time when the actual number of AAM offices remain unknown are indicated by a segmented line. Figure 1, therefore, suggests that the adoption of the American Agriculture Movement followed a logistic type pattern. Figure 1 also indicates a subsequent decline in AAM activity during the summer of 1978. The decline in activity may be partly explained by the increased labor required in the fields. In effect, this pattern of wide acceptance followed by disillusionment characterizes all previous farmers' organizations.

The two lists dated January 11, 1978, and October 15, 1978, are comprehensive, for all offices in existence on those dates are given. Additionally, new local offices are provided in updated lists following each of these two dates.

TABLE 3

TIME OF ADOPTION OF LOCAL AMM OFFICES DURING 1978-1979

DATES	DAYS SINCE LAST REPORT	NEW AAM OFFICES	CUMULATIVE TOTAL
January 11, 1978	0	695	695
January 27, 1978	16	127	822
February 1, 1978	5	102	924
February 8, 1978	7	41	965
February 16, 1978	8	38	1003
February 23, 1978	7	24	1027
March 2, 1978	7	16	1043
March 9, 1978	7	4	1047
March 16, 1978	7	31	1078
March 23, 1978	7	6	1084
April 13, 1978	21	3	1087
May 10, 1978	27	4	1091
June 7, 1978	28	2	1093
October 15, 1978	116	0	679
December 1, 1978	61	15	694
January 4, 1979	35	1	695
January 15, 1979	11	1	696
February 1, 1979	17	11	707
February 15, 1979	14	3	710
March 8, 1979	21	43	753

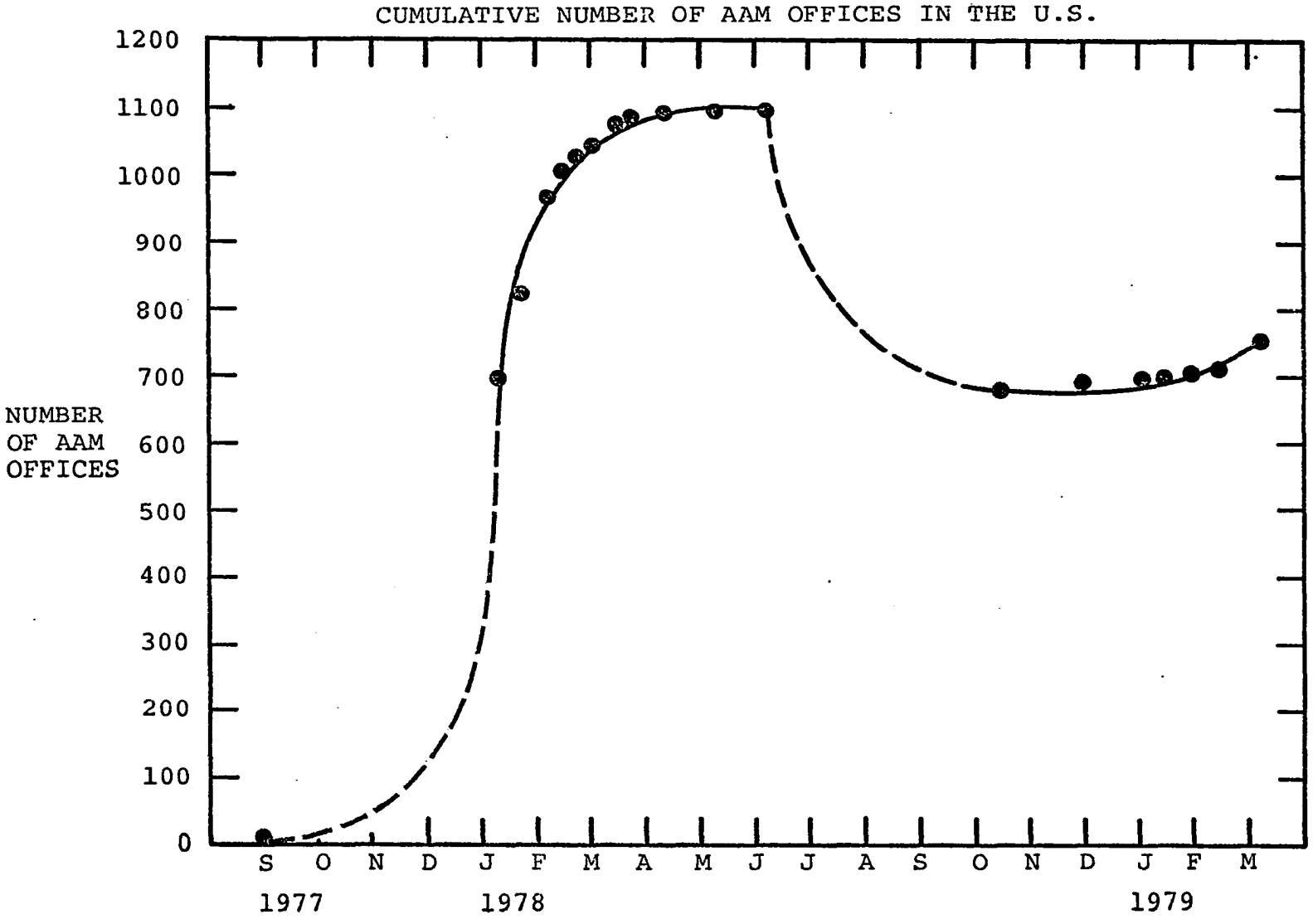

CUMULATIVE NUMBER OF AAM OFFICES IN THE U.S.
NUMBER OF AAM OFFICES
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
S O N D J F M A M J J A S O N D J F M
1977
1978
1979

FIGURE 1

Four maps, whose compilation was based on this information, are offered. The first map (Fig. 2) gives the location of all offices listed on January 11, 1978, whereas the second map (Fig. 3) includes these offices in addition to subsequent offices up to June 1978. A comprehensive list compiled in October 1978 serves as the basis for the third map (Fig. 4). Figure 5 includes all offices granted from October 1978 through February 1979. In addition, Appendix C provides the number of offices by state for these four time periods.

3.1.1 January 1978

Figure 2 reveals the distribution of local AAM strike offices during January, 1978. The closed dots on the map indicate locations where an office is currently active, while the open circles mark locations where an office will be located during at least one of the four time intervals. The origin of the strike, Springfield, Colorado, is indicated by a diamond in southeastern Colorado.

Adopters of the farmers' strike were scattered among 41 states from coast to coast within four months of its inception in September, 1977. This scattering indicates that sufficient time had passed for the vast majority of farmers to have heard about the movement. Therefore, this author suggests that the spread of first knowledge of the movement was not a limiting factor in the January, 1978 distribution of offices. In reality, the movement achieved national media attention during the fall of 1977.

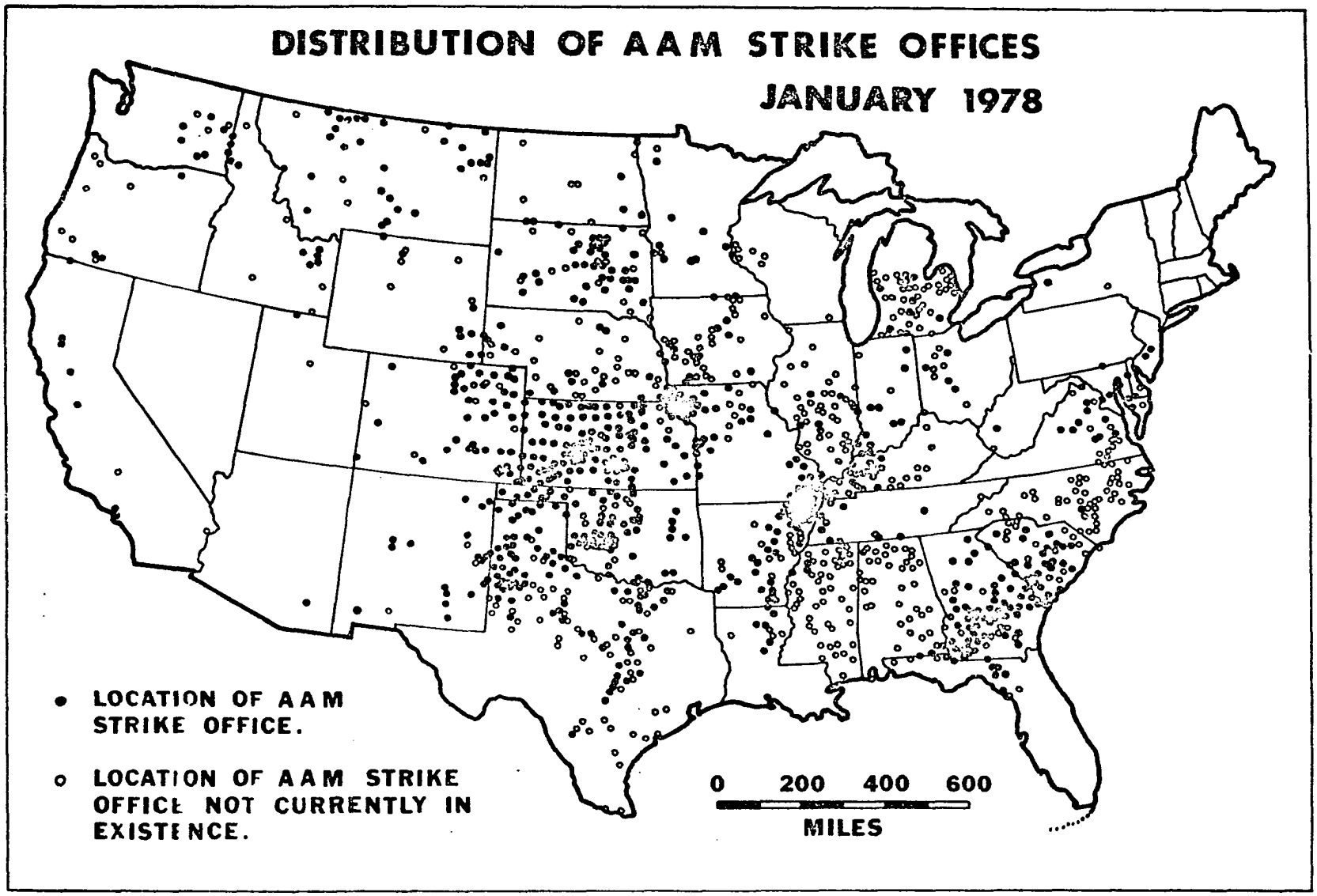

DISTRIBUTION OF AAM STRIKE OFFICES
JANUARY 1978
• LOCATION OF AAM STRIKE OFFICE.
o LOCATION OF AAM STRIKE OFFICE NOT CURRENTLY IN EXISTENCE.
0 200 400 600
MILES

Figure 2

As mentioned in Chapter 2, anticipation of low wheat prices served as the original cause of the movement. The early leaders and organizers of the movement, midwestern wheat producers, enlisted other farmers to their cause regardless of the commodity produced. While in those early months, the Missouri panhandle and Georgia ranked as two growth areas of the movement. However, the backbone of the strike in its early stages arose in the wheat fields of Colorado, Kansas, Oklahoma, and the Texas panhandle.

The distribution of local offices in the central U.S. is roughly aligned with the principle wheat growing areas. Specifically, hard red winter wheat, primarily used for baking breads, is grown in the Kansas-Oklahoma core region. The hard red winter wheat varieties are planted in the fall, survive the winter, and can withstand the marginal rainfall regime. A second concentration of offices in South Dakota is aligned with the core area of hard red spring wheat plantings. Located in a colder climate to the north, South Dakota wheat producers must wait until the spring to plant their wheat varieties. Although not as clearly concentrated, the local offices scattered throughout Missouri, Kentucky, and Illinois are likely associated with the product in that region, a soft wheat of lesser commercial value but with the ability to withstand the wetter rainfall regime. Two inferences can be drawn from the distribution

of offices within these three wheat areas. First, wheat is probably the most commercially viable agricultural product grown in the core area. Second, wheat producers in the core regions are likely to be the farmers most committed to wheat production. Furthermore, this commitment can be measured in terms of capital outlay for wheat production farm equipment and the obvious wheat monoculture with minimal reliance on other crop types.

3.1.2 June 1978

Nine months after its creation, the American Agriculture Movement reached its highest level of participation. At this time, the wheat harvest had commenced in the Texas panhandle and was spreading northward through the Great Plains. Thus, it is understandable that concern for wheat market prices would also peak at this time.

Desiring to remain a grass-roots movement, the National AAM headquarters in Springfield, Colorado awarded the state leaders complete autonomy in organizing their state memberships. The Kansas AAM, one of the earliest to organize and the local that has dominated all other state membership rolls since, decided to create their organization around the local county office. This pattern of development is evident in the regularity of a single local office located in each county. The majority of other states did not follow the concept of a county AAM office, however.

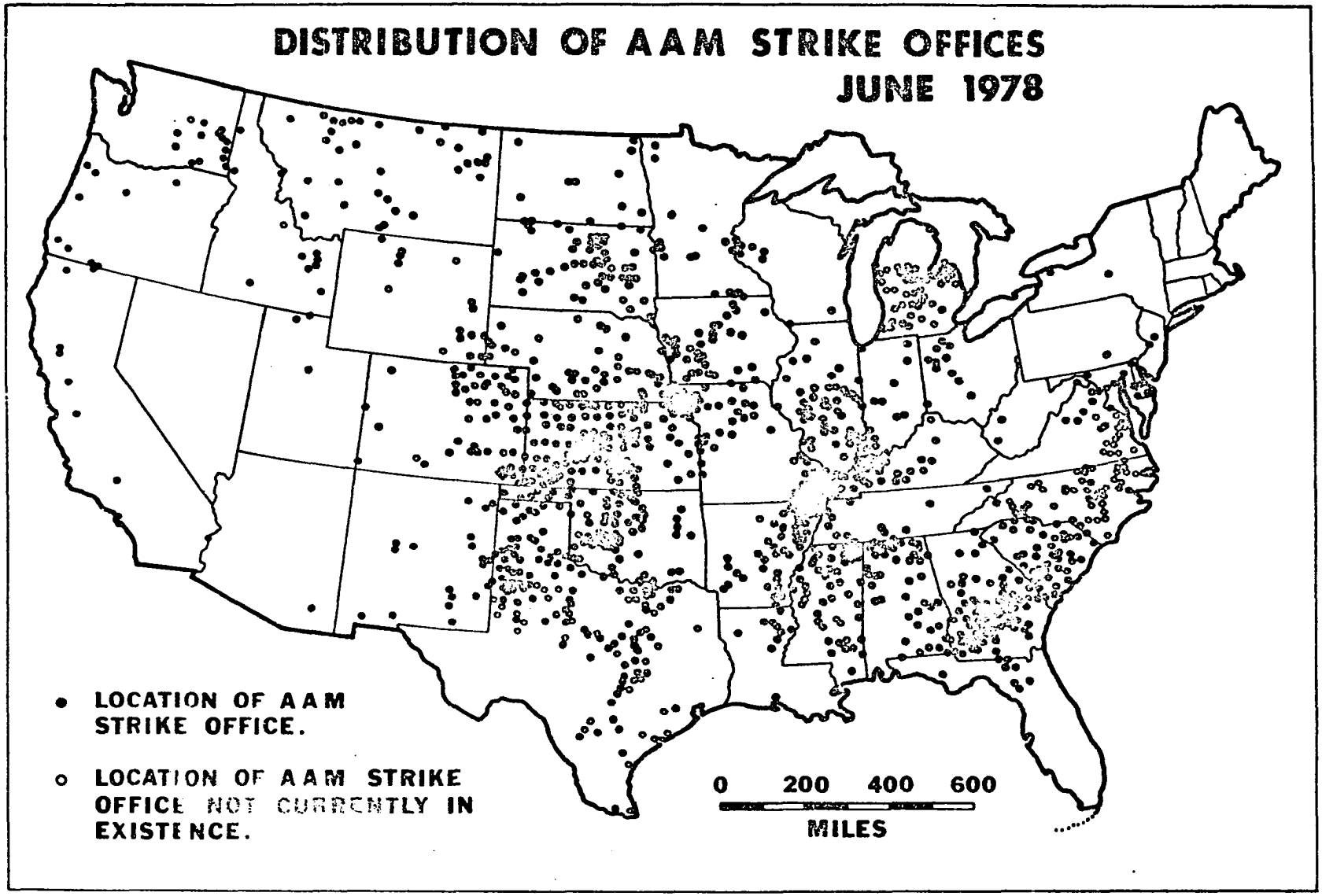

DISTRIBUTION OF AAM STRIKE OFFICES
JUNE 1978
• LOCATION OF AAM STRIKE OFFICE.
o LOCATION OF AAM STRIKE OFFICE NOT CURRENTLY IN EXISTENCE.
0 200 400 600
MILES

Figure 3

Instead, offices were scattered in locations where farmers desired them. In many instances, multiple AAM offices were located within a single county.

Evident in the June, 1978 distribution are linearities in placement of AAM offices, linearities likely caused by linear topographic features or soil types. Sometimes farming activities take advantage of unique environments. For example, the placement of early cotton plantations straddled the fertile limestone formations in the deep south. In addition, irrigation ranked as a farming practice easily applied to farmland adjoining river courses. In this particular case, linearities are seen in association with the Mississippi River and with the Balcones fault in central Texas. The fall line extending from Virginia to New Jersey is also outlined by placement of AAM local offices.

The contagion influence is evident from the increased activity in states that had not, during the earlier time period, joined the AAM. Two groups of states increased the number of local offices by June: One group, Alabama and Mississippi, increased its number of offices from 6 to 82 offices; likewise, the second group of Illinois, Iowa and Michigan increased its membership from 26 to 100 local AAM offices. A partial explanation for the late adoption of the AAM in Illinois and adjacent states is the pervasive influence of the Farm Bureau, the sole farm group which actively sought to denounce the American Agriculture Movement.

3.1.3 October 1978

By October, 1978 a significant decline in the number of AAM local offices occurred. In general, the loss of AAM interest primarily developed in states which were latecomers to the movement. Hence, a decline was noted in Mississippi, Texas, Idaho, Montana and Iowa. Yet, some latecomer states continued active growth from the June to October period. Actively growing states during this period included Michigan, Nebraska, and Virginia.

Disenchantment with the movement can be traced to several possible causes. Although wheat producers received financial relief, no long-term legislative action was accomplished. Many farmers in non-wheat growing regions had different types of problems from those represented by the AAM. The cotton producers, for example, were faced with the best cotton harvest in 20 years during the fall of 1978. The good fortune of cotton producers in places like Mississippi cost the AAM substantial membership gains. Moreover, interest was lost in the highly commercialized farming states of Florida and California where farmers enjoyed monetary stability as a result of contract farming and increased vertical integration with industry giants. Many Florida citrus growers, for example, benefitted from labor contracts with Sunkist which provided investment capital in maintaining the groves.

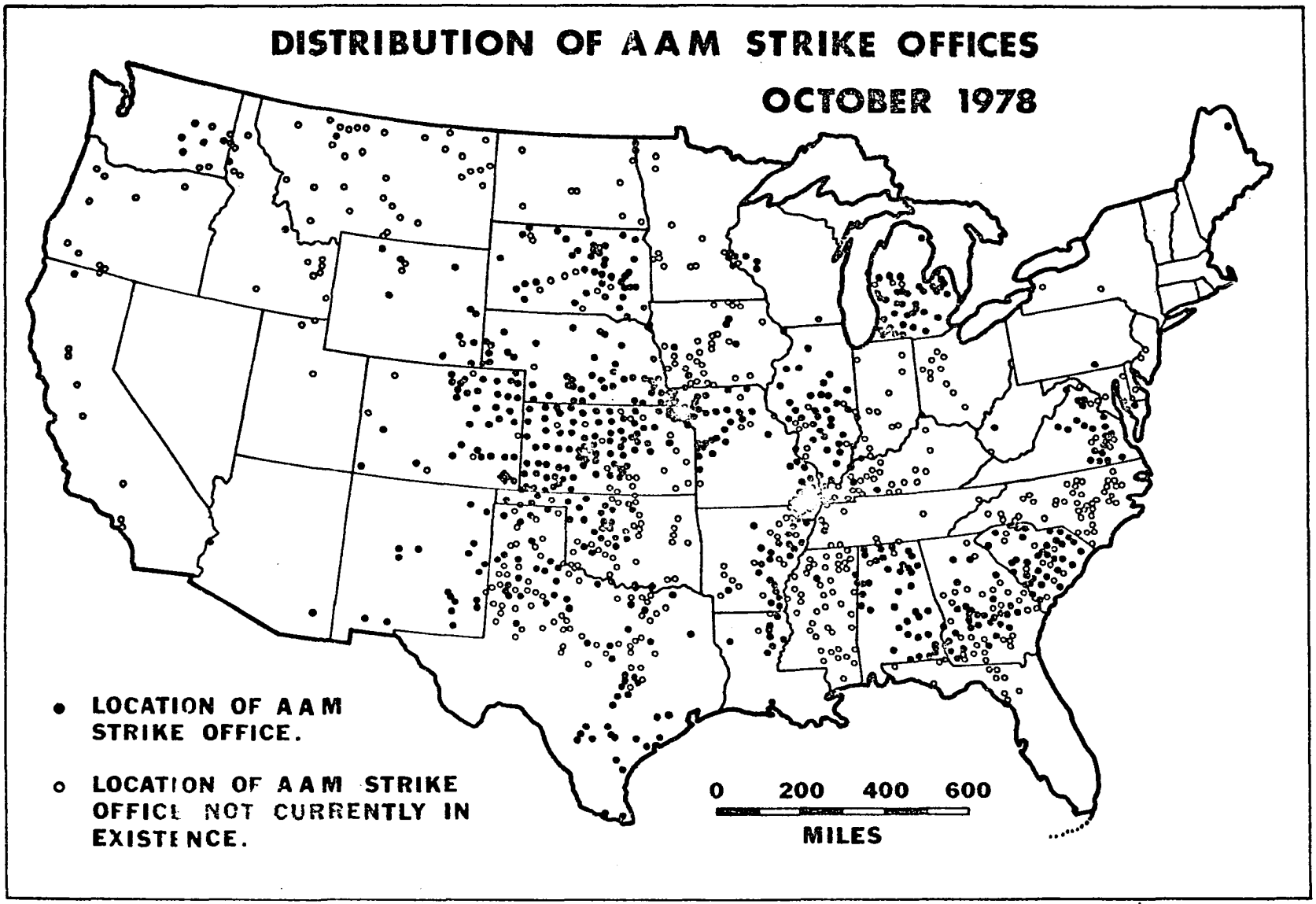

DISTRIBUTION OF AAM STRIKE OFFICES
OCTOBER 1978
• LOCATION OF AAM STRIKE OFFICE.
o LOCATION OF AAM STRIKE OFFICE NOT CURRENTLY IN EXISTENCE.
0 200 400 600
MILES

Figure 4

3.1.4 February 1979

During the fourth time period under consideration, slight increases in the total number of local offices took place. While some states added a few new offices, the majority of states held constant the number of AAM offices in their state. The notable exception, however, was North Carolina which increased from no offices to 43 local offices.

In states only marginally interested in the farmers' strike, many offices underwent closing. In fact, some states, such as Florida, California, Montana, Mississippi, and Tennessee, maintained only the single state AAM office in order to continue contact with the national headquarters.

A final note is the placement of AAM local offices in the rural/urban context. For the most part, the AAM offices were uniquely constrained to the smallest towns most readily accessible to rural farmers. A noteworthy rural cluster is the dense network of AAM local offices in the area of Dunklin County in southeastern Missouri where more than 25 offices are located within a 30 mile radius of this area. The most urbanized cluster of offices is in the vicinity of Kansas City. Adoption of offices in the Kansas City area is entirely consistent since Kansas City ranks as the largest city in the region and also one of the major grain trading centers. A secondary urban cluster is found in Wichita, Kansas--another area which provides some of the largest grain storage facilities in the world.

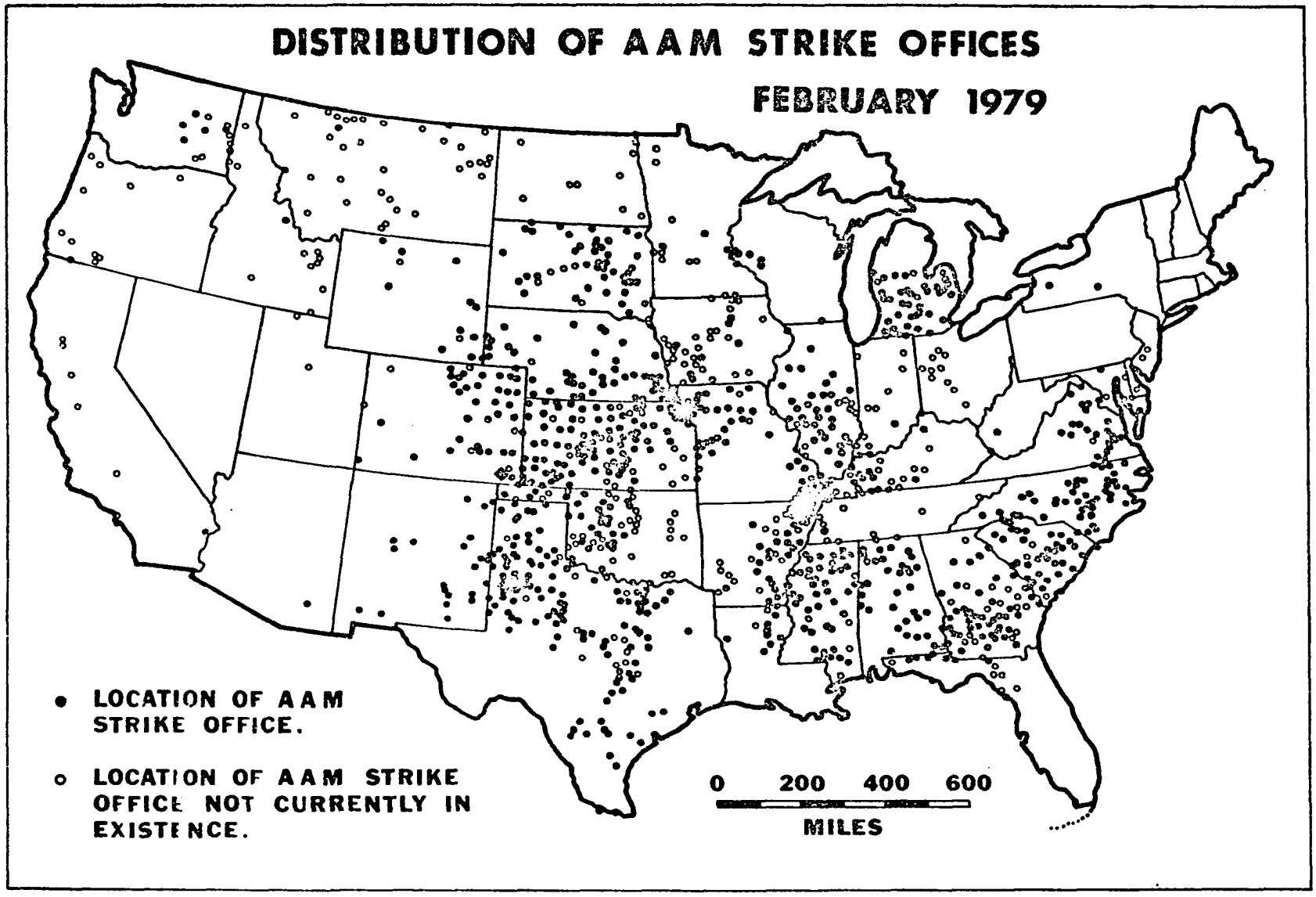

DISTRIBUTION OF AAM STRIKE OFFICES
FEBRUARY 1979
• LOCATION OF AAM STRIKE OFFICE.
o LOCATION OF AAM STRIKE OFFICE NOT CURRENTLY IN EXISTENCE.
0 200 400 600
MILES

Figure 5

3.2 Diffusion of the AAM in Oklahoma

Encompassing a time period from May 1978 to May 1979, the following map series indicates the pattern of individual membership adoption of the American Agriculture Movement in Oklahoma. Desiring to appear a spontaneous grassroots movement, the AAM did not solicit memberships until May 1978. Therefore, no membership list was recorded nor yearly membership dues collected until this time. Without question, many Oklahoma farmers were active in the strike prior to May 1978. Accordingly, two kinds of individual adoption will be presented in this research. The formal, duespaying membership is presented in this map series. From this population, a random sample of farmers responded to the question of when they first became active in the farmers' strike. The analysis which follows in subsequent chapters considers the time of individual adoption as that time when a farmer first became active in the movement.

In addition to indicating towns where AAM local offices are located, towns closest to farmer residences have also been shown. Open circles on the map depict locations where farmers have not become members of the AAM, while the size of the closed dots reveals the number of AAM adopters from each community. Over the 13 month period considered, 23 local offices were established with dues-paying members. Designation of the 23 local offices are marked by an "X"

over its dotted location. Neighboring towns which share a common AAM local office have been encircled. For the purpose of identification, each cluster or group of towns has been numbered. These groups are not numbered chronologically; rather, they have been numbered according to their final position on the map from left to right and from top to bottom. Accordingly, the 23 Oklahoma communities possessing an AAM local office are listed below.

1	Boise City	13	Okeene
2	Guymon	14	Watonga
3	Hooker	15	Hydro
4	Beaver	16	El Reno
5	Freedom	17	Willow
6	Helena	18	Sentinel
7	Lahoma	19	Carnegie
8	Tonkawa	20	Verden
9	Red Rock	21	Chickasha
10	Arnett	22	Marietta
11	Woodward	23	Madill
12	Vici		

During the first month of the AAM membership drive, six local offices established 230 members in surrounding communities (Fig. 6). The area of these six groups, adjacent to Kansas which had previously established farmer recruitment, includes some of the most fertile acreage used for wheat production. Groups 3 and 4 are noteworthy for the large number of adopters in each town, while Group 7, in north-central Oklahoma, is noteworthy for its expanded membership into eleven towns.

By June, five new groups (10, 11, 14, 16 and 19) arose south of the first group (Fig. 7) for a total of 424 members. While these eleven groups generally maintained separate membership fields, two towns were commonly shared by two membership

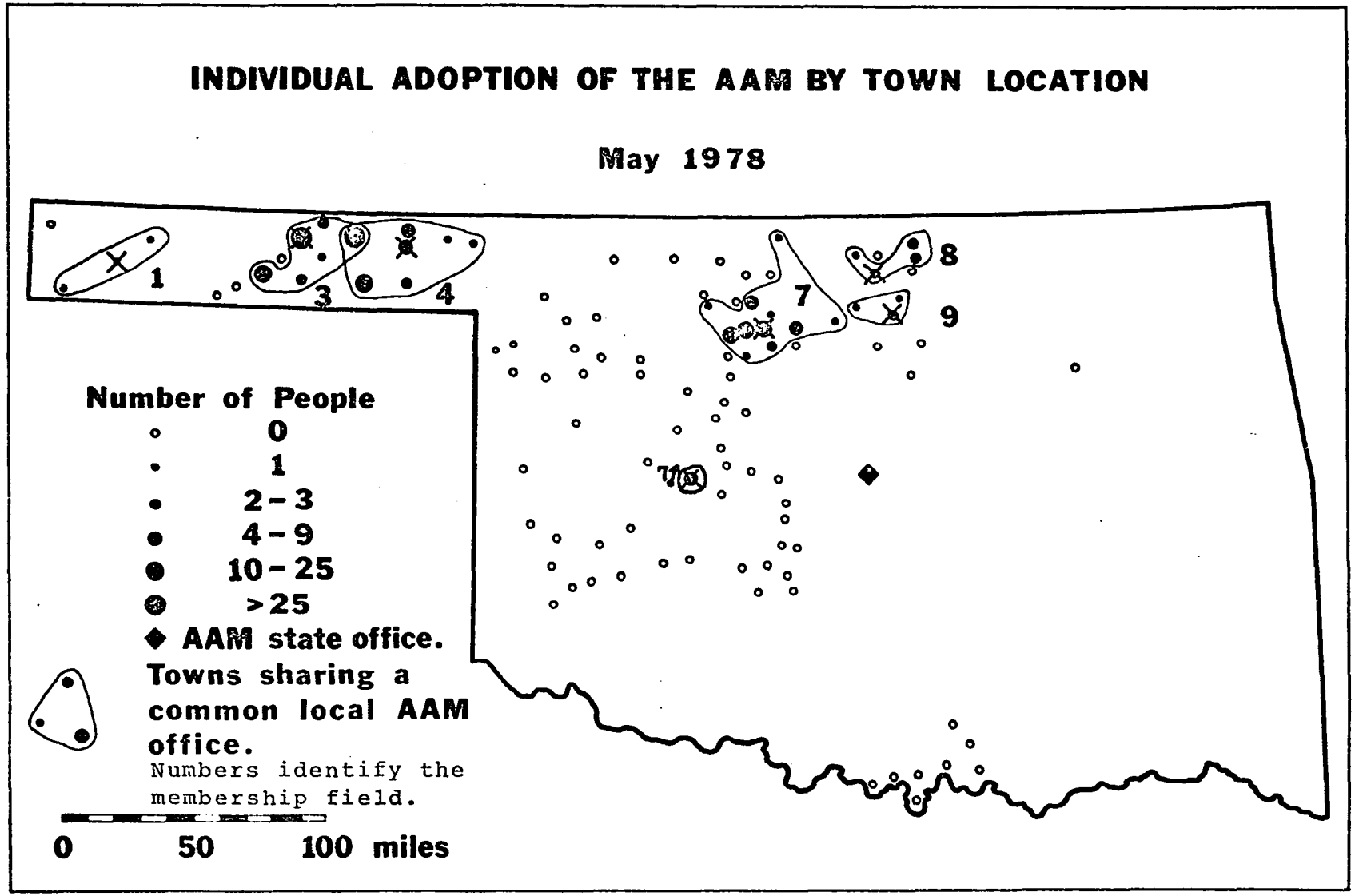

INDIVIDUAL ADOPTION OF THE AAM BY TOWN LOCATION
May 1978
1
3
4
7
8
9
11
Number of People
0
1
2-3
4-9
10-25
>25
AAM state office.
Towns sharing a common local AAM office.
Numbers identify the membership field.
0
50
100 miles

Figure 6

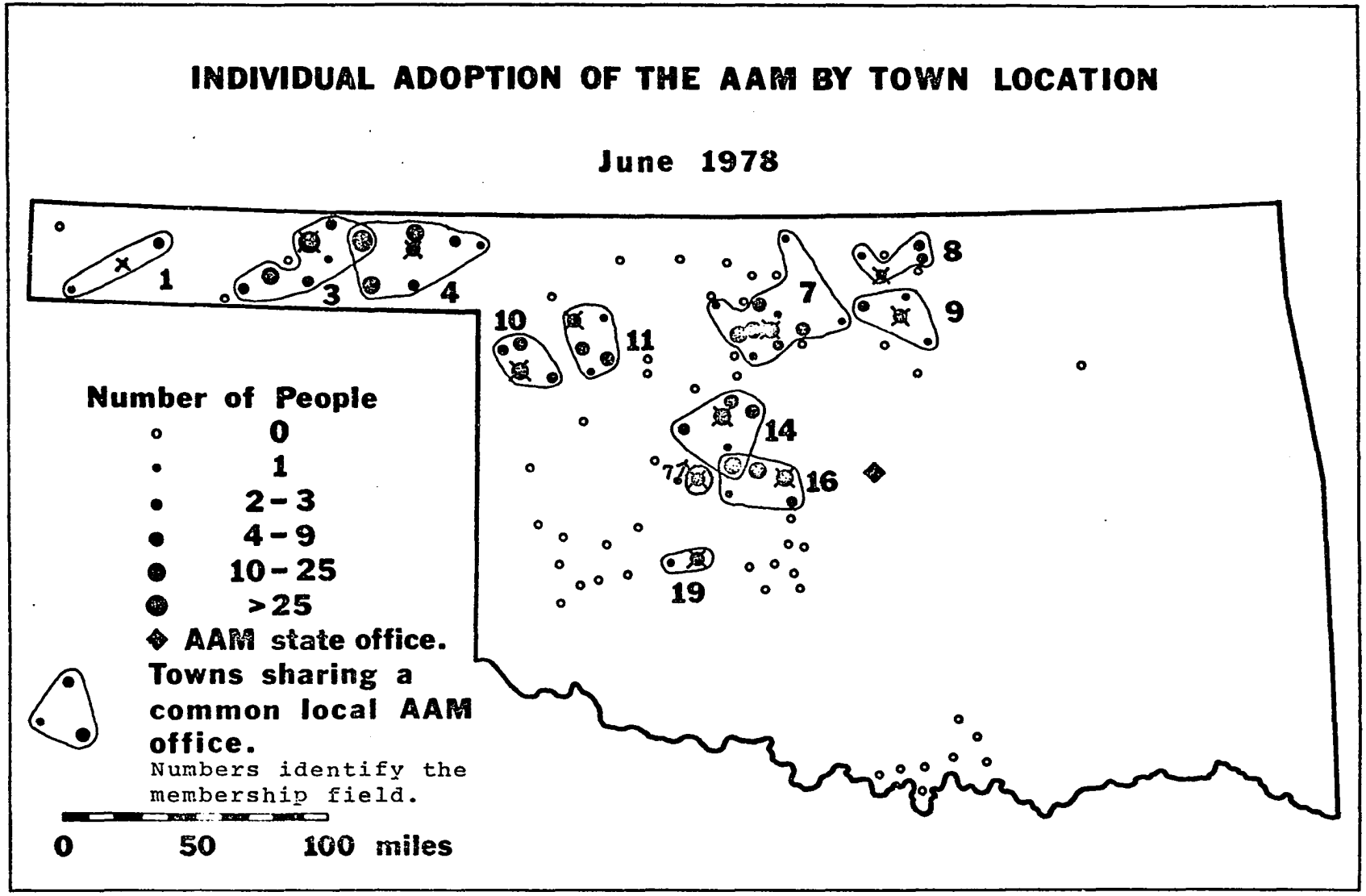

INDIVIDUAL ADOPTION OF THE AAM BY TOWN LOCATION
June 1978
1
3
4
10
11
7
8
9
14
16
19
Number of People
0
1
2-3
4-9
10-25
>25
AAM state office.
Towns sharing a common local AAM office.
Numbers identify the membership field.
0
50
100 miles

Figure 7

circles: Turpin, shared by groups 3 and 14; and Geary, which is shared by groups 14 and 16.

During the third month, in July, seven more groups developed for a total of 730 members. These new areas of adoption continued the expansion into southern Oklahoma as shown by 6, 12, 13, 15, 18 and 20. However, the majority of new communities added in July did not spread over new areas. Instead, these new groups filled in areas of previously established membership fields. Considerable overlap of membership fields has been the primary result. Eight towns possess AAM memberships in two different AAM locals, while Aline, Oklahoma possesses farmer memberships in groups 5, 6 and 7.

In August, 1978 the Chickasha AAM (21) established 76 memberships in four surrounding towns (Fig. 9). Group 11, whose 6 new members served as the only additional change, continued growth in September to include Seiling, Oklahoma (Fig. 10). Because October ranks as one of the wheat producers' most active months (Fig. 11), it is suggested that this production activity contributed to the lack of AAM involvement with a total of 855 memberships established since May.

Establishment of group 17 and expansion of groups 1 and 15 are noted in November, 1978. By this time, six months after the membership began, 20 of the eventual 23 local offices had established their membership fields, with

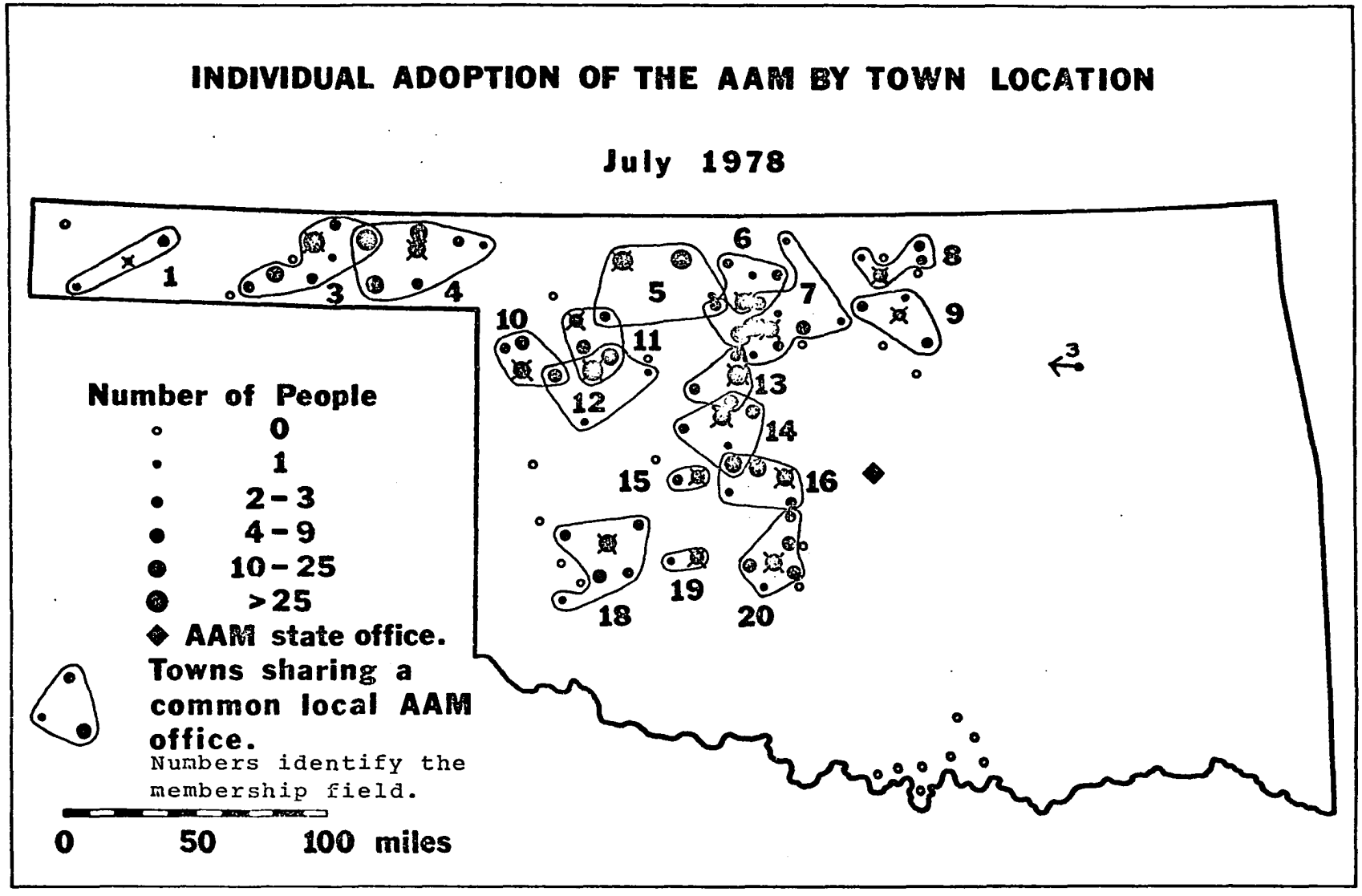

INDIVIDUAL ADOPTION OF THE AAM BY TOWN LOCATION
July 1978
Number of People
0
1
2-3
4-9
10-25
>25
AAM state office.
Towns sharing a common local AAM office.
Numbers identify the membership field.
0
50
100 miles
1
3
4
5
6
7
8
9
10
11
12
13
14
15
16
18
19
20

Figure 8

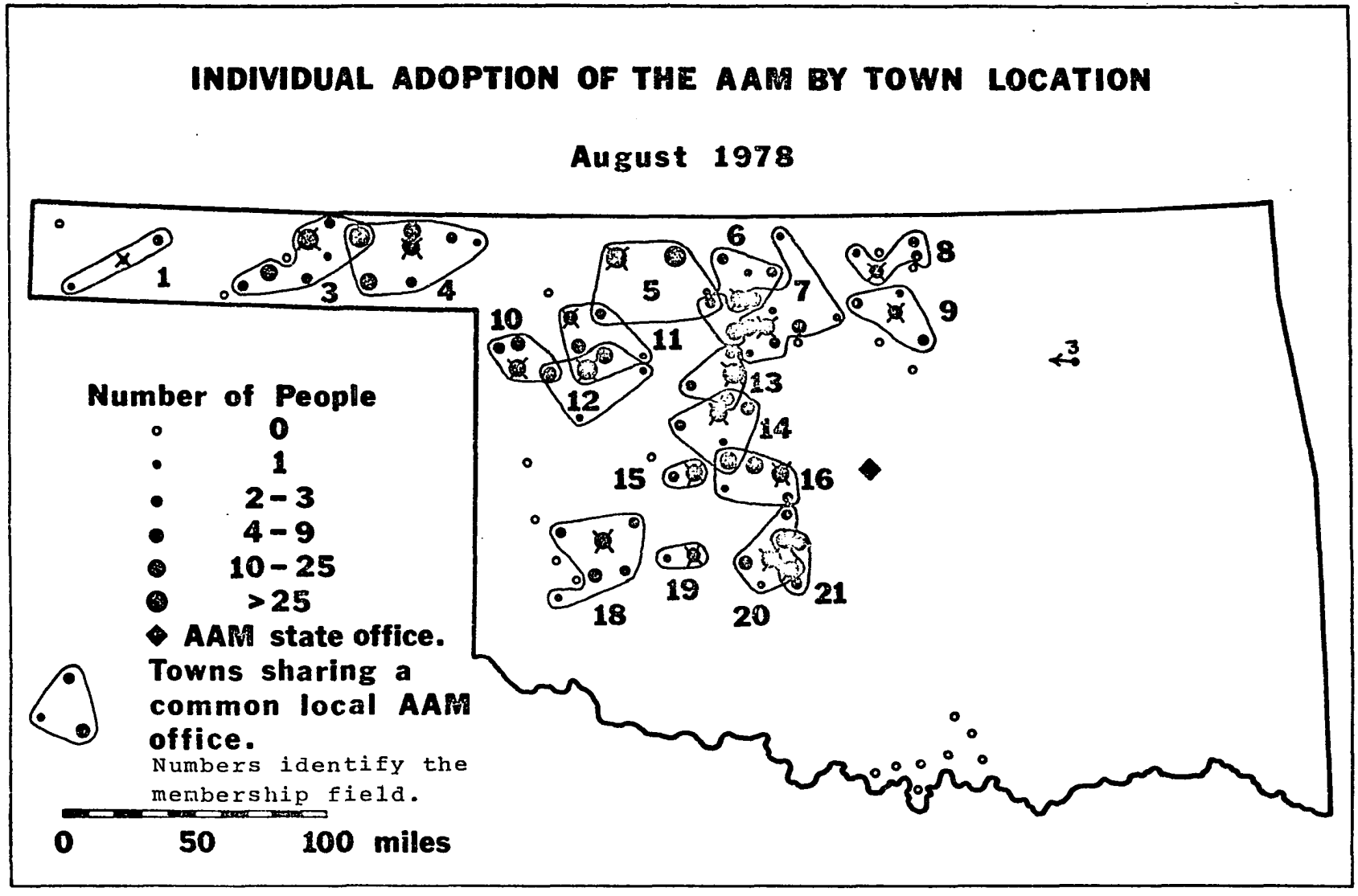

INDIVIDUAL ADOPTION OF THE AAM BY TOWN LOCATION
August 1978
Number of People
0
1
2-3
4-9
10-25
>25
AAM state office.
Towns sharing a common local AAM office.
Numbers identify the membership field.
0
50
100 miles
1
3
4
5
6
7
8
9
10
11
12
13
14
15
16
18
19
20
21

Figure 9

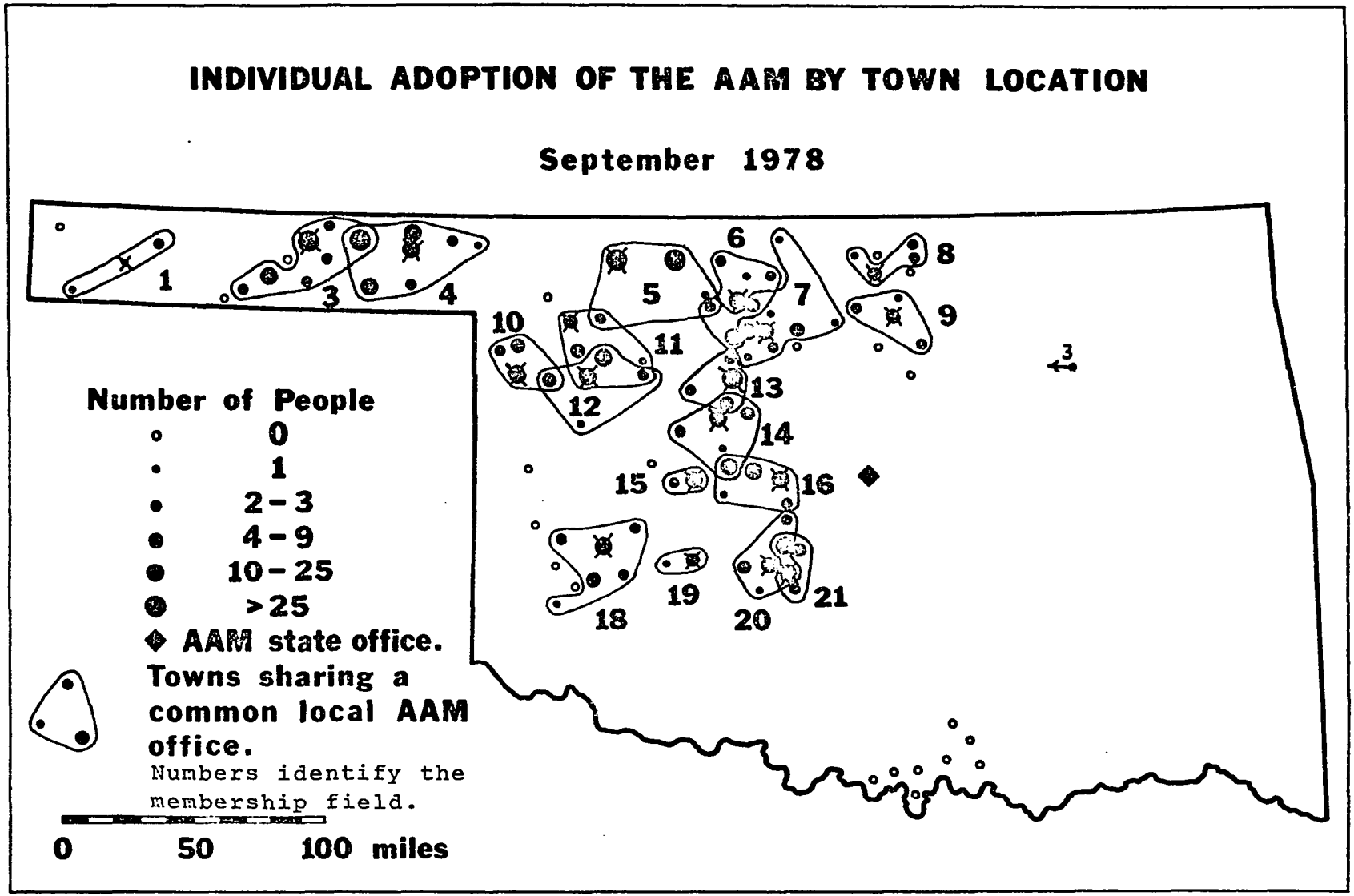

INDIVIDUAL ADOPTION OF THE AAM BY TOWN LOCATION
September 1978
Number of People
0
1
2-3
4-9
10-25
>25
AAM state office.
Towns sharing a common local AAM office.
Numbers identify the membership field.
0
50
100 miles
1
3
4
5
6
7
8
9
10
11
12
13
14
15
16
18
19
20
21

Figure 10

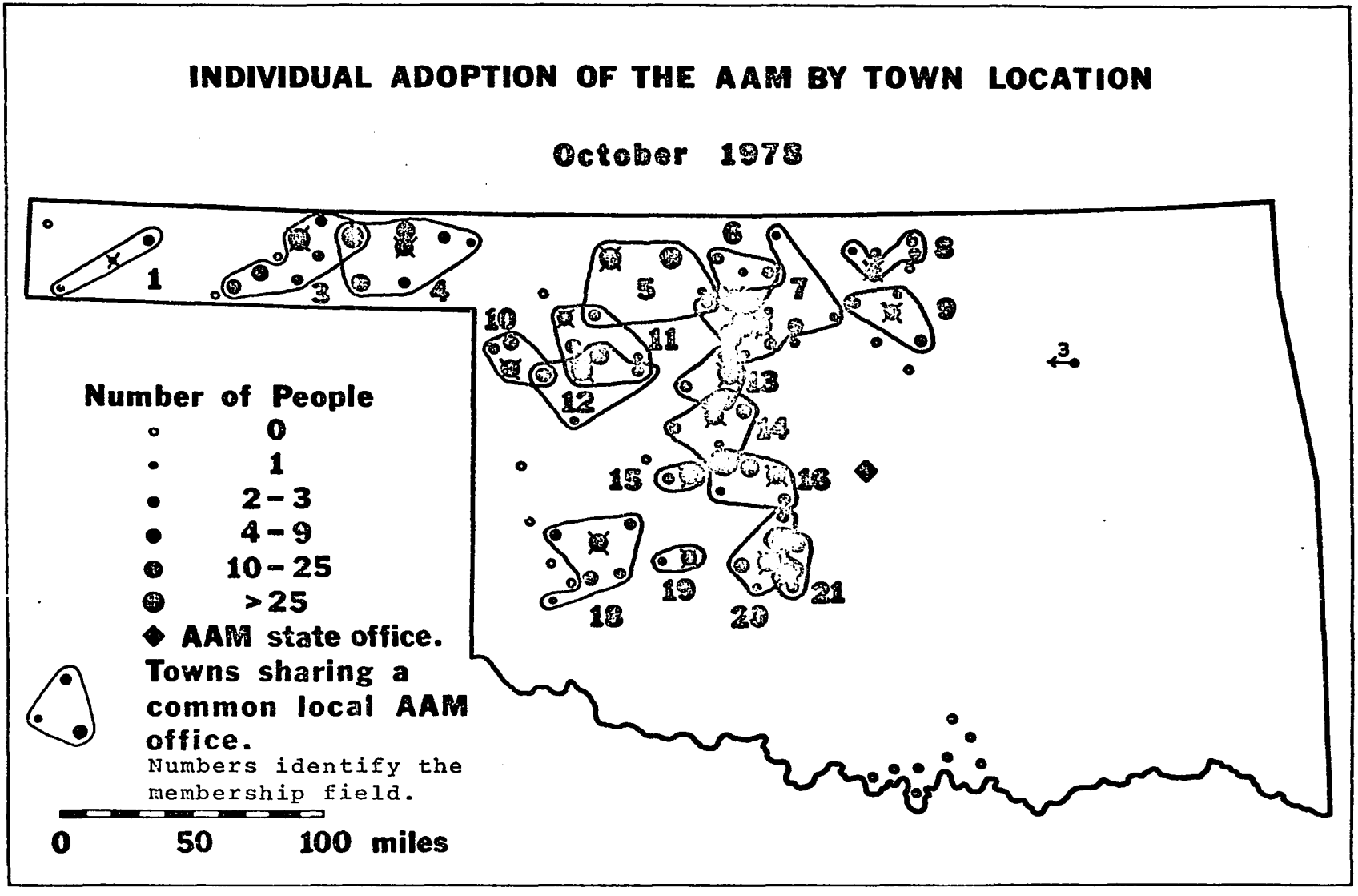

INDIVIDUAL ADOPTION OF THE AAM BY TOWN LOCATION
October 1978
Number of People
0
1
2-3
4-9
10-25
>25
AAM state office.
Towns sharing a common local AAM office.
Numbers identify the membership field.
0
50
100 miles
1
3
4
5
6
7
8
9
10
11
12
13
14
15
16
18
19
20
21

Figure 11

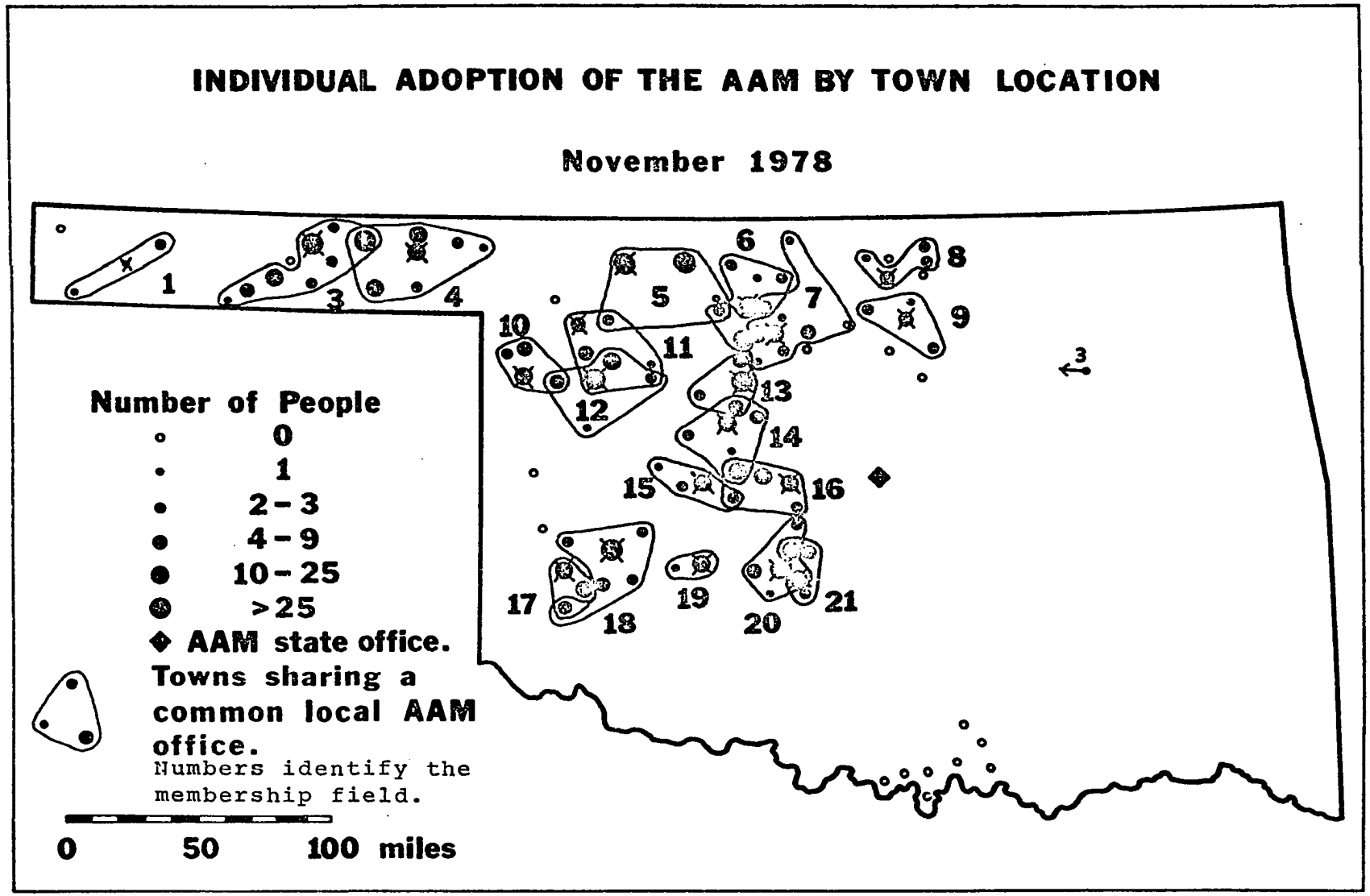

INDIVIDUAL ADOPTION OF THE AAM BY TOWN LOCATION
November 1978
1
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
Number of People
0
1
2-3
4-9
10-25
>25
AAM state office.
Towns sharing a common local AAM office.
Numbers identify the membership field.
0
50
100 miles

Figure 12

the majority of subsequent membership the result of consolidation of previously established membership fields. Included are ninety towns with 927 AAM farmer members. In December, groups 1 and 9 expanded to include four additional towns (Fig. 13), while additional increases in overall membership (1,063) were achieved in previously established areas during December.

In January, 1979 the last three local AAM offices established memberships: Guymon (2), Marietta (22), and Madill (23). Yet groups 22 and 23, because of their distant location in south-central Oklahoma, are significantly different from the other groups. Since their location is not in the primary wheat growing region, their new activity cannot be readily explained. However, groups 22 and 23 may represent an area of marginal economic farming activity regardless of the commodity grown. Moreover, groups 8 and 11 expanded during January to include two towns without previous AAM memberships for a total of 1142 members.

During February, group 23 added an additional community and continued rapid membership expansion (1235) into March, 1979 (Fig. 16). Whereas groups 7, 8 and 17 also continued consolidation of their membership circles in March, in April no changes occurred in the areal extent of AAM membership fields. However, significant membership growth (1288) was observed in groups 7, 8 and 22 through the consolidation process. For instance, in May, 1979 group 9 enlarged its

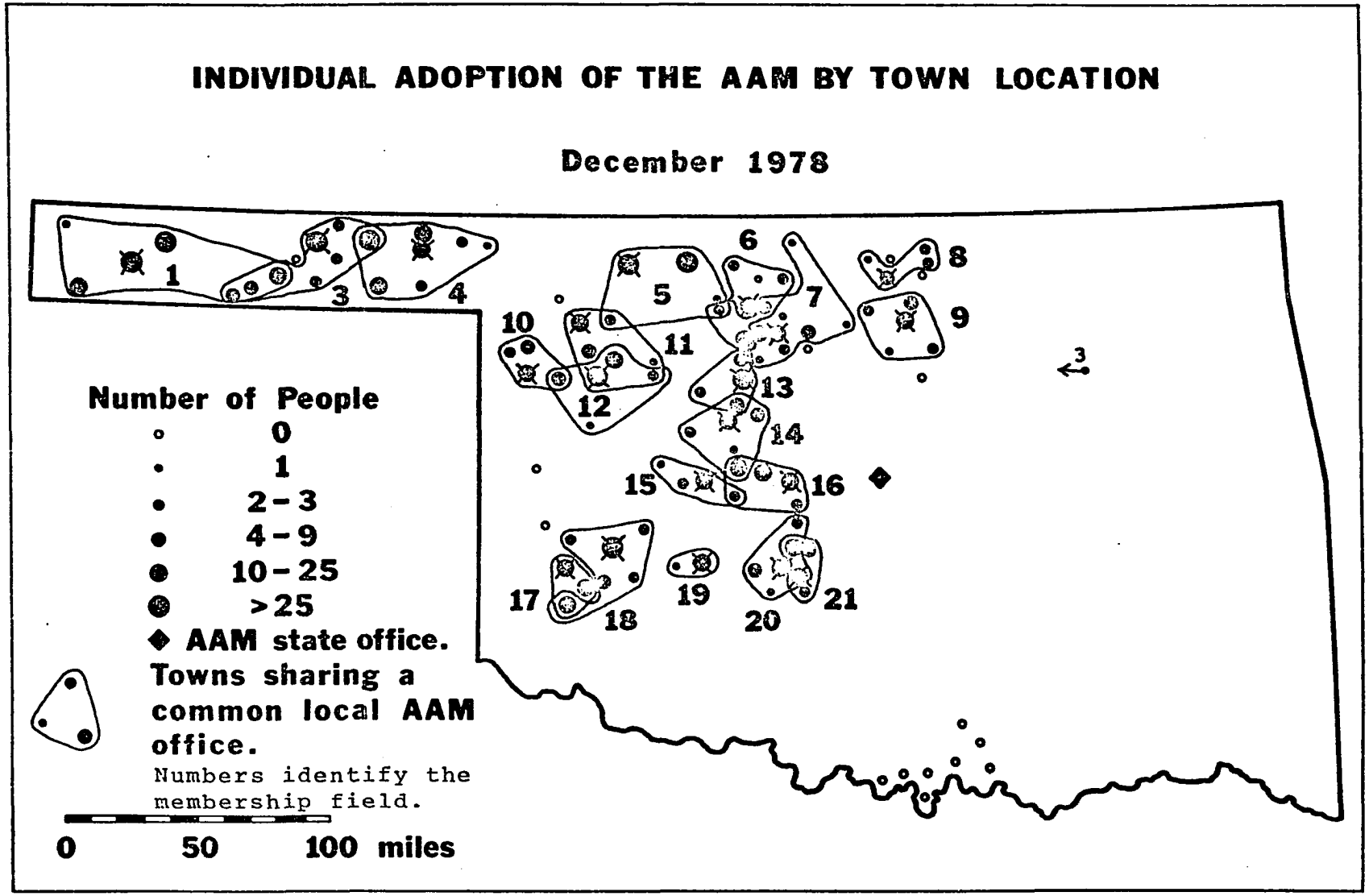

INDIVIDUAL ADOPTION OF THE AAM BY TOWN LOCATION
December 1978
Number of People
0
1
2-3
4-9
10-25
>25
AAM state office.
Towns sharing a common local AAM office.
Numbers identify the membership field.
0
50
100 miles
1
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21

Figure 13

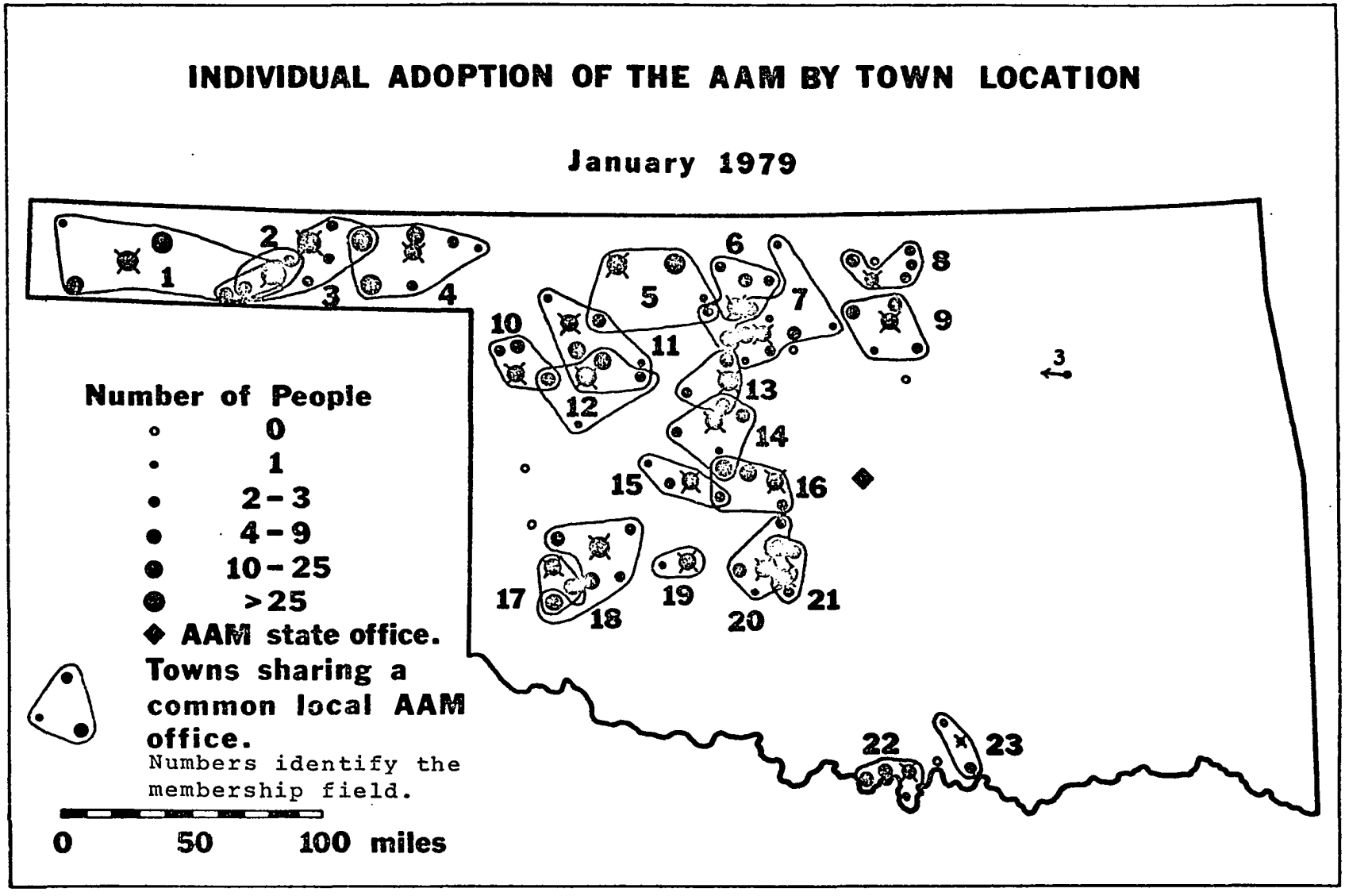

INDIVIDUAL ADOPTION OF THE AAM BY TOWN LOCATION
January 1979
Number of People
0
1
2-3
4-9
10-25
>25
AAM state office.
Towns sharing a common local AAM office.
Numbers identify the membership field.
0
50
100 miles
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

Figure 14

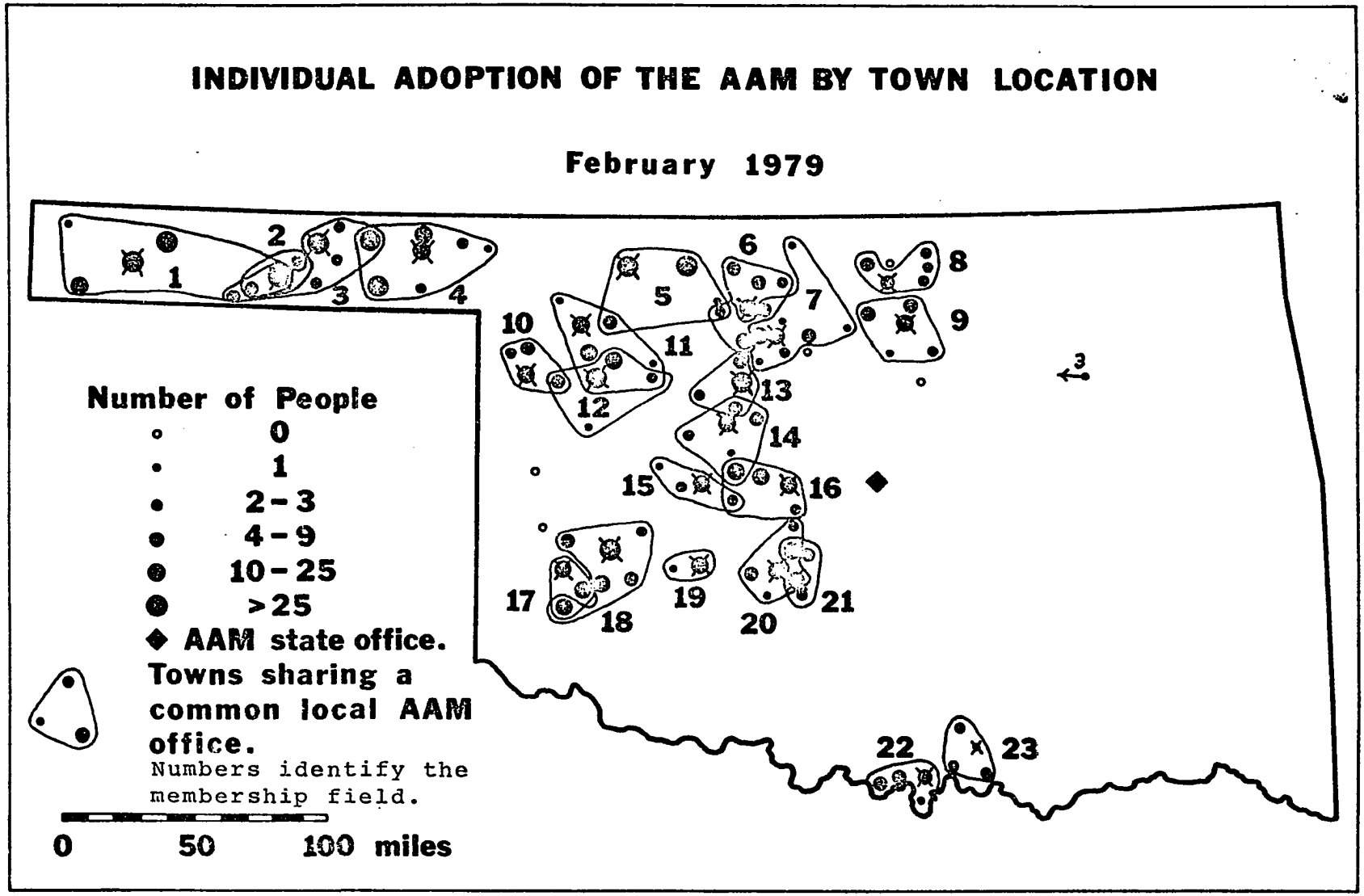

INDIVIDUAL ADOPTION OF THE AAM BY TOWN LOCATION
February 1979
Number of People
0
1
2-3
4-9
10-25
>25
AAM state office.
Towns sharing a common local AAM office.
Numbers identify the membership field.
0
50
100 miles
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

Figure 15

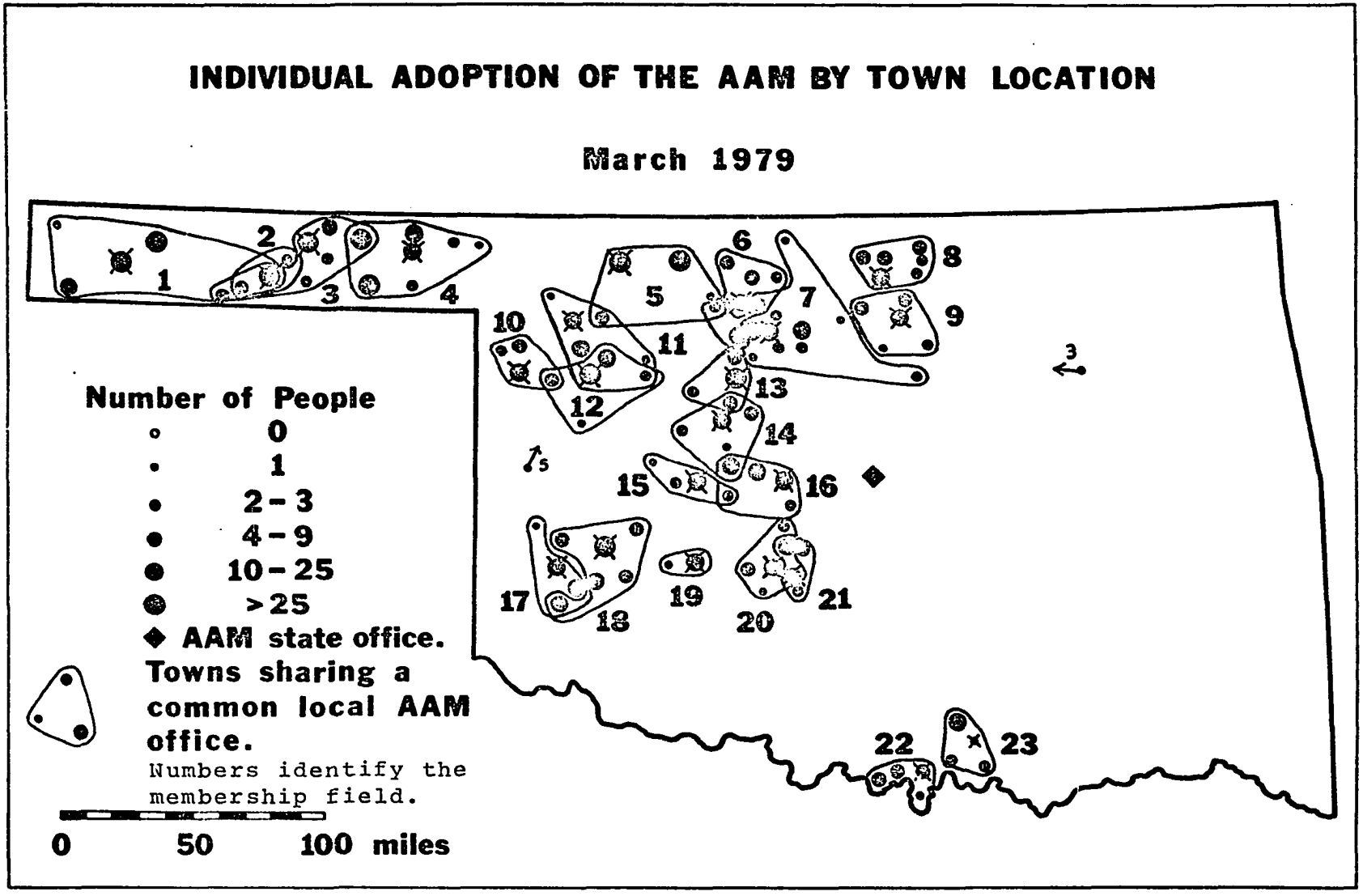

INDIVIDUAL ADOPTION OF THE AAM BY TOWN LOCATION
March 1979
Number of People
0
1
2-3
4-9
10-25
>25
AAM state office.
Towns sharing a common local AAM office.
Numbers identify the membership field.
0
50
100 miles
1
2
3
4
5
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20
21
22
23

Figure 16

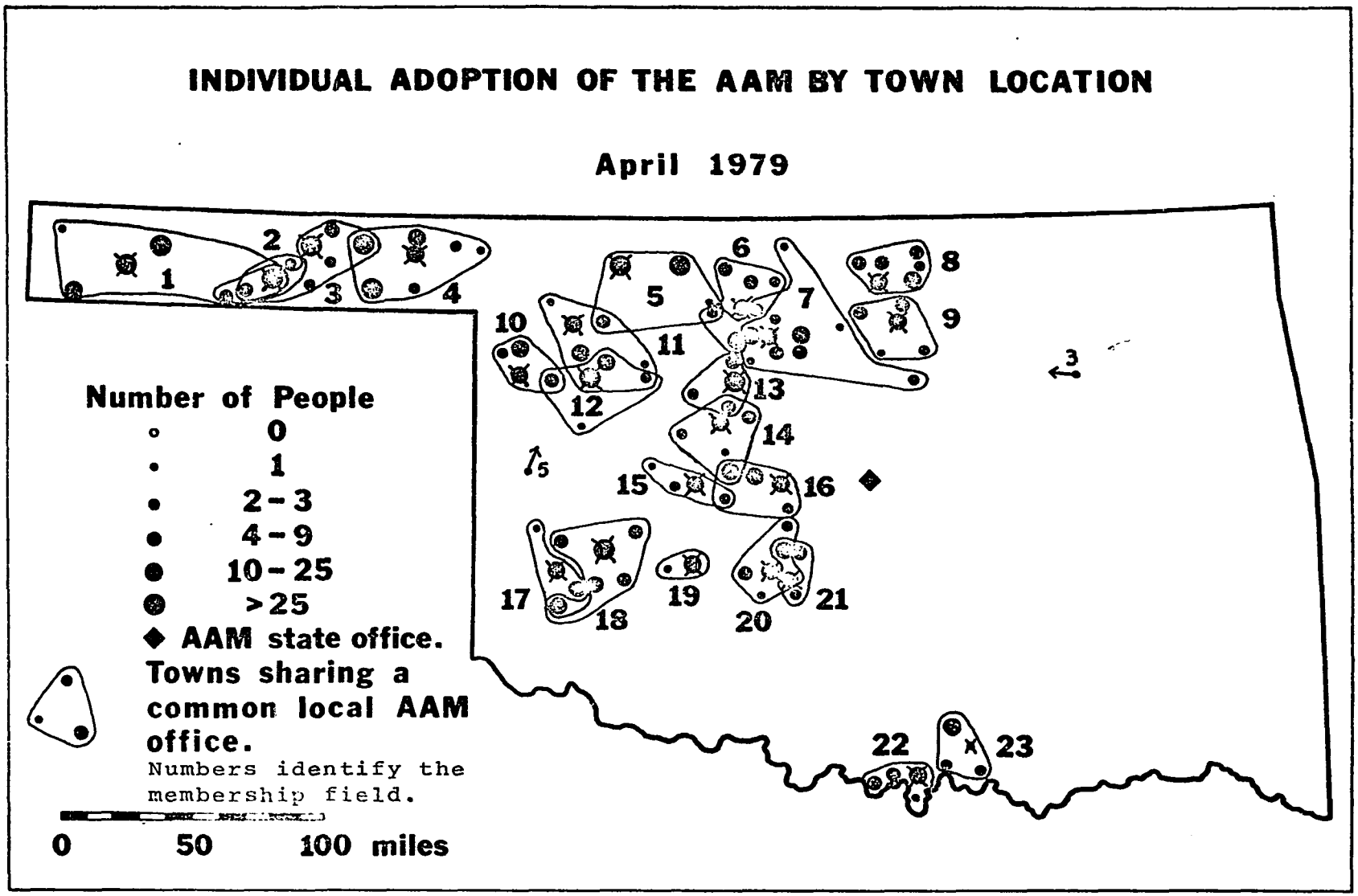

INDIVIDUAL ADOPTION OF THE AAM BY TOWN LOCATION
April 1979
Number of People
0
1
2-3
4-9
10-25
>25
◆ AAM state office.
Towns sharing a common local AAM office.
Numbers identify the membership field.
0 50 100 miles
1
2
3
4
5
6
7
8
9
10
11
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16
17
18
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20
21
22
23

Figure 17

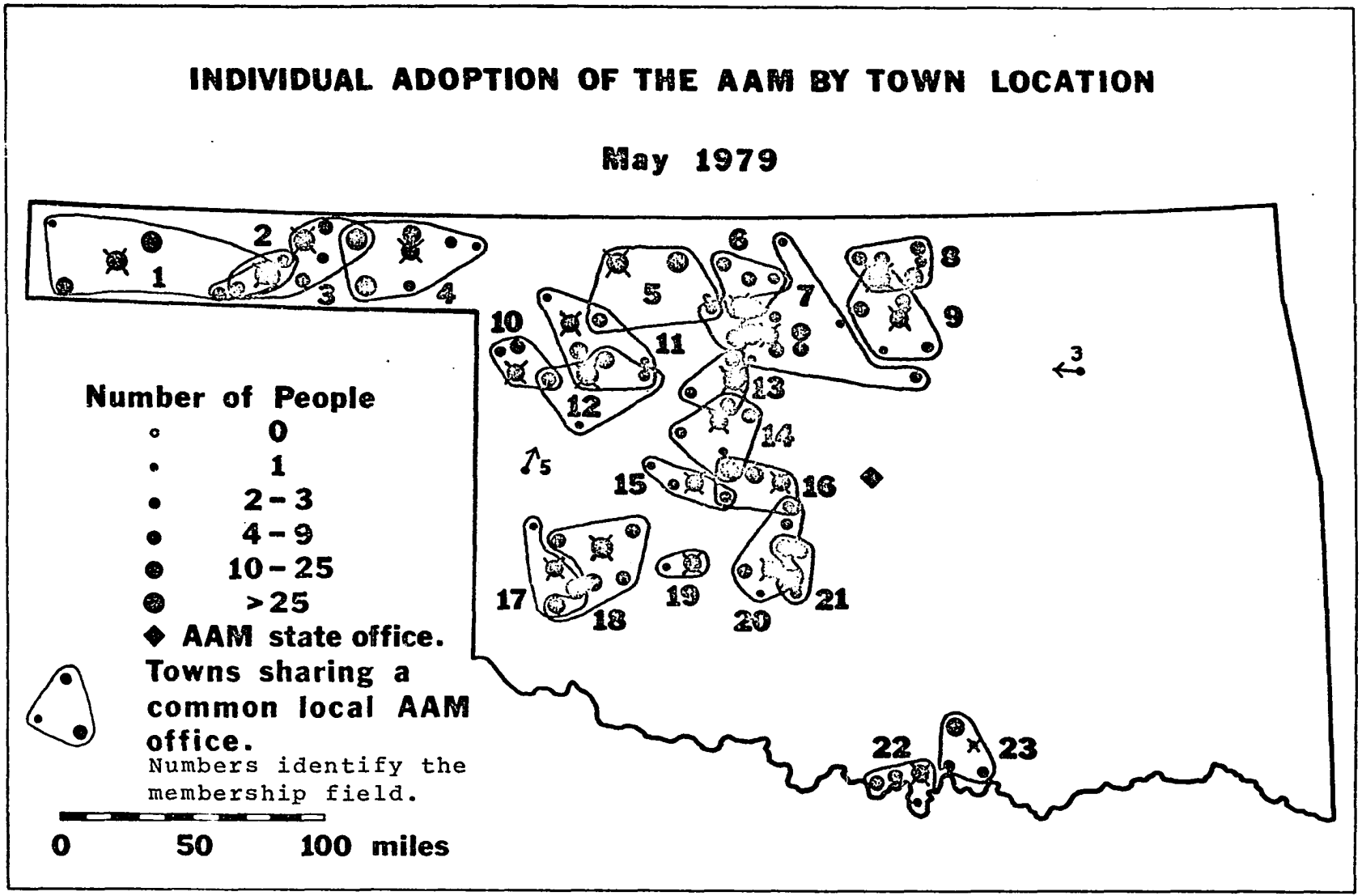

INDIVIDUAL ADOPTION OF THE AAM BY TOWN LOCATION
May 1979
Number of People
0
1
2-3
4-9
10-25
>25
AAM state office.
Towns sharing a common local AAM office.
Numbers identify the membership field.
0
50
100 miles
1
2
3
4
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22
23

Figure 18

membership to include a town in group 8. In a similar manner, group 20 extended into group 16.

Throughout the thirteen month period considered, the AAM of Oklahoma established 23 local offices with farmer members in 108 towns with total membership by May, 1979 claiming over 1328 Oklahoma farmers. With earliest activity in AAM membership adoption occurring near the origin of the farmers' strike, the movement began directly above group 1 in Springfield, Colorado. This early adoption, determined by the time of office establishment and the large number of farmer adopters in each community in the Oklahoma panhandle, was complemented by another early adoption, this time in north-central Oklahoma. This region, including Grant, Garfield, and Major counties, boasts the three largest producers of Oklahoma wheat. Later expansion continued along the axis of the wheat belt toward the southwest part of Oklahoma. This region, though less productive, depended upon wheat as its principle commodity. A third phase of diffusion involved a filling-in of memberships in areas previously overstepped by earlier expansion: spurious and seemingly unrelated memberships were obtained in south-central Oklahoma. Clearly, throughout the first few months the majority of local offices and their member communities underwent rapid establishment. Subsequent membership growth, on the other hand, depended upon the occasional overlapping of membership fields and internal consolidation within each town.

CHAPTER IV

DATA, METHODOLOGY, AND SURVEY RESPONSE

The comments in Chapter Four indicate the sources of data used in this study, together with the methodology by which the data is analyzed and a discussion of the survey results. The primary source of information, a mail survey of randomly selected members of the AAM in Oklahoma, is supplemented by additional information provided through personal interviews with Mr. Harvey Gardner, President of AAM of Oklahoma.

4.1 Survey of Oklahoma Members of AAM

The Oklahoma State Headquarters of the AAM currently lists about 1,350 individual farmer members in the AAM. From this population, a random selection of 375 members has been chosen to respond to a mail survey. A pilot survey of this group indicated a 60% response rate; after allowing for rate of return and incomplete forms, an expected 125 to 175 surveys was analyzed.

The survey (Appendix D) is designed to obtain seven categories of information: temporal and spatial, communication, commitment, farmer resources, biographical, financial,

and impacts. Basic to diffusion theory, the first category is concerned with the time of individual adoption of the AAM and location of the farmer with respect to his local AAM office. Time of individual adoption is analyzed in Chapter 5, and is considered the fundamental variable to which other variables are related. Previous research has shown that distance and time of adoption are related, with earliest adopters nearest the innovation source. In addition, time of adoption is earlier when communication frequency is increased and when adopter resources permit rapid adoption.

The second category deals with the farmers' communication links with personal and media information sources including newspapers, television, extension services, relatives and friends. All of the variables included in the communication category find a theoretical justification in this study. Information media sources have been shown to be positively related to time of adoption. Hence, greater contact with radio and television and greater readership enhances awareness and therefore the likelihood of earlier innovation adoption. Personal communication links are also theoretically related to innovation adoption. In the present context, measures of personal farmer influence, personal knowledge of local AAM organizers, and membership in farm organizations increase the likelihood of rapid innovation adoption.

The third group of variables attempt to measure the level of commitment held by farmers toward the American Agriculture Movement. These variables are not theoretically based upon previous research, but are included to offer empirical research on the levels of adoption of a social innovation. In industrial applications, levels of innovation adoption are delineated by the magnitude of financial investment, where large investments indicate high adoption levels. In a similar manner, the author proposes that the level of adoption of a social innovation is determined by the commitment held by the adopter toward the social innovation. Five measures of farmer commitment are analyzed in Chapter 6 and include: activity in recruiting new members, frequency of protest, parity support, support of the AAM, and sales of farm produce. Except for sales of farm produce, all of these variables are expected to be positively related to farmer commitment.

The fourth category concerns the level of resource availability for the farmer. Previous research in agricultural diffusion has shown that resource variables are often related to the ability of the potential adopter to purchase an innovation. Farmer resource variables are most frequently related to infrastructure requirements of the innovation. For example, adoption of fertilizer is dependent on a tractor which can apply the fertilizer. In addition, many resource variables find theoretical justification because they reflect previous innovation adoptions. Hence, farmers indicating

favorable attitudes toward technology, fertilizer, changes in farm size, and crop storage facilities may be more willing to adopt a social innovation which may also bring improvement. For this reason, it is suggested that positive attitudes toward farm resources also predispose farmers favorably toward social innovations.

The next category includes specific details concerning the respondent, with typical biographical information such as the age and level of education of the farmer. Age is shown to be negatively related to adoption, where older respondents show a greater resistance to change. Education, on the other hand, is positively related to time of adoption, such that adopters with a higher education exhibit more liberal views and are willing to try new innovations. In previous research, political affiliation has not been a good indicator of adoption behavior. Nevertheless, because of the evident connection between a social innovation and the attendant political repercussions, political affiliation has been included.

The sixth group of variables are related to the financial condition of the respondent. Research on the adoption of technological innovations provide a positive relationship between monetary resources and time of innovation adoption. The implication of this relationship provides an early adoption time for those individuals with the greatest ease of innovation purchase. However, in the present empirical study, the adoption of a social innovation does not require

monetary purchase. Instead, the financial condition of the respondent is deemed important by the author because it may directly influence the respondents' predisposition toward the farmers' strike. Four financial variables are herein considered: income, level of debt, the number of income sources, and the proportion of off-farm income.

Impact of the farmers' strike serves as the final category of information sought on the survey. The purpose for including innovation impacts in the survey is to expand current diffusion theory such that the aftermath of innovation diffusion may be better understood. In the present study, a significant impact of the farmers' strike is the heightened awareness by farmers toward their role in society. The impact of this new perspective is measured in terms of the future intentions of farmers. Therefore, the author has included the following farmer responses toward their future plans: the intention by farmers to remain in farming, plans to increase farm acreage, and past and future encouragement of their children to enter farming.

4.2 Methodology

Many of the survey questions function as dependent variables in the analysis. For example, several of the questions provide a measure of farmer commitment toward the AAM. A few questions also consider the future plans of farmers to remain in farming. Since these variables are

likely to be related, their relative association is measured using a contingency table analysis.

The specific contingency table analysis chosen for this research is cross-tabulation. The survey, which requires discrete rather than continuous responses for each question, receives assistance from cross-tabulation analysis, a process specifically designed to handle such discrete variable responses. Thus, two or more classificatory variables, such as income or age, can be observed for their common relationship. Accordingly, cross-tabulation offers an analysis of the frequency distribution of cases of multiple, related variables. To determine the significance of the cross-tabulation, the Chi-Square statistic has been used.

The survey may also be studied through alternative statistical procedures. Such a worthwhile analysis would establish the behavior of multiple variables when a related variable is controlled. Multivariate analysis is well-suited for establishing these partial relations with multiple classifications. However, this present work is exploratory in nature; both for its consideration of the diffusion of a social innovation in a rural setting and for its consideration of the impacts of that innovation. For this reason, the present study is constrained to an analysis which establishes in a clear fashion the simple relations between variables. The final product, then, is a summary of these variable relationships in a manner similar to the work by Rogers and Shoemaker

[49]. In future research, when a refinement of this study is sought, a multivariate analysis will be followed.

4.3 Survey Results

The remainder of Chapter Four presents the frequency distribution of responses for each of the 37 survey questions. For the purpose of discussion, the 37 questions have been aggregated into six areas of mutual concern. These six areas include: 1) the time of adoption and spatial factors, 2) communication factors, 3) farmer commitment, 4) farmer resources, 5) biographical information, and 6) impacts of the farmer's condition.

4.3.1 Time of adoption and location

Approximately 50% of the farmers surveyed completed and returned the survey. After deleting unacceptable surveys, 164 returns found entry into the overall analysis. In addition, farmers responding to the time of individual adoption totaled 116. With time of adoption indicated to the nearest month, the earliest adoption time noted was in September, 1977, while the mean time for the 116 respondents was 4.5 months later, during January, 1978. According to Found [20, p. 143], a considerable variation in time of adoption is based upon the initial cost and type of innovation. Since adoption of the American Agriculture Movement did not entail monetary inputs, resistance to adoption was based more upon social risks, whereas with industrial

innovations, an adoption lag time from one to seven years is typically evidenced [66, p. 622]. Furthermore, the distance the farmer traveled to his local AAM strike office was determined from the survey, with the average distance traveled from a farmer's home town to his local office equalling 19 miles.

4.3.2 Communication

In noting the information source which first informed the farmer about the strike, 55% of the 164 respondents listed a neighbor or relative. Ryan and Gross [53, p. 19] similarly report that 50% of their respondents first heard about hybrid seed corn through a neighbor or relative. Mass communications was cited by another 28% as their first source of knowledge about the AAM. Finally, 13% indicated first knowledge of the strike through direct contact with an AAM representative.

In regard to the first AAM representative the farmer met, 62% of the respondents were contacted by a neighboring farmer, with 10% first contacted by a state AAM organizer, and another 24% contacted by a traveling speaker outside of Oklahoma. These percentages reveal that almost two out of three AAM adopters were contacted by AAM representatives who were their neighbors. Accordingly, this majority group most likely perceived the AAM as an organization of concerned farmers who possessed points of view compatible with the group's.

Seventy-six percent of all respondents revealed that they know very well the organizer of their local office. Only 24% indicate they know the organizer "a little" or not at all. Thus, we may conclude that social distance between organizers and adopters is probably minimal. As Dragovich [18, p. 277] emphasized, communication channels are strengthened as social distance is minimized.

The frequency distribution of responses to the question, "How often do you rely on farming advice from farm magazines and newspapers?" produced a normal distribution pattern which contained the following response frequencies: very often - 6%, sometimes - 41%, seldom - 42%, and never - 11%. In another agricultural setting, Mason and Halter [39, p. 192] found that individual farm magazine readership served as a good indicator of the level of communication and social influence. In regard to the most regular source of farming news, 49% of all respondents indicated the electronic media. An almost equal number, 48%, relied most heavily on newspapers or farm magazines for farm news. On a typical day, 35% of all respondents listened to the radio or television three or more times, while 64% listened to the electronic medias once or twice a day for farming news.

A significant break in a traditional communications source is the lack of farming advice sought from the local agricultural extension agent. While 53% of the 164 respondents never communicated with their extension agent, 35% communicated once or twice with the extension agent over

the last six months. Only 12% of the farmers in this study contacted their extension agent three or more times in the last six months. This lack of communication stands in contradiction to Roger's study [50, p. 169] which indicated the significant role of the extension agent.

The membership farmers hold in various farm organizations serves as another measure of communication. Of the sample, 37% of all farmers are not members of any farm organization, while 29% held membership in the Farm Bureau, and 31% indicated membership in the National Farmers Union. Interestingly, many claimed membership in these organizations only for the lower insurance rate offered to them. Forty-eight percent of all farmers queried held multiple memberships in various farm organizations.

Katz [31, p. 63] has determined the relationship between flow of communication and flow of personal influence, with personal influence measured in part by the frequency that other people ask the respondent for advice. Hence the question was asked: "Within the last month, how often have other farmers asked you for your ideas on the AAM?" The frequency distribution indicates that 20% of the farmers had been asked for their advice "more than 4 times". The bimodal frequency distribution suggests that this group may indeed carry more personal influence than the average farmer. Forty percent indicated that their opinion had been sought once or twice, while advice was not sought from 27% of the respondents.

4.3.3 Commitment

Commitment to the American Agriculture Movement has varied among farmers and by location. In particular, wheat producers in the Oklahoma panhandle maintained the strongest sentiment. Several of the survey questions were designed to measure this level of commitment among the respondents. One of the early objectives of the AAM, to reduce the acreage in wheat in order to raise the prices received per bushel, also served as the objective of the Federal set-aside program; thus, the level of farmer cooperation with government attempts to reduce acreage was determined. The responses reveal that a majority (51%) of farmers decreased their acreage even more than the government requires, while 78% of all farmer respondents noted cooperation with the acreage set-aside program. Less than 2% of farmers replied that their acreage had increased over earlier years.

The farmer respondents also responded to how much produce they sold in comparison to previous years. A reduction in sales agreed with the AAM objective to withhold produce from the marketplace. Whereas only 4% of the respondents sold more produce than usual during a year which witnessed slightly better-than-average wheat yields, 26% had average sales of produce, with the remaining 70% of the respondents selling less produce than usual. During this same year, a majority of the respondents held at least 50% of their crops in storage. Commitment toward the AAM objective of withholding produce probably does not fully explain

this uniform sentiment toward reduced sales; part of the farmer's decision to reduce sales is likely owed to his exercise of an individual choice in storing his crops until higher prices are available.

The number of times the respondent has tried to convince another farmer to join the AAM ranks as the second measure of farmer commitment toward the AAM. In this sample, only 15% of AAM farmers tried more than four times to convince non-member farmers to join the AAM. Another 13% of the sample sought to recruit membership "three or four times," while 35% attempted to recruit other farmers once or twice. Another third of the sample (36%) never tried to enlist new members into the AAM.

Level of commitment was also ascertained by the frequency of participation in protest activities ranging from trips to Washington, local demonstrations, and tractor caravans. Involved in more than four protest activities was one-third of the respondents (32%). Another 37% had protested from one to four times, whereas the remaining 31% never participated in a protest.

Farmer commitment toward the American Agriculture Movement was also obtained by direct inquiry. When asked how strong their support of the AAM was, 57% responded that their support was "very strong". Another 26% of farmers reported "strong" support of the AAM, while 15% indicated average commitment. Only 2% of the sampled farmers noted less-than-average support of the AAM.

Commitment toward the AAM was also indirectly measured by a series of 17 value judgments concerning the objective of the AAM. Each respondent was asked to place a mark beside those statements with which he agreed, with the 17 statements ranked from 1 to 17 according to the strength that the statement indicated allegiance toward the AAM. For example, if a respondent agreed that the AAM "is absurd", then his value judgment would indicate a low esteem for the AAM. The value of the median response was determined as the level of commitment the respondent held toward the AAM. For a further explanation of this technique, see "A Scale for Measuring Attitudes Toward Any Social Action", by H. H. Remmers [48]. The overall response to this question indicated a generally strong farmer commitment toward the AAM. Of the 164 respondents, 79% believed that the AAM "will solve some of the major problems in agriculture", while 65% held that the AAM "places great emphasis upon fair dealing." Sixty-two percent affirmed the AAM "is a practical basis for future planning", while 60% insisted that the AAM "has unlimited possibilities." The AAM was held "to be effective" by 50% of the farmers sampled. Forty-nine percent of the farmers conceded the AAM "has its merits," while another 46% insisted the AAM "will be an influence for right living." Finally, 38% noted the AAM "can do no serious harm."

4.3.4 Farmer Resources

Farmer resources include the physical resources available to the farmer such as equipment, land, and infrastructure

necessary for farming. Within recent years, farmer reliance on chemical fertilizer has increased due to higher levels of availability and development of fertilizer-tolerant wheat varieties. When the respondents were asked how much fertilizer they used compared to five years ago, almost half replied "about the same". On the other hand, 32% used more fertilizer, while 20% used less.

According to Bachman and Christensen [1, p. 255], farms have increased in recent years in order to maintain an economic size unit. In this sample, changes in farm size reveal the following distribution. Fifty-two percent of all respondents have bought or leased more land in order to maintain an economic size unit, with 34% reporting no change in the size of their farms. Only 9% report a reduction in the size of their farm operation. When asked the specific acreages of their farm operation, the farmers' responses yielded the following distribution: the average acreage owned by the respondents is 576 acres; another 868 acres is rented; and 22 respondents lease out an additional 10,100 acres to other farmers. Altogether, 192,000 acres is controlled by this sample of 164 farmers.

Considerable increases in the size of the farm operation have been noted. In order to determine if this increase will continue, farmers were asked if they intended to increase their farm operation during the next five years. Although increases in farm size were planned by 36% of the

sample, almost two-thirds (62%) of the farmers do not intend to enlarge their farms.

According to H. Gardner [21], President of AAM of Oklahoma, many farmers have sought income security through diversification into multiple crops, oil leases or non-farm jobs. This opinion is further supported by Schluter and Mount [56, p. 1]. Since farmers perceive income variability as a risk, they seek to optimize income by maximizing earnings while averting risk. Crops and cattle is an income source for 97% of farmers sampled. In addition, 54% also report income from oil leases. Almost one-third of the sample (31%) augments its income through off-farm jobs with additional 22% of the sample reporting "other" income as well. The proportion of total income from off-farm sources is reported as 25%.

In recent years, many farmers have increased storage facilities to hold crops until favorable market conditions develop. This form of risk aversion produced the following frequency distribution: 32% reported "almost none" of their crops in storage, another 52% revealed at least half of their crops in storage, while almost 28% of the sample noted "almost all" of their crops in storage in hopes of higher prices.

4.3.5 Biographical

Many of the survey questions are biographical in nature because they seek personal information or attitudes about the respondent. For example, age typically serves as

a significant variable in diffusion studies. In the case of mid-western farmers, age ranked significant in determining acceptable risk in farming activities [61, p. 276]. The average age of all respondents was 48 years old, with 51 respondents in the 20 to 39 year old age group. Moreover, 78 farmers were 40 to 59 years old, while 35 farmers were at least 60 years old.

Level of education, like age, has repeatedly been proved significant in time of adoption [49, p. 186] and level of social influence [39, p. 192]. As a group, the Oklahoma farmers responding to this survey are well educated. Over half of the respondents have had some college education, with 26% receiving a college degree. Terminal education for the remaining farmers include: elementary school - 6%; junior high school - 1%; high school - 32%; and some technical training - 7%.

Since it reflects farmers' willingness to adopt new innovations in agriculture [49, p. 188], farmer attitude toward technical improvements ranks as an important variable. Farmers were asked if technical improvements have helped the American farmer financially. Seventy-five percent indicated that technical improvements did help the farmer, while the remaining respondents noted technology did not help the farmer financially. In contrast to this result, Mellor [41, p. 123] concluded that technology is frequently responsible for low rural incomes.

Likewise, political affiliation was requested in this survey, yielding the following results: 36% of all farmers in this survey indicated a preference for the Republican Party; 61% noted an affiliation with the Democratic Party; and, less than 2% of the farmers defined themselves as independents. Clearly, the proportion of independent farmers is considerably smaller than among their non-rural counterparts. In support of this contrast, Lewis-Beck [37, p. 562] has noted that farmers are politically individualistic, although they remain affiliated with a particular party.

Farmers' credit attitudes were obtained by asking for their current level of debt. Of the 164 farmers responding, 20% indicated they had no outstanding loans. Farmers with a debt less than half of their farm value constituted 46% of the sample. Twenty percent stated their debt was more than half of the farm value, while another 12% had a debt for the value of the entire farm.

Spector, Brown, and Malecki [59, p. 274] have observed that in the case of Swedish farmers, agricultural income is related to economic status and hence to communication influence. In accordance with this observation, income was considered an important variable, one which may influence participation and communication with the AAM. The responses by Oklahoma farmers produced the following income distribution. While 8% of the respondents noted an income during

1978 of less than $10,000, 17% listed 1978 incomes between $10,000 and $25,000. Still another 22% reported incomes between $25,000 and $40,000. Thirty-two percent of farmers responding noted an income greater than $40,000, but less than $100,000. Incomes greater than $100,000 were reported by only 18% of the respondents. In short, more than 71% of all farmers indicated an income greater than $25,000.

The last biographical variable requested of the farmers was the number of dependents living at home. Including himself, the average number of people in the household was 2.8 dependents. This low number of dependents confirms the gradual trend toward declining farm population. Slicher Van Bath likewise noted this decline in his agrarian history [58, p. 18]: "During the course of history the relative importance of agrarian production and population has steadily declined, while that of non-agrarian production and non-agrarian population has steadily risen."

4.3.6 Impacts

The American Agriculture Movement is a popular expression of farmers' discontent for the loss of purchasing power obtained for their labors. The attitudes that farmers hold toward their jobs are shaped in part by their previous experience, with part of that experience related to the job security and level of success they observe in themselves and their neighbors. In order to measure the farmers' perception of the security in farming, each respondent was asked

to record the number of farmers who had gone out of business during the last five years. Fifty-five percent of the farmers knew "more than four farmers" who had gone out of business. Furthermore, 20% knew "three or four" farmers, while 19% knew "one or two" farmers who had quit farming. A mere 5% of the respondents did not know any farmers who had gone out of business.

As a further measure of the impacts of the undesirability of farming, the respondents were asked if they intended to remain in farming during the next five years. Ninety percent responded affirmatively; only 7% planned to leave farming. When asked if they had encouraged their children to farm, 32% responded "yes," with 63% responding "no." Almost the same proportion was given when farmers were asked if, in the future they would encourage their children to farm. Apparently, the vast majority of farmers in this sample will continue in farming, but only a minority want their children to enter the business.

CHAPTER V

ANALYSIS ON TIME OF ADOPTION

The analysis in this chapter identifies those variables which influenced the time of individual farmer adoption of the American Agriculture Movement, a time defined as that moment when a farmer became active in his local AAM office. Accordingly, farmer respondents were requested to identify the time of their initial activity in the nearest month.

Figure 19 reveals the cumulative number of individual adopters with respect to time. Individual farmer adoption of the AAM in Oklahoma displayed a logistic curve. While the national data witnessed a decline in the number of AAM offices, the number of adopting farmers continued to grow in Oklahoma. The average time of adoption, at the point of inflection, equals 4.5 months. Three classes of adopters have been arbitrarily chosen which divide the 116 respondent sample into three distinct groups. The first group (innovators) includes farmers who adopted the AAM during its first three months in September, October, and November, 1977. On the other hand, the middle group of farmers became active during the next three-months period in December, 1977, and

INNOVATORS
MIDDLE
LAGGARDS
CUMULATIVE NUMBER OF ADOPTERS
120
110
100
90
80
70
60
50
40
30
20
10
0
S O N D J F M A M J J A S O N D J F M A
1977
1978
1979

Figure 19

in January and February, 1978. Lastly, the third group (laggards) includes farmers who became active in the movement after February, 1978.

Twenty-one variables have been selected from the survey to explain the time of individual farmer adoption of the AAM. These variables include:

SPATIAL/TEMPORAL	The time the local AAM office was opened. Distance to the nearest town with an AAM office.
COMMUNICATIONS	First information source about the AAM. First personal source about the AAM. Number of previous farmers who have gone out of business. Number of memberships in other farm organizations. Frequency of communication with agrigultural extension agent. Most regular media source for farming news. Frequency of readership in farm magazines. Frequency of use of electronic media for farming news.
BIOGRAPHICAL	Age. Education. Number of dependents. Political party affiliation.
RESOURCES	Number of acres owned. Number of acres rented. Past five year changes in farm size.
FINANCIAL	Income. The number of different income sources. Proportion of income from off-farm sources. Debt on farm.

For the purpose of discussion, the variables in Chapter Five has been grouped into five subject areas according to common features. Furthermore, each variable is compared to the time of farmer adoption according to the Chi-square test of significance.

The contingency tables provided in this chapter and in Chapters Six and Seven present in a similar format the statistical results, with the dependent variable listed at the top of each table. In the case of the present chapter, the variable under investigation is "time of adoption." Each consecutively numbered table provides a single variable to be tested for its relation to time of adoption. Within each cell of the table is found the percentage distribution of the secondary variable by category of the dependent variable. Moreover, the Chi-square, significance level, degrees of freedom, and contingency coefficient are given beneath each contingency table with the 10% confidence limit established by the Chi-square test serving as the criteria for determining significance.

5.1 Spatial/Temporal Effects

One spatial and one temporal variable are considered for their relationship to the time of individual farmer adoption of the AAM. In Table 4, the relationship between time of adoption and the opening of the local AAM office is shown to be significant at a 4.7% confidence level. Specifically, earliest adopters are members in local offices which opened early. The implication of this relationship is that individual adoption is dependent upon establishment of a local AAM office infrastructure.

In Table 5, the distance between the individual adopter and his local office is considered. Distance does

TABLE 4

TIME OF INDIVIDUAL ADOPTION

TIME LOCAL AAM OFFICE OPENED	Early	Middle	Late	n
Early	25 60%	11 29%	10 28%	46
Early Majority	2 5%	8 21%	6 16%	16
Late Majority	4 9%	6 16%	5 14%	15
Late	11 26%	13 34%	15 42%	39
n	42	38	36	

$x^2 = 12.74$ Sig. = 4.7% (d.f. = 6)

TABLE 5

TIME OF INDIVIDUAL ADOPTION

DISTANCE TO TOWN WITH AAM OFFICE (in miles)	Early	Middle	Late	n
0-9	25 60%	25 66%	17 47%	67
10-19	7 17%	8 21%	13 36%	28
20+	9 21%	3 8%	5 14%	17
n	41	36	35	

$x^2 = 5.35$ Sig. = 24.8% (d.f. = 4)

TABLE 6

TIME OF INDIVIDUAL ADOPTION

FIRST INFORMATION SOURCE ON AAM	Early	Middle	Late	n
Neighbor	25 59%	19 50%	20 56%	64
Media	10 24%	13 34%	13 36%	36
AAM Rep.	7 17%	6 16%	3 8%	16
n	42	38	36	

$x^2 = 2.60$ Sig. = 62.7% (d.f. = 4)

not appear to be related to time of adoption (28% significance). The majority of adopters are found at the shortest distances over all time-of-adoption classes.

5.2 Communication

Communication has been demonstrated as an important factor in the time of adoption of many innovations. For this reason, eight communication variables are now considered for their influence on the farmer adoption time of the American Agriculture Movement. These eight variables include: (1) first information source of the AAM, (2) first personal information source, (3) number of farmers the respondent knows who have gone out of business, (4) memberships in other farm groups, (5) communication with the agricultural extension agent, (6) most regular media source, (7) farm magazine readership, and (8) listening frequency of radio and television.

The first information source which told the farmer about the AAM is not related to the time of farmer adoption of the movement (Table 6). Regardless of the time of adoption, a "neighbor" served as the most frequent source for information. A neighbor was also the most frequent personal contact from the AAM (Table 7). The type of personal contact is significantly related (1.9% significance) to adoption time. While out-of-state AAM speakers were important for early adopters, neighbor representatives became increasingly

TABLE 7

		TIME OF INDIVIDUAL ADOPTION			
		Early	Middle	Late	n
FIRST PERSONAL CONTACT FROM AAM	Neighbor	20 48%	25 66%	24 67%	69
	Oklahoma AAM	4 9%	8 21%	2 5%	14
	Out-Of-Town Speaker	18 43%	5 13%	10 28%	33
	n	42	38	36	

$X^2 = 11.79$ Sig. = 1.9% (d.f. = 4)

TABLE 8

		TIME OF INDIVIDUAL ADOPTION			
		Early	Middle	Late	n
NUMBER OF OUT OF BUSINESS FARMERS	5+	28 67%	19 50%	19 53%	66
	3 or 4	7 17%	14 37%	7 19%	28
	1 or 2	5 16%	5 13%	5 28%	15
	Not Any	2 4%	0 0%	5 14%	7
	n	42	38	36	

$X^2 = 11.12$ Sig. = 8.5% (d.f. = 6)

TABLE 9

		TIME OF INDIVIDUAL ADOPTION			
		Early	Middle	Late	n
ADDITIONAL FARMER ORGANIZATION MEMBERSHIP	None	18 43%	21 37%	17 36%	45
	One	6 43%	3 55%	6 47%	56
	Two	18 14%	14 8%	13 17%	15
	n	42	38	36	

$X^2 = 2.12$ Sig. = 71.3% (d.f. = 4)

important for later adopters. This conclusion is entirely consistent with the literature indicating that later adopters rely more heavily on interpersonal guidance from their peers than do early adopters.

Furthermore, the number of farmers who have ceased farming is related to time of adoption (8.5% significance). Table 8 notes that earliest adopters personally knew more farmers who had gone out of business than did later adopters. Accordingly, the author suggests that the perception of the farm problem increased with increasing numbers of farm failures known to the respondent.

Table 9 shows the relationship between time of adoption and the number of farmer organization memberships held by the respondent. The number of memberships is not related to time of adoption.

However, the frequency of contact with the county agricultural extension agent is significantly related to time of adoption (Table 10). Earliest adopters experienced the least contact with the extension agent, while later adopters had more contact. The county agricultural extension agents in Oklahoma did not support the agricultural strike. As a result, adopting farmers who were in frequent contact with their extension agent had to overcome a disparity between their personal inclinations and the advice given to them by the extension service. Because of this dissonance factor, it is likely that the decision process was lengthened.

TABLE 10

TIME OF INDIVIDUAL ADOPTION

		Early	Middle	Late	n
FREQUENCY OF CONTACT	3+	1 2%	3 8%	9 25%	13
WITH AGRICULTURAL	1 or 2	13 31%	17 45%	12 33%	42
EXTENSION AGENT	Never	28 67%	18 47%	15 42%	61
	n	42	38	36	

$x^2 = 13.3$ Sig. = 0.8% (d.f. = 4)

TABLE 11

TIME OF INDIVIDUAL ADOPTION

		Early	Middle	Late	n
MOST REGULAR	Radio or TV	22 52%	17 45%	20 56%	59
SOURCE OF	Newspaper	9 21%	9 24%	5 14%	23
FARMING NEWS	Farm Magazine	11 26%	12 31%	11 30%	34
	n	42	38	36	

$x^2 = 1.61$ Sig. = 80.4% (d.f. = 4)

TABLE 12

TIME OF INDIVIDUAL ADOPTION

		Early	Middle	Late	n
FREQUENCY OF FARMING	Often	17 40%	19 50%	21 58%	57
ADVICE FROM FARM	Seldom	18 43%	16 42%	11 31%	45
MAGAZINES	Never	7 17%	3 8%	4 11%	14
	n	42	38	36	

$x^2 = 3.46$ Sig. = 46.9% (d.f. = 4)

The remaining three variables in this section represent communication through media channels rather than personal contact. Table 11 reveals that no relationship exists between adoption time and the most regular source of farming news. Similarly, no relationship was established between adoption time and the frequency of farming advice from farm magazines (Table 12). Likewise, the frequency of farming advice from radio or TV bore no relationship to adoption time (Table 13).

5.3 Biographical

Four variables are designated as biographical: age, education, number of dependents, and political party affiliation. None of the biographical variables, however, is significantly related to time of adoption (see Tables 14-17).

5.4 Farmer Resources

Resources available to the farmer may also influence his attitude and behavior toward the American Agriculture Movement. The three resources variables considered here are the number of acres owned by the farmer, the number of acres he rents, and the changes made in the size of his farm. While acreage owned was not shown to be significantly related to the time of adoption (Table 18), the number of acres rented from other farmers was shown to be related to adoption time (Table 19). Apparently, farmers with the largest amount of land rented were the first to join the AAM. Furthermore,

TABLE 13

TIME OF INDIVIDUAL ADOPTION

		Early	Middle	Late	n
FREQUENCY OF FARMING ADVICE FROM RADIO OR TV (PER DAY)	4+	13 31%	6 16%	6 17%	25
	3	6 14%	6 16%	7 19%	19
	2	13 31%	15 39%	15 42%	43
	1	10 24%	11 29%	8 22%	29
	n	42	38	36	

$X^2 = 4.09$ Sig. = 66.4% (d.f. = 6)

TABLE 14

TIME OF INDIVIDUAL ADOPTION

		Early	Middle	Late	n
AGE	20-39	15 36%	14 37%	8 22%	37
	40-59	21 50%	17 45%	17 47%	55
	60+	6 14%	7 18%	11 31%	24
	n	42	38	36	

$X^2 = 4.28$ Sig. = 37.0% (d.f. = 4)

TABLE 15

TIME OF INDIVIDUAL ADOPTION

		Early	Middle	Late	n
EDUCATION COMPLETED	High School	16 38%	10 26%	19 53%	45
	Some College	16 38%	14 37%	10 28%	40
	College Degree	10 24%	14 37%	7 19%	31
	n	42	38	36	

$X^2 = 6.34$ Sig. = 17.5% (d.f. = 4)

TABLE 16

TIME OF INDIVIDUAL ADOPTION

		Early	Middle	Late	n
NUMBER OF DEPENDENTS	1-2	16 38%	15 40%	22 61%	53
	3-4	21 50%	18 47%	12 33%	51
	5-6	5 12%	5 13%	2 6%	12
	n	42	38	36	

$X^2 = 5.29$ Sig. = 25.9% (d.f. = 4)

TABLE 17

TIME OF INDIVIDUAL ADOPTION

		Early	Middle	Late	n
POLITICAL AFFILIATION	Republican	18 44%	14 37%	15 43%	47
	Democrat	23 56%	24 63%	20 57%	67
	n	41	38	35	

$X^2 = 0.52$ Sig. = 82.1% (d.f. = 2)

TABLE 18

TIME OF INDIVIDUAL ADOPTION

		Early	Middle	Late	n
ACREAGE OWNED	0-99	6 14%	11 29%	6 17%	23
	100-999	28 67%	22 58%	28 78%	78
	1000+	8 19%	5 13%	2 5%	15
	n	42	38	36	

$X^2 = 6.25$ Sig. = 18.1% (d.f. = 4)

TABLE 19

		TIME OF INDIVIDUAL ADOPTION			
		Early	Middle	Late	n
ACREAGE RENTED FROM OTHERS	0-99	10 24%	6 16%	8 22%	24
	100-999	15 36%	20 53%	23 64%	58
	1000+	17 40%	12 31%	5 14%	34
	n	42	38	36	

$X^2 = 8.61$ Sig. = 7.2% (d.f. = 4)

TABLE 20

		TIME OF INDIVIDUAL ADOPTION			
		Early	Middle	Late	n
CHANGES IN FARM SIZE DURING LAST FIVE YEARS	Increased	23 55%	21 55%	18 50%	62
	Constant	12 29%	14 37%	13 36%	39
	Decrease	3 16%	3 8%	5 14%	11
	n	38	38	36	

$X^2 = 1.71$ Sig. = 78.1% (d.f. = 4)

TABLE 21

		TIME OF INDIVIDUAL ADOPTION			
		Early	Middle	Late	n
INCOME (IN THOUSANDS)	0-25	10 24%	10 26%	11 30%	31
	25-60	21 50%	14 37%	15 42%	50
	60-100	6 14%	5 13%	4 11%	15
	100+	5 12%	9 24%	6 17%	20
	n	42	38	36	

$X^2 = 2.93$ Sig. = 81.8% (d.f. = 6)

changes in farm size during the last five years (Table 20) was not demonstrated to be related to adoption time.

5.5 Financial

The four financial variables potentially related to adoption time include: (1) income, (2) the number of different incomes sources, (3) the proportion of off-farm income, and (4) debt on the farm. Whereas the first three financial variables are not significantly related to time of adoption (see Tables 21-23), Table 24 reveals that the proportion of farm in debt is significantly related to adoption time. The relationship shows that farmers with the highest farm debt were the earliest to join the AAM. The inference drawn is that farmers with a large farm debt depend more heavily upon the immediate monetary return of each harvest with which to pay off their indebtedness than do farmers with little debt. In contrast, farmers with little debt have more flexibility to cope with a poor harvest. In effect, a farmer who owns most of his farm can more readily obtain funding through a farm mortgage.

5.6 Summary

In Chapter Five, five groups of variables were considered for their relationship to time of individual farmer adoption of the AAM. In all, 21 variables were separately analyzed using Chi-square analysis. Of these 21 variables, six were shown to be related to adoption time at the 10%

TABLE 22

		TIME OF INDIVIDUAL ADOPTION			
		Early	Middle	Late	n
NUMBER OF INCOME SOURCES	One	12 29%	9 24%	8 22%	29
	Two	21 50%	17 45%	16 44%	54
	Three	9 21%	12 31%	12 34%	33
	n	42	38	36	

$X^2 = 3.65$ Sig. = 72.3% (d.f. = 4)

TABLE 23

		TIME OF INDIVIDUAL ADOPTION			
		Early	Middle	Late	n
PROPORTION OF INCOME FROM OFF-FARM SOURCES	0-10%	8 43%	8 42%	8 42%	49
	10-29%	10 19%	9 21%	7 22%	24
	30-59%	6 24%	5 24%	6 19%	26
	60%+	18 14%	16 13%	15 17%	17
	n	42	38	36	

$X^2 = 0.47$ Sig. = 99.8% (d.f. = 6)

TABLE 24

		TIME OF INDIVIDUAL ADOPTION			
		Early	Middle	Late	n
PROPORTION OF FARM IN DEBT	No Debt	4 9%	5 13%	12 34%	21
	1-49%	19 45%	19 50%	12 33%	50
	50-99%	12 29%	6 16%	8 22%	26
	100%	7 17%	8 21%	4 11%	19
	n	42	38	36	

$X^2 = 10.67$ Sig. = 9.9% (d.f. = 6)

significance level. Table 25 summarizes this list of variables studied.

Three variables were shown to be related to time of individual adoption at the more rigorous 5% level of significance. These variables included the time the local AAM office opened, the first personal contact from the AAM, and the frequency of contact with the agricultural extension agent. This observation serves to reinforce the conclusion that spatial and communication variables are most important in determining time of adoption of an innovation.

Although none of the biographical variables was demonstrated to be related to time of adoption, other variables shown to be significant include the time the local office opened, the number of acres rented, and farm debt. The remaining significant variables, found in the communication category, are: (1) the first personal source of the AAM, (2) number of farmers out of business, and (3) frequency of communication with the extension agent. Interestingly, the communication variables which measured a level of personal contact were significant in this study. However, communication variables related to the mass medium were shown to be insignificant in determining the time of farmer involvement in the American Agriculture Movement.

TABLE 25

SIGNIFICANCE OF VARIABLES RELATING TO TIME OF ADOPTION

SPATIAL/TEMPORAL	
the time local AAM office opened	Significant
distance to town with AAM office	Not Significant
COMMUNICATION	
first information source on AAM	Not Significant
first personal source on AAM	Significant
number of farmers out of business	Significant
farm memberships in other organizations	Not Significant
communication with extension agent	Significant
regular media source for farm news	Not Significant
frequency of farm magazines for farm news	Not Significant
frequency of radio or TV for farm news	Not Significant
BIOGRAPHICAL	
age	Not Significant
education	Not Significant
number of dependents	Not Significant
political party affiliation	Not Significant
RESOURCES	
number of acres owned	Not Significant
number of acres rented from other farmers	Significant
changes in farm size over last 5 years	Not Significant
FINANCIAL	
income	Not Significant
number of different income sources	Not Significant
proportion of off-farm income	Not Significant
debt on farm	Significant

CHAPTER VI

ANALYSIS OF FARMER COMMITMENT

In this chapter, five measures of farmer commitment toward the AAM were studied: participation in protest activities, reductions in farm produce sold, frequency of recruitment of other farmers into the AAM, support of parity, and overall support of the AAM.

The purpose in studying farmer commitment is to provide much needed empirical research on the levels of adoption of a social innovation. In industrial applications, adoption of an innovation can be clearly delineated by various levels of financial investment in an innovation. That is, the degree of adoption of industrial innovations is directly related to the level of capital investment for that innovation. Yet what is the equivalent standard for measuring the level of adoption of a social innovation? Membership is an insufficient answer for it provides two discrete cases of membership (adopter) or non-membership (non-adopter). Instead, this writer suggests that the level of commitment is an adequate measure of multiple levels of adoption. By this means, the degree of commitment ranks as the social equivalent of capital investment in industrial innovations.

The structure of Chapter Six is similar to Chapter Five. Each of the five commitment values is compared to a list of variables thought potentially influential in determining farmer commitment. The means of this comparison is a contingency table analysis using a Chi-square test to determine significance at the 10% level. The 22 variables include:

SPATIAL/TEMPORAL	Time of Adoption Distance to Town
COMMUNICATIONAL	Farmer memberships held Frequency farmers ask you for advice Knowledge of local organizer Frequency of contact with agricultural extension agent Knowledge of out-of-business farmers
BIOGRAPHICAL	Age Education Number of dependents Political affiliation
RESOURCES	Farm size changes Stored grain Planted acreage Do technical improvements help? Fertilizer use
FINANCIAL	Income Number of income sources Off-farm income Debt on farm

6.1 Spatial/Temporal Effects

The relationship between time of adoption and the five commitment variables is shown in Tables 26 to 30. Adoption time is significantly related to three of the commitment variables. Also, the level of participation in protests is

TABLE 26

PROTEST PARTICIPATION

TIME OF ADOPTION	5+	3-4	1-2	Never	n
Early	24 63%	5 24%	9 30%	4 15%	42
Middle	7 19%	12 57%	10 33%	9 33%	38
Late	7 18%	4 19%	11 37%	14 52%	36
n	38	21	30	27	

$x^2 = 25.45$ Sig. = 0.0% (d.f. = 6)

TABLE 27

SALES OF FARM PRODUCE

TIME OF ADOPTION	Average	Sold Less	Sold Little	n
Early	3 12%	17 32%	21 62%	41
Middle	10 40%	18 34%	8 23%	36
Late	12 48%	18 34%	5 15%	35
n	25	53	34	

$x^2 = 17.4$ Sig. =0.05% (d.f. = 4)

TABLE 28

CONVINCE OTHER FARMERS TO JOIN

TIME OF ADOPTION	5+	3-4	1-2	Never	n
Early	8 47%	8 44%	16 36%	10 27%	42
Middle	4 24%	5 28%	18 41%	11 30%	38
Late	5 29%	5 28%	10 23%	16 43%	36
n	17	18	44	37	

$x^2 = 6.16$ Sig. = 40.6% (d.f. = 6)

TABLE 29

PARITY SUPPORT

		Strong	Average	Weak	n
TIME OF ADOPTION	Early	37 51%	3 10%	2 18%	42
	Middle	17 24%	14 48%	5 46%	36
	Late	18 25%	12 42%	4 36%	34
	n	72	29	11	

$x^2 = 17.3$ Sig. =0.05% (d.f. = 4)

TABLE 30

AAM SUPPORT

		Strong	Average	Weak	n
TIME OF ADOPTION	Early	4 31%	32 41%	6 24%	42
	Middle	4 31%	25 32%	9 36%	38
	Late	5 38%	21 27%	10 40%	36
	n	13	78	25	

$x^2 = 3.05$ Sig. = 55.0% (d.f. = 4)

related to adoption time with a 0.03% significance (Table 26). Farmers who were not active in protest were early adopters of the AAM. Furthermore, the volume of sales of farm produce is significantly related (0.7%) to adoption time (Table 27). Farmers selling the most produce were slower in joining the AAM. Table 29 reveals that support of parity is significantly related (0.3%) to adoption time. In effect, strongest supporters of parity were first to join the farm movement.

Distance to nearest local AAM office is shown to be related to only one of the five commitment variables (Tables 31 to 35). Table 33 notes that the frequency of attempts to recruit new members increases when the distance to the local office decreases. Previous literature suggests that the opportunity for increased social contact is increased when distances traveled are reduced. According to Cox [15], the frequency of interpersonal contact is inversely related to distance. Hence, relationships are more easily established when the individuals intersect frequently in space and time.

6.2 Communication

Nearly one-half of the communication variables are significantly related to the five measures of farmer commitment. This strong relationship between communication and commitment is plausible. The degree of commitment a farmer expresses is probably defined through conversations he shares with his neighbors. As in Chapter Five, a distinction is

TABLE 31

PROTEST PARTICIPATION

		5+	3-4	1-2	Never	n
DISTANCE TO	0-9	33 62%	11 46%	19 51%	32 64%	95
TOWN WITH AAM	10-19	10 19%	7 29%	12 32%	9 18%	38
OFFICE (IN MILES)	20+	10 19%	6 25%	6 17%	9 18%	31
	n	53	24	37	50	

$X^2 = 6.7$ Sig. = 34.8% (d.f. = 6)

TABLE 32

SALES OF FARM PRODUCE

		Average	Sold Less	Sold Little	n
DISTANCE TO TOWN	0-9	23 55%	41 60%	28 60%	92
WITH AAM	10-19	10 24%	17 25%	9 19%	36
OFFICE (IN MILES)	20+	9 21%	10 15%	10 21%	24
	n	42	68	47	

$X^2 = 3.2$ Sig. = 51.2% (d.f. = 4)

TABLE 33

CONVINCE OTHER FARMERS TO JOIN

		5+	3-4	1-2	Never	n
DISTANCE TO TOWN	0-9	11 46%	15 68%	33 58%	36 59%	95
WITH AAM OFFICE	10-19	11 46%	6 27%	8 14%	13 21%	38
(IN MILES)	20+	2 8%	1 5%	16 28%	12 20%	31
	n	24	22	57	61	

$X^2 = 14.8$ Sig. = 2.6% (d.f. = 6)

TABLE 34

PARITY SUPPORT

		Strong	Average	Weak	n
DISTANCE TO TOWN	0-9	58 62%	19 44%	18 63%	95
WITH AAM OFFICE	10-19	21 23%	12 28%	5 18%	38
(IN MILES)	20+	14 15%	12 28%	5 19%	30
	n	93	43	28	

$X^2 = 4.7$ Sig. = 30.8% (d.f. = 4)

TABLE 35

AAM SUPPORT

		Strong	Average	Weak	n
DISTANCE TO TOWN	0-9	10 56%	63 61%	22 52%	95
WITH AAM OFFICE	10-19	2 11%	25 24%	11 26%	38
(IN MILES)	20+	6 33%	16 15%	9 22%	31
	n	18	104	42	

$X^2 = 4.56$ Sig. = 33.3% (d.f. = 4)

drawn between personal communication and impersonal communication. An example of impersonal communication is the number of memberships a farmer holds in other farm organizations. In the present study, the number of farmer memberships is revealed as unrelated to any of the five commitment variables (Tables 36 to 40).

The frequency with which other farmers have asked advice from the respondent is an appropriate example of personal communication. Tables 41 to 45 reveal that all of the commitment variables are strongly related to the frequency of farmer communication with at least a 1.5% significance. According to Table 41, those farmers ranking as more active participants in the AAM protest sought advice most frequently. One objective of the AAM was to reduce the sales of farm produce. Those farmers with reduced farm sales are most frequently sought for advice (Table 42). Likewise, farmers most active in recruiting new members are also frequently sought for advice (Table 43). Table 44 reveals that those farmers most strongly in support of parity are most often sought for advice. Interestingly, farmers sought advice most frequently from those possessing simply an "average" overall support of the AAM (Table 45). Less often were farmers who supported the AAM to a greater or lesser degree sought for advice. One may suppose that farmers stood in general agreement with AAM objectives but questioned the AAM as the proper vehicle to express their discontent.

TABLE 36

PROTEST PARTICIPATION

		5+	3-4	1-2	None	n
ADDITIONAL FARMER ORGANIZATION MEMBERSHIPS	None	28 53%	13 54%	18 49%	26 52%	85
	One	11 21%	2 8%	5 13%	3 6%	21
	Two	14 26%	9 38%	14 38%	21 42%	58
	n	53	24	37	50	

$X^2 = 6.84$ Sig. = 33.6% (d.f. = 6)

TABLE 37

SALES OF FARM PRODUCE

		Average	Sold Less	Sold Little	n
ADDITIONAL FARMER ORGANIZATION MEMBERSHIPS	None	24 50%	39 57%	22 47%	85
	One	8 14%	6 9%	7 15%	21
	Two	17 36%	23 34%	18 38%	58
	n	49	68	47	

$X^2 = 2.36$ Sig. = 66.9% (d.f. = 4)

TABLE 38

CONVINCE OTHER FARMERS TO JOIN

		5+	3-4	1-2	Never	n
ADDITIONAL FARMER ORGANIZATION MEMBERSHIPS	None	14 58%	12 55%	29 51%	30 49%	85
	One	3 13%	2 9%	6 10%	10 16%	21
	Two	7 29%	8 36%	22 39%	21 35%	58
	n	24	22	57	61	

$X^2 = 1.85$ Sig. = 93.3% (d.f. = 6)

TABLE 39

PARITY SUPPORT

		Strong	Average	Weak	n
ADDITIONAL FARMER	None	43 46%	26 61%	16 62%	85
ORGANIZATION	One	14 15%	4 9%	3 13%	21
MEMBERSHIPS	Two	36 39%	13 30%	9 25%	58
	n	93	43	28	

$x^2 = 2.80$ Sig. = 58.0% (d.f. = 4)

TABLE 40

AAM SUPPORT

		Strong	Average	Weak	n
ADDITIONAL FARMER	None	11 61%	54 52%	20 48%	85
ORGANIZATION	One	1 6%	14 13%	6 14%	21
MEMBERSHIPS	Two	6 33%	36 35%	16 38%	58
	n	18	104	42	

$x^2 = 1.41$ Sig. = 84.2% (d.f. = 4)

TABLE 41

PROTEST PARTICIPATION

FREQUENCY FARMERS ASK YOU FOR ADVICE	5+	3-4	1-2	Never	n
5+	22 43%	3 13%	5 11%	3 6%	33
3-4	9 17%	2 8%	5 14%	5 10%	21
1-2	15 28%	14 58%	16 43%	21 42%	66
Never	7 12%	5 21%	11 32%	21 42%	44
n	53	24	37	50	

x^2 = 36.67 Sig. = 0.03% (d.f. = 9)

TABLE 42

SALES OF FARM PRODUCE

FREQUENCY FARMERS ASK YOU FOR ADVICE	Average	Sold Less	Sold Little	n
5+	3 7%	14 21%	16 34%	33
3-4	6 10%	6 9%	9 19%	21
1-2	21 43%	29 43%	16 34%	66
Never	19 40%	19 27%	6 13%	44
n	49	68	47	

x^2 = 18.32 Sig. = 0.5% (d.f. = 6)

TABLE 43

CONVINCE OTHER FARMERS TO JOIN

FREQUENCY FARMERS ASK YOU FOR ADVICE	5+	3-4	1-2	Never	n
5+	15 63%	6 27%	11 19%	1 2%	33
3-4	3 12%	5 18%	6 11%	7 13%	21
1-2	5 21%	8 41%	31 54%	22 34%	66
Never	1 4%	3 14%	9 16%	31 51%	44
n	24	22	57	61	

x^2 = 60.38 Sig. = 0.04% (d.f. = 9)

TABLE 44

PARITY SUPPORT

		Strong	Average	Weak	n
FREQUENCY	5+	29 31%	2 5%	2 8%	33
FARMERS ASK	3-4	12 13%	8 19%	1 4%	21
YOU FOR	1-2	37 40%	13 30%	16 58%	66
ADVICE	Never	15 16%	20 46%	9 30%	44
	n	93	43	28	

$X^2 = 29.75$ Sig. 0.02% (d.f. = 6)

TABLE 45

AAM SUPPORT

		Strong	Average	Weak	n
FREQUENCY	5+	1 6%	30 29%	2 5%	33
FARMERS ASK	3-4	2 11%	14 14%	5 12%	21
YOU FOR	1-2	10 61%	43 40%	13 31%	66
ADVICE	Never	5 22%	17 17%	22 52%	44
	n	18	104	42	

$X^2 = 27.58$ Sig. = 0.01% (d.f. = 6)

Knowledge about the local organizer was also shown to be related to four of the five commitment variables (Tables 46 to 50). Table 46 discloses that protest participation increased as knowledge about the local organizer increased. Similarly, efforts to recruit new farmers into the AAM directly increased with increasing knowledge of the local leader (Table 48). The respondent's support of parity likewise increased with increasing knowledge about the local organizer (Table 49).

In Chapter Five, one notes that farmers holding minimum contact with the agricultural extension agent were the first to adopt the movement (Table 10). In Tables 51 to 55 contact frequency with the extension agent is seen as unrelated to any of the five commitment variables. Together, these conclusions suggest that the AAM expanded to include farmers with a variety of attitudes toward the county agricultural agent.

The respondent's personal knowledge of farmers who had gone out of business is reflected in three of the five commitment variables. As participation in protest activities increased, the number of "out-of-business" farmers known to the respondent increased (Table 56). Table 58 reveals that recruitment of new farmers increased as personal knowledge of out of business farmers increased. Finally, support of parity pricing of commodities is directly related to the number of out of business farmers known to the respondent (Table 59).

TABLE 46

PROTEST PARTICIPATION

KNOWLEDGE OF LOCAL ORGANIZER	5+	3-4	1-2	Never	n
Myself	12 23%	2 8%	1 3%	0 0%	15
Know Well	34 64%	16 67%	26 70%	33 66%	109
Know Little	7 13%	6 25%	10 27%	17 34%	40
n	53	24	37	50	

$x^2 = 20.2$ Sig. = 0.4% (d.f. = 6)

TABLE 47

SALES OF FARM PRODUCE

KNOWLEDGE OF LOCAL ORGANIZER	Average	Sold Less	Sold Little	n
Myself	1 3%	5 7%	9 19%	15
Know Well	29 69%	46 68%	30 64%	109
Know Little	12 28%	17 25%	0 17%	40
n	42	68	47	

$x^2 = 8.83$ Sig. = 6.9 % (d.f. = 4)

TABLE 48

CONVINCE OTHER FARMERS TO JOIN

KNOWLEDGE OF LOCAL ORGANIZER	5+	3-4	1-2	Never	n
Know Well	21 88%	20 90%	45 79%	38 62%	124
Know Little	3 12%	2 9%	12 21%	23 38%	40
n	24	22	57	61	

$x^2 = 10.89$ Sig. = 0.8% (d.f. = 3)

TABLE 49

PARITY SUPPORT

		Strong	Average	Weak	n
KNOWLEDGE OF LOCAL ORGANIZER	Myself	15 16%	0 0%	0 0%	15
	Know Well	65 70%	28 65%	16 57%	109
	Know Little	13 14%	15 35%	12 43%	40
	n	93	43	28	

x^2 = 22.05 Sig. =0.01% (d.f. = 4)

TABLE 50

AAM SUPPORT

		Strong	Average	Weak	n
KNOWLEDGE OF LOCAL ORGANIZER	Myself	2 11%	12 12%	1 3%	15
	Know Well	11 61%	70 67%	28 67%	109
	Know Little	5 28%	22 21%	13 30%	40
	n	18	104	42	

x^2 = 7.37 Sig. = 11.8% (d.f. = 4)

TABLE 51

PROTEST PARTICIPATION

FREQUENCY OF CONTACT WITH AGRICULTURAL EXTNSION AGENT	5+	3-4	1-2	Never	n
3+	2 4%	5 21%	4 10%	8 16%	19
1-2	17 32%	9 37%	11 30%	21 42%	58
Never	34 64%	10 42%	22 60%	21 42%	87
n	53	24	37	50	

X^2 = 9.71 Sig. = 13.3% (d.f. = 6)

TABLE 52

SALES OF FARM PRODUCE

FREQUENCY OF CONTACT WITH AGRICULTURAL EXTENSION AGENT	Average	Sold Less	Sold Little	n
3+	8 18%	7 10%	4 8%	19
1-2	17 22%	27 40%	14 30%	58
Never	24 50%	34 50%	29 62%	87
n	49	68	47	

X^2 = 2.51 Sig. = 64.8% (d.f. = 4)

TABLE 53

CONVINCE OTHER FARMERS TO JOIN

FREQUENCY OF CONTACT WITH AGRICULTURAL EXTENSION AGENT	5+	3-4	1-2	Never	n
3+	1 4%	3 14%	6 11%	9 15%	19
1-2	7 29%	7 32%	18 32%	26 43%	58
Never	16 67%	12 54%	33 57%	26 43%	87
n	24	22	57	61	

X^2 = 5.66 Sig. = 45.0% (d.f. = 6)

TABLE 54

PARITY SUPPORT

		Strong	Average	Weak	n
FREQUENCY OF CONTACT	3+	8 8%	8 19%	3 11%	19
WITH AGRICULTURAL	1-2	32 34%	14 33%	12 43%	58
EXTENSION AGENT	Never	53 58%	21 48%	13 46%	87
	n	93	43	28	

$x^2 = 3.67$ Sig. = 43.9% (d.f. = 4)

TABLE 55

AAM SUPPORT

		Strong	Average	Weak	n
FREQUENCY OF CONTACT	3+	5 28%	10 10%	4 10%	19
WITH AGRICULTURAL	1-2	6 33%	37 36%	15 36%	58
EXTENSION AGENT	Never	7 39%	57 54%	23 54%	87
	n	18	104	42	

$x^2 = 5.21$ Sig. = 26.0% (d.f. = 4)

TABLE 56

PROTEST PARTICIPATION

NUMBER OF OUT OF BUSINESS FARMERS	5+	3-4	1-2	Never	n
5+	40 76%	11 46%	17 46%	23 46%	91
3-4	6 11%	6 25%	13 35%	7 14%	32
1-2	7 13%	5 21%	5 13%	14 28%	31
None	0 0%	2 8%	2 6%	6 12%	10
n	53	24	37	50	

$X^2 = 23.26$ Sig. = 0.6% (d.f. = 9)

TABLE 57

SALES OF FARM PRODUCE

NUMBER OF OUT OF BUSINESS FARMERS		Average	Sold Less	Sold Little	n
5+		22 44%	38 56%	31 66%	91
3-4		11 22%	15 22%	6 13%	32
0-2		16 34%	15 22%	10 21%	41
	n	49	68	47	

$X^2 = 5.07$ Sig. = 27.4 % (d.f. = 4)

TABLE 58

CONVINCE OTHER FARMERS TO JOIN

NUMBER OF OUT OF BUSINESS FARMERS	5+	3-4	1-2	Never	n
5+	19 79%	16 73%	28 49%	28 46%	91
3-4	3 13%	5 23%	12 21%	12 20%	32
0-2	2 8%	1 4%	17 30%	21 34%	41
n	24	22	57	61	

$X^2 = 14.89$ Sig. = 2.0% (d.f. = 6)

TABLE 59

PARITY SUPPORT

NUMBER OF OUT OF BUSINESS FARMERS		Strong	Average	Weak	n
	5+	62 67%	20 47%	9 32%	91
	3-4	14 15%	13 30%	5 18%	32
	1-2	17 18%	10 23%	14 50%	41
	n	93	43	28	

$X^2 = 17.74$ Sig. = 0.2% (d.f. = 4)

TABLE 60

AAM SUPPORT

NUMBER OF OUT OF BUSINESS FARMERS		Strong	Average	Weak	n
	5+	7 39%	60 58%	24 57%	91
	3-4	5 28%	19 18%	8 19%	32
	1-2	5 28%	18 17%	8 19%	31
	None	1 5%	7 7%	2 5%	10
	n	18	104	42	

$X^2 = 2.81$ Sig. = 83.2% (d.f. = 6)

6.3 Biographical

As a group, the biographical variables were not strongly related to the five measures of commitment. Age was related (5.7% significance) to the level of protest participation (Table 61) with younger farmers protesting more than older farmers. Support for farm parity was also most strongly expressed by the young farmers (Table 64). However, age was not significantly related to volume of sales (Table 62), recruitment of other farmers (Table 63), or with overall support of the AAM (Table 65).

Educational attainment was not related to any of the five commitment variables (Tables 66 to 70). Tables 71 to 75 indicate the influence of the number of dependents within the family. Yet family size was found to be insignificantly related to any measure of farmer commitment toward the AAM. Next the influence of political party affiliation is considered in Tables 76 to 80. Here one observes that political party ties were not influential in the level of farmer protest, sales of produce, farmer recruitment, or parity support. However, overall support of the AAM was related (1.3% significance) to political party affiliation (Table 80) with Democrats supporting the American Agriculture Movement to a much greater extent than Republicans. Yet Democratic support was either strong or weak. Republican farmers exhibited moderate support of the AAM without being in favor of or against the movement to an extreme.

TABLE 61

PROTEST PARTICIPATION

AGE	5+	3-4	1-2	Never	n
20-39	21 40%	8 33%	11 30%	11 22%	51
40-59	28 53%	12 50%	15 40%	23 46%	78
60+	4 7%	4 17%	11 30%	16 32%	35
n	53	24	37	50	

$x^2 = 12.23$ Sig. = 5.7% (d.f. = 6)

TABLE 62

SALES OF FARM PRODUCE

AGE	Average	Sold Less	Sold Little	n
20-39	14 28%	24 35%	13 28%	51
40-59	24 50%	28 41%	26 55%	78
60+	11 22%	16 24%	8 17%	35
n	49	68	47	

$x^2 = 2.43$ Sig. = 66.2 % (d.f. = 4)

TABLE 63

CONVINCE OTHER FARMERS TO JOIN

AGE	5+	3-4	1-2	Never	n
20-39	5 21%	4 18%	21 37%	21 34%	51
40-59	14 58%	12 55%	23 40%	29 48%	78
60+	5 21%	6 27%	13 23%	11 18%	35
n	24	22	57	61	

$x^2 = 4.99$ Sig. = 54.6% (d.f. = 6)

TABLE 64

PARITY SUPPORT

AGE	Strong	Average	Weak	n
20-39	32 34%	14 33%	5 18%	51
40-59	48 52%	8 42%	12 43%	78
60+	13 14%	11 25%	11 39%	35
n	93	43	28	

$X^2 = 9.54$ Sig. = 5.4% (d.f. = 4)

TABLE 65

AAM SUPPORT

AGE	Strong	Average	Weak	n
20-39	5 28%	35 34%	11 26%	51
40-59	8 44%	50 48%	20 48%	78
60+	5 28%	19 18%	11 26%	35
n	18	104	42	

$X^2 = 1.92$ Sig. = 75.0% (d.f. = 4)

TABLE 66

PROTEST PARTICIPATION

EDUCATION	5+	3-4	1-2	Never	n
High School	17 32%	12 50%	15 40%	20 40%	64
Some College	22 42%	7 29%	11 30%	17 34%	57
College Degree	14 26%	5 21%	11 30%	13 26%	43
n	53	24	37	50	

$x^2 = 3.06$ Sig. = 80.1% (d.f. = 6)

TABLE 67

SALES OF FARM PRODUCE

EDUCATION	Sold More	Average	Sold Less	Sold Little	n
High School	2 29%	17 40%	24 35%	21 45%	64
Some College	2 29%	12 29%	25 37%	18 38%	57
College Degree	3 42%	13 31%	19 28%	8 17%	43
n	7	42	68	47	

$x^2 = 4.32$ Sig. = 63.2% (d.f. = 6)

TABLE 68

CONVINCE OTHER FARMERS TO JOIN

EDUCATION	5+	3-4	1-2	Never	n
High School	12 50%	13 59%	18 32%	21 34%	64
Some College	9 38%	6 27%	21 37%	21 34%	57
College degree	3 12%	3 14%	18 31%	19 32%	43
n	24	22	57	61	

$x^2 = 8.87$ Sig. = 18.1% (d.f. = 6)

TABLE 69

PARITY SUPPORT

EDUCATION	Very Strong	Strong	Average	Weak	n
High School	39 42%	18 42%	6 25%	1 25%	64
Some College	32 34%	13 30%	11 46%	1 25%	57
College Degree	22 24%	12 28%	7 29%	2 50%	43
n	93	43	24	4	

$X^2 = 4.14$ Sig. = 65.8% (d.f. = 6)

TABLE 70

AAM SUPPORT

EDUCATION	Strong	Average	Weak	n
High School	8 44%	42 40%	14 33%	64
Some College	5 28%	38 37%	14 33%	57
College Degree	5 28%	24 23%	14 34%	43
n	18	104	42	

$X^2 = 2.12$ Sig. = 71.3% (d.f. = 4)

TABLE 71

PROTEST PARTICIPATION

NUMBER OF DEPENDENTS	5+	3-4	1-2	Never	n
1-2	23 43%	7 29%	19 51%	30 60%	79
3-4	25 47%	12 50%	13 35%	16 32%	66
5-6	5 10%	5 21%	5 14%	4 8%	19
n	53	24	37	50	

$X^2 = 8.52$ Sig. = 20.2% (d.f. = 6)

TABLE 72

SALES OF FARM PRODUCE

NUMBER OF DEPENDENTS	Average	Sold Less	Sold Little	n
	23 48%	32 47%	24 51%	79
	20 40%	25 37%	21 45%	66
	6 12%	11 16%	2 4%	19
	49	68	47	

$X^2 = 3.95$ Sig. = 40.2% (d.f. = 4)

TABLE 73

CONVINCE OTHER FARMERS TO JOIN

NUMBER OF DEPENDENTS	5+	3-4	1-2	Never	n
1-2	11 46%	13 59%	24 42%	31 51%	79
3-4	11 46%	8 36%	24 42%	23 38%	66
5-6	2 8%	1 5%	9 16%	7 11%	19
n	24	22	57	61	

$X^2 = 3.54$ Sig. = 73.8% (d.f. = 6)

TABLE 74

PARITY SUPPORT

		Strong	Average	Weak	n
NUMBER OF DEPENDENTS	1-2	43 46%	18 42%	18 65%	79
	3-4	40 43%	18 42%	8 28%	66
	5-6	10 11%	7 16%	2 7%	19
	n	93	43	28	

$X^2 = 4.40$ Sig. = 34.9% (d.f. = 4)

TABLE 75

AAM SUPPORT

		Strong	Average	Weak	n
NUMBER OF DEPENDENTS	1-2	9 50%	48 46%	22 52%	79
	3-4	6 33%	43 41%	17 40%	66
	5-6	3 17%	13 13%	3 8%	19
	n	18	104	42	

$X^2 = 1.69$ Sig. = 79.2% (d.f. = 4)

TABLE 76

PROTEST PARTICIPATION

		5+	3-4	1-2	Never	n
POLITICAL	Republican	18 36%	10 42%	13 36%	17 36%	58
AFFILIATION	Democrat	32 64%	14 58%	23 64%	31 64%	100
	n	50	24	36	48	

$x^2 = 1.19$ Sig. = 68.3% (d.f. = 3)

TABLE 77

SALES OF FARM PRODUCE

POLITICAL		Average	Sold Less	Sold Little	n
	Republican	17 37%	26 39%	15 34%	58
AFFILIATION	Democrat	31 63%	41 61%	28 62%	100
	n	48	67	43	

$x^2 = 0.21$ Sig. = 85.2% (d.f. = 2)

TABLE 78

CONVINCE OTHER FARMERS TO JOIN

		5+	3-4	1-2	Never	n
POLITICAL	Republican	7 35%	9 43%	19 34%	23 39%	58
AFFILIATION	Democrat	14 65%	12 57%	37 66%	37 61%	100
	n	21	21	56	60	

$x^2 = 0.71$ Sig. = 74.8% (d.f. = 3)

TABLE 79

PARITY SUPPORT

		Strong	Average	Weak	n
POLITICAL	Republican	32 36%	16 40%	10 36%	58
AFFILIATION	Democrat	57 64%	25 60%	18 64%	100
	n	89	41	28	

$X^2 = 0.11$ Sig. = 71.3% (d.f. = 2)

TABLE 80

AAM SUPPORT

		Strong	Average	Weak	n
POLITICAL	Republican	3 18%	44 44%	11 27%	58
AFFILIATION	Democrat	13 72%	57 56%	30 73%	100
	n	16	101	41	

$X^2 = 6.04$ Sig. = 4.9% (d.f. = 2)

6.4 Resources

Farmer resources include those factors which may determine the opportunities available to a farmer. Included among these resources are changes in farm size, owned and rented acreage, grain storage capacity, attitudes toward technical developments and fertilizer usage. Accordingly, this section explores the relationship between farmer resources and his commitment toward the farmer's movement.

Recent theory in agricultural economics supports the belief that as technology increases the production capacity of the individual farmer, his acreage in production must also increase to maintain an economic size unit. For this reason, acreage owned, acreage rented, and changes in farm size are deemed potentially important variables in determining farmer commitment toward the AAM. Nevertheless, Tables 81 to 85 reveal no significant relationship between commitment and acreage owned by the respondent. Rented farm acreage, however, produced one significant relationship (Tables 86 to 90). A 3% significance confirmed that those farmers most active in farmer protests rent the most acreage (Table 86). In addition, those farmers most strongly in support of parity rent the most acreage (Table 89). Lastly, changes in farm size during the last five years were not related to any of the commitment variables (Tables 91-95).

Grain storage capacity is important to grain producers as a hedge against intermittent price fluctuations;

TABLE 81

PROTEST PARTICIPATION

		5+	3-4	1-2	Never	n
ACREAGE OWNED	0-99	13 24%	6 25%	7 19%	8 16%	34
	100-999	29 55%	16 67%	28 76%	33 66%	106
	1000+	11 21%	2 8%	2 5%	9 18%	24
	n	53	24	37	50	

$X^2 = 7.26$ Sig. = 29.7% (d.f. = 6)

TABLE 82

SALES OF FARM PRODUCE

		Average	Sold Less	Sold Little	n
ACREAGE OWNED	0-99	13 24%	9 13%	12 25%	34
	100-999	28 56%	50 74%	28 60%	106
	1000+	8 16	9 13%	7 15%	24
	n	49	68	47	

$X^2 = 4.77$ Sig. = 30.5% (d.f. = 4)

TABLE 83

CONVINCE OTHER FARMERS TO JOIN

		5+	3-4	1-2	Never	n
ACREAGE OWNED	0-99	6 25%	3 14%	13 23%	12 20%	34
	100-999	16 67%	15 68%	35 61%	40 66%	106
	1000+	2 8%	4 18%	9 16%	9 14%	24
	n	24	22	57	61	

$X^2 = 1.95$ Sig. = 92.4% (d.f. = 6)

TABLE 84

PARITY SUPPORT

		Strong	Average	Weak	n
ACREAGE OWNED	0-99	22 24%	6 14%	6 21%	34
	100 -999	57 61%	30 70%	19 68%	106
	1000+	14 15%	7 16%	3 11%	24
	n	93	43	28	

$X^2 = 2.12$ Sig. = 71.9% (d.f. = 4)

TABLE 85

AAM SUPPORT

		Strong	Average	Weak	n
ACREAGE OWNED	0-99	2 11%	24 23%	8 19%	34
	100-999	14 78%	65 63%	27 64%	106
	1000+	2 11%	15 14%	7 17%	24
	n	18	104	42	

$X^2 = 1.97$ Sig. = 74.2% (d.f. = 4)

TABLE 86

PROTEST PARTICIPATION

ACREAGE RENTED FROM OTHERS	5+	3-4	1-2	Never	n
0-99	8 15%	3 12%	14 38%	16 32%	41
100-999	26 49%	11 46%	18 49%	24 48%	79
1000+	19 36%	10 42%	5 13%	10 20%	44
n	53	24	37	50	

$x^2 = 13.93$ Sig. = 3.0% (d.f. = 6)

TABLE 87

SALES OF FARM PRODUCE

ACREAGE RENTED FROM OTHERS	Average	Sold Less	Sold Little	n
0-99	10 22%	19 28%	12 25%	41
100-999	28 56%	29 43%	22 47%	79
1000+	11 22%	20 29%	13 28%	44
n	49	68	47	

$x^2 = 2.48$ Sig. = 64.9% (d.f. = 4)

TABLE 88

CONVINCE OTHER FARMERS TO JOIN

ACREAGE RENTED FROM OTHERS	5+	3-4	1-2	Never	n
0-99	5 21%	7 32%	16 28%	13 21%	41
100-999	10 42%	10 45%	27 47%	32 53%	79
1000+	9 37%	5 23%	14 25%	16 26%	44
n	24	22	57	61	

$x^2 = 2.88$ Sig. = 82.4% (d.f. = 6)

TABLE 89

PARITY SUPPORT

		Very Strong	Strong	Average	n
ACREAGE RENTED	0-99	17 18%	13 30%	11 39%	41
FROM	100-999	48 52%	21 49%	10 36%	79
OTHERS	1000+	28 30%	9 21%	7 25%	44
	n	93	43	28	

$X^2 = 6.51$ Sig. = 16.3% (d.f. = 4)

TABLE 90

AAM SUPPORT

		Strong	Average	Weak	n
ACREAGE RENTED	0-99	5 28%	24 23%	12 29%	41
FROM	100-999	8 44%	49 47%	22 52%	79
OTHERS	1000+	5 28%	31 30%	8 19%	44
	n	18	104	42	

$X^2 = 1.95$ Sig. = 74.5% (d.f. = 4)

TABLE 91

PROTEST PARTICIPATION

CHANGES IN FARM SIZE DURING LAST 5 YEARS	5+	3-4	1-2	Never	n
Increased	30 57%	13 55%	17 46%	26 52%	86
Constant	14 27%	9 38%	17 46%	16 32%	56
Decreased	7 16%	1 7%	2 8%	5 16%	15
n	51	23	36	47	

$X^2 = 5.88$ Sig. = 75.2% (d.f. = 6)

TABLE 92

SALES OF FARM PRODUCE

CHANGES IN FARM SIZE DURING LAST 5 YEARS	Average	Sold Less	Sold Little	n
Increased	26 60%	42 62%	18 39%	86
Constant	15 30%	21 31%	20 43%	56
Decreased	5 10%	4 7%	6 18%	22
n	49	68	47	

$X^2 = 7.57$ Sig. = 10.4% (d.f. = 4)

TABLE 93

CONVINCE OTHER FARMERS TO JOIN

CHANGES IN FARM SIZE DURING LAST 5 YEARS	5+	3-4	1-2	Never	n
Increased	8 34%	8 37%	30 53%	40 66%	86
Constant	12 50%	10 46%	20 36%	14 23%	56
Decreased	3 16%	3 17%	5 11%	4 11%	15
n	23	21	55	58	

$X^2 = 10.98$ Sig. = 27.7% (d.f. = 6)

TABLE 94

PARITY SUPPORT

CHANGES IN FARM SIZE DURING LAST 5 YEARS		Strong	Average	Weak	n
	Increased	53 57%	20 48%	13 46%	86
	Constant	29 32%	14 34%	13 46%	56
	Decreased	11 11%	9 18%	2 8%	22
	n	93	43	28	

$X^2 = 5.12$ Sig. = 27.5% (d.f. = 4)

TABLE 95

AAM SUPPORT

		Strong	Average	Weak	n
CHANGES IN FARM SIZE DURING LAST 5 YEARS	Increased	8 45%	56 55%	22 53%	86
	Constant	6 34%	37 36%	13 31%	56
	Decreased	3 21%	6 9%	6 16%	15
	n	17	99	41	

$X^2 = 4.56$ Sig. = 60.0% (d.f. = 4)

hence, farmers with large storage capacities can withhold grain until higher prices are offered. Two commitment variables are shown to be related to grain held in storage (Tables 96 to 100). Table 96 verifies that farmers most active in protesting also held more grain in storage. In addition, those farmers holding production in storage also sold the least grain (Table 97).

Farmers sought to raise prices by reducing the volume of production. Planted acreage, a good measure of the intention of a farmer to reduce his production, is shown in tables 101 to 105 to be strongly related to four of the commitment measures. Clearly, farmers most active in protest reduce acreage to a greater degree (Table 101). In addition, Table 102 reveals that farmers with the greatest reduction in planted acreage also sold the least produce. Finally, farmers who reduced planted acreage exhibited the strongest overall support of the AAM (Table 105).

The relationship between farmer attitudes toward technology and farmer commitment toward the AAM is now presented. The majority of farmers in this survey believe that technology has financially assisted the American farmer (Tables 106 to 110). However, Table 106 reveals that a larger percentage of protesting farmers believes that technology has not helped the farmer (0.7% significance). Volume of farm produce sold is also related to belief in the advantages of technology (Table 107).

TABLE 96

PROTEST PARTICIPATION

GRAIN IN STORAGE	5+	3-4	1-2	Never	n
None	9 17%	10 42%	10 27%	24 48%	53
25%	12 23%	2 8%	5 14%	4 8%	23
50%	14 26%	3 13%	12 32%	10 20%	39
Almost All	18 34%	9 37%	10 27%	12 24%	49
n	53	24	37	50	

$x^2 = 17.64$ Sig. = 3.9% (d.f. = 9)

TABLE 97

SALES OF FARM PRODUCE

GRAIN IN STORAGE	Average	Sold Less	Sold Little	n
None	26 54%	19 28%	8 17%	53
25%	6 12%	10 15%	7 15%	23
50%	10 20%	17 25%	12 25%	39
Almost All	7 14%	22 32%	20 43%	49
n	49	68	47	

$x^2 = 17.59$ Sig. = 0.7% (d.f. = 6)

TABLE 98

CONVINCE OTHER FARMERS TO JOIN

GRAIN IN STORAGE	5+	3-4	1-2	Never	n
None	8 33%	5 23%	15 26%	25 41%	53
25%	3 13%	1 4%	11 19%	8 13%	23
50%	4 17%	7 32%	12 21%	16 26%	39
Almost All	9 37%	9 41%	19 34%	12 20%	49
n	24	22	57	61	

$x^2 = 10.46$ Sig. = 31.4% (d.f. = 9)

TABLE 99

PARITY SUPPORT

GRAIN IN STORAGE		Strong	Average	Weak	n
	None	28 30%	12 28%	13 46%	53
	25%	12 13%	7 16%	4 14%	23
	50%	24 26%	8 19%	7 26%	39
	Almost All	29 31%	16 37%	4 14%	49
	n	93	43	28	

$X^2 = 6.22$ Sig. 39.2% (d.f. = 6)

TABLE 100

AAM SUPPORT

GRAIN IN STORAGE		Strong	Average	Weak	n
	None	7 39%	27 26%	19 45%	53
	25%	2 11%	15 14%	6 14%	23
	50%	6 33%	26 25%	7 17%	39
	Almost All	3 17%	36 35%	10 24%	49
	n	18	104	42	

$X^2 = 7.83$ Sig. = 25.1% (d.f. = 6)

TABLE 101 PROTEST PARTICIPATION

PLANTED ACREAGE	5+	3-4	1-2	Never	n
Slight Decrease	11 21%	2 8%	12 33%	12 24%	37
Some Decrease	7 13%	9 38%	9 24%	18 36%	43
Major Decrease	35 66%	13 54%	16 43%	20 40%	84
n	53	24	37	50	

$X^2 = 14.34$ Sig. = 3.7% (d.f. = 6)

TABLE 102 SALES OF FARM PRODUCE

PLANTED ACREAGE	Average	Sold Less	Sold Little	n
Same	11 24%	9 13%	7 15%	27
Slight Decrease	5 10%	4 6%	1 2%	10
Some Decrease	18 36%	21 31%	4 9%	43
Major Decrease	15 30%	34 50%	35 74%	84
n	49	68	47	

$X^2 = 21.40$ Sig. =0.2 % (d.f. = 6)

TABLE 103 CONVINCE OTHER FARMERS TO JOIN

PLANTED ACREAGE	5+	3-4	1-2	Never	n
Slight Decrease	2 8%	6 27%	13 23%	16 26%	37
Some Decrease	3 13%	5 23%	15 26%	20 33%	43
Major Decrease	19 79%	11 50%	29 51%	25 41%	84
n	24	22	57	61	

$X^2 = 10.42$ Sig. =10.5% (d.f. = 6)

TABLE 104

PARITY SUPPORT

PLANTED ACREAGE	Strong	Average	Weak	n
Same	11 12%	10 23%	6 22%	27
Slight Decrease	7 7%	3 7%	0 0%	10
Some Increase	21 23%	11 26%	11 39%	43
Major Decrease	54 58%	19 44%	11 39%	84
n	93	43	28	

$X^2 = 9.27$ Sig. = 15.8% (d.f. = 6)

TABLE 105

AAM SUPPORT

PLANTED ACREAGE	Strong	Average	Weak	n
Slight Decrease	5 28%	18 18%	14 34%	37
Some Decrease	2 11%	28 27%	13 31%	43
Major Decrease	11 61%	58 55%	15 35%	84
n	18	104	42	

$X^2 = 8.28$ Sig. = 8.4% (d.f. = 4)

TABLE 106

PROTEST PARTICIPATION

TECH. IMPROVEMENTS HELP FARMER?		5+	3-4	1-2	Never	n
	Yes	35 66%	14 58%	29 78%	45 90%	123
	No	18 34%	10 42%	8 22%	5 10%	41
	n	53	24	37	50	

$X^2 = 12.05$ Sig. = 0.7% (d.f. = 3)

TABLE 107

SALES OF FARM PRODUCE

TECH. IMPROVEMENTS HELP FARMER		Sold More	Average	Sold Less	Sold Little	n
	Yes	6 86%	37 88%	49 72%	31 66%	123
	No	1 14%	5 12%	19 28%	16 34%	41
	n	7	42	68	47	

$X^2 = 6.63$ Sig. = 8.5% (d.f. = 3)

TABLE 108

CONVINCE OTHER FARMERS TO JOIN

TECH. IMPROVEMENTS HELP FARMER?		5+	3-4	1-2	Never	n
	Yes	15 62%	19 86%	42 74%	47 77%	123
	No	9 38%	3 14%	15 26%	14 23%	41
	n	24	22	57	61	

$X^2 = 3.70$ Sig. 29.5% (d.f. = 3)

TABLE 109

PARITY SUPPORT

		Strong	Average	Weak	n
TECH. IMPROVE-	Yes	68 73%	31 72%	24 88%	123
MENTS HELP FARMER?	No	25 27%	12 28%	4 12%	41
	n	93	43	28	

$x^2 = 2.07$ Sig. = 40.2% (d.f. = 2)

TABLE 110

AAM SUPPORT

		Strong	Average	Weak	n
TECH. IMPROVEMENTS	Yes	14 78%	78 75%	31 74%	123
HELP FARMER?	No	4 22%	26 25%	11 26%	41
	n	18	104	42	

$x^2 = 0.11$ Sig. = 94.8% (d.f. = 2)

TABLE 111

PROTEST PARTICIPATION

		5+	3-4	1-2	Never	n
USE OF FERTILIZER	More	17 32%	9 38%	8 22%	19 38%	53
	Same	28 53%	8 33%	20 54%	23 46%	79
	Less	8 15%	7 29%	9 24%	8 16%	32
	n	53	24	37	50	

$x^2 = 6.09$ Sig. = 41.3% (d.f. = 6)

TABLE 112

SALES OF FARM PRODUCE

		Average	Sold Less	Sold Little	n
USE OF FERTILIZER	More	20 40%	26 38%	7 15%	53
	Same	23 46%	31 46%	25 53%	79
	Less	6 14%	11 16%	15 32%	32
	n				

$x^2 = 12.05$ Sig. = 1.6% (d.f. = 4)

TABLE 113

CONVINCE OTHER FARMERS TO JOIN

		5+	3-4	1-2	Never	n
USE OF FERTILIZER	More	9 38%	3 14%	17 30%	24 39%	53
	Same	9 37%	15 68%	30 53%	25 41%	79
	Less	6 25%	4 18%	10 17%	12 20%	32
	n	24	22	57	61	

$x^2 = 7.41$ Sig. = 28.5% (d.f. = 6)

TABLE 114

PARITY SUPPORT

		Strong	Average	Weak	n
USE OF FERTILIZER	More	24 26%	20 47%	9 32%	53
	Same	46 49%	15 35%	18 64%	79
	Less	23 25%	8 18%	1 4%	32
	n	93	43	28	

$x^2 = 12.05$ Sig. 1.6% (d.f. = 4)

TABLE 115

AAM SUPPORT

		Strong	Average	Weak	n
USE OF FERTILIZER	More	3 17%	32 31%	18 43%	53
	Same	12 67%	49 47%	18 43%	79
	Less	3 16%	23 22%	6 14%	32
	n	18	104	42	

$x^2 = 5.46$ Sig. = 24.3% (d.f. = 4)

TABLE 116

PROTEST PARTICIPATION

		5+	3-4	1-2	Never	n
INCOME	0-25	10 19%	10 42%	11 30%	11 22%	42
(IN THOUSANDS)	25-60	19 36%	8 33%	17 46%	24 48%	68
	60-100	10 19%	2 8%	3 8%	7 14%	22
	100+	14 26%	4 17%	6 16%	8 16%	32
	n	53	24	37	50	

$X^2 = 9.68$ Sig. = 37.7% (d.f. = 9)

TABLE 117

SALES OF FARM PRODUCE

		Sold More	Average	Sold Less	Sold Little	n
INCOME	0-25	1 14%	8 19%	20 29%	13 28%	42
(IN	25-60	5 72%	18 43%	26 38%	19 40%	68
THOUSANDS)	60-100	1 14%	5 12%	11 16%	5 11%	22
	100+	0 0%	11 26%	11 17%	10 21%	32
	n	7	42	68	47	

$X^2 = 6.76$ Sig. = 66.2% (d.f. = 9)

TABLE 118

CONVINCE OTHER FARMERS TO JOIN

		5+	3-4	1-2	Never	n
INCOME	0-25	5 21%	8 36%	16 28%	13 21%	42
(IN THOUSANDS)	25-60	11 46%	6 27%	25 44%	26 43%	68
	60-100	4 17%	0 0%	9 16%	9 15%	22
	100+	4 16%	8 37%	7 12%	13 21%	32
	n	24	22	57	61	

$X^2 = 11.45$ Sig. = 24.6% (d.f. = 9)

TABLE 119

PARITY SUPPORT

		Strong	Average	Weak	n
INCOME	0-25	23 25%	9 21%	10 36%	42
(IN THOUSANDS)	25-60	39 42%	17 40%	12 43%	68
	60-100	14 15%	6 14%	2 7%	22
	100+	17 18%	11 25%	4% 14%	32
	n	93	43	28	

$X^2 = 3.85$ Sig. = 69.0% (d.f. = 6)

TABLE 120

AAM SUPPORT

		Strong	Average	Weak	n
INCOME	0-25	6 33%	26 25%	10 24%	42
(IN THOUSANDS)	25-60	9 50%	42 40%	17 40%	68
	60-100	2 11%	16 15%	4 10%	22
	100+	1 6%	20 20%	11 26%	32
	n	18	104	42	

$X^2 = 4.45$ Sig. = 61.6% (d.f. = 6)

TABLE 121

PROTEST PARTICIPATION

NUMBER OF INCOME SOURCES	5+	3-4	1-2	Never	n
1	14 26%	11 46%	7 19%	11 22%	43
2	25 47%	6 25%	23 62%	23 46%	77
3	11 27%	7 29%	7 19%	15 32%	40
n	50	24	37	49	

$x^2 = 14.30$ Sig. = 11.2% (d.f. = 6)

TABLE 122

SALES OF FARM PRODUCE

NUMBER OF INCOME SOURCES	Average	Sold Less	Sold Little	n
1	12 26%	17 25%	14 30%	43
2	23 46%	32 47%	22 47%	77
3	14 28%	19 28%	11 23%	44
n	49	68	47	

$x^2 = 0.62$ Sig. = 99.5% (d.f. = 4)

TABLE 123

CONVINCE

NUMBER OF INCOME SOURCES	5+	3-4	1-2	Never	n
1	8 33%	6 27%	9 16%	20 33%	43
2	10 42%	12 55%	29 51%	26 43%	77
3	5 25%	4 18%	16 33%	15 24%	40
n	23	22	54	61	

$x^2 = 9.65$ Sig. = 37.9% (d.f. = 6)

TABLE 124

PARITY SUPPORT

NUMBER OF INCOME SOURCES		Strong	Average	Weak	n
	1	29 31%	10 23%	4 14%	43
	2	39 42%	24 56%	14 50%	77
	3	25 27%	9 21%	10 36%	44
	n	93	43	28	

$X^2 = 5.16$ Sig. = 27.2% (d.f. = 4)

TABLE 125

AAM SUPPORT

NUMBER OF INCOME SOURCES		Strong	Average	Weak	n
	1	4 22%	31 30%	8 19%	43
	2	11 61%	44 42%	22 52%	77
	3	3 17%	25 28%	12 29%	40
	n	18	100	42	

$X^2 = 6.01$ Sig. = 42.2% (d.f. = 4)

Farmers who sold more produce believe in the advantages of technical improvements. Belief in the advantages of technology, however, indicated no relationship to farmer recruitment efforts, support of parity, or general support of the AAM.

Application of fertilizer is an example of technology in agriculture. Accordingly, respondents were asked to note the changes in fertilizer use in comparison to the previous five years. The results, given in Tables 111 to 115, show two significant relationships to commitment. A significance of 3.8% in Table 112 supports the conclusion that those farmers who sold the most produce use the most fertilizer. Weakest support for parity was also noted for those farmers who increased fertilizer usage (Table 114).

6.5 Financial

The original motivation for the farmer's strike was the anticipated reduction in income caused by low prices paid to the farmers. For this reason, it was expected that financial variables would be significantly related to farmer commitment. Interestingly, the financial variables were weakly related to farmer commitment. Indeed, no relationship between farmer commitment and income is established in Tables 116 to 120. Furthermore, the number of income sources bears no relationship to commitment (Tables 121 to 125). However, the proportion of income from off-farm sources was related to level of participation in farmer protests (Table 126). The inference is that those farmers most

active in protest had a larger proportion of their income from off-farm sources. This tendency may represent the desire for part-time farmers to enter into active, full-time farming employment. In addition, part-time farmers probably experienced increased social contact through off-farm jobs. Hence, the increased activity in protesting may have ranked as the result of augmented social contact acquired in the off-farm job. Furthermore, Tables 127 to 130 reveal that the proportion of off-farm income is not related to the remaining commitment variables. The proportion of the farm in debt was significantly related to protest participation (Table 131). Those farmers most active in protesting also ranked as the deepest in debt. In addition, parity support was most strongly exhibited by farmers with highest debt. Farm debt was not related to farm sales, farmer recruitment or to overall support of the AAM.

6.6 Conclusion

In Chapter Six, the relationship between farmer commitment and five groups of variables was studied. The five variable categories encompassed spatial/temporal factors, levels of communication, biographical data, farmer resources, and financial influences. Table 136 below summarizes the results of this comparison. As a group, the communication variables witnessed the most significant relationships to farmer commitment. Spatial/temporal factors and farmer resource variables were also strongly

TABLE 126

PROTEST PARTICIPATION

PROPORTION OF INCOME FROM OFF FARM SOURCE	3+	1-2	Never	n
0-9%	9 12%	10 27%	12 24%	31
10-29%	18 23%	4 11%	10 20%	32
30-59%	13 18%	3 8%	12 24%	28
60-100%	37 47%	20 54%	16 32%	73
n	77	37	50	

$X^2 = 12.02$ Sig. = 6.4% (d.f. = 6)

TABLE 127

SALES OF FARM PRODUCE

PROPORTION OF INCOME FROM OFF FARM SOURCE	Average	Sold Less	Sold Little	n
0-9%	11 24%	12 18%	8 17%	31
10-29%	9 18%	14 21%	9 19%	32
30-59%	8 16%	11 16%	9 19%	28
60-100%	21 42%	31 45%	21 45%	73
n	49	68	47	

$X^2 = 0.77$ Sig. = 99.2% (d.f. = 6)

TABLE 128

CONVINCE OTHER FARMERS TO JOIN

PROPORTION OF INCOME FROM OFF FARM SOURCE	3+	1-2	Never	n
0-9%	6 13%	11 19%	14 23%	31
10-29%	9 19%	16 28%	7 12%	32
30-59%	8 21%	12 21%	8 13%	28
60-100%	23 47%	18 32%	32 52%	73
n	46	57	61	

$X^2 = 9.97$ Sig. = 12.3% (d.f. = 6)

TABLE 129

PARITY SUPPORT

		Strong	Average	Weak	n
PROPORTION OF	0-9%	14 15%	10 23%	7 25%	31
INCOME FROM	10-29%	19 20%	8 19%	5 17%	32
OFF FARM	30-59%	15 16%	5 12%	8 29%	28
SOURCES	60-100%	45 49%	20 46%	8 29%	73
	n	93	43	28	

x^2 = 6.72 Sig. = 34.0% (d.f. = 6)

TABLE 130

AAM SUPPORT

		Strong	Average	Weak	n
PROPORTION OF	0-9%	3 17%	18 17%	10 24%	31
INCOME FROM	10-29%	1 6%	22 21%	9 21%	32
OFF FARM	30-59%	5 28%	16 15%	7 17%	28
SOURCES	60-100%	9 49%	48 47%	16 38%	73
	n	18	104	42	

x^2 = 4.70 Sig. = 58.3% (d.f. = 6)

TABLE 131

PROTEST PARTICIPATION

PROPORTION OF FARM IN DEBT	3+	1-2	Never	n
No Debt	7 10%	9 24%	16 32%	32
1-49%	38 49%	13 35%	25 50%	76
50-99%	20 26%	7 19%	6 12%	33
100%	12 15%	8 22%	3 6%	23
n	77	37	50	

$X^2 = 16.83$ Sig. = 0.9% (d.f. = 6)

TABLE 132

SALES OF FARM PRODUCE

PROPORTION OF FARM IN DEBT	Average	Sold Less	Sold Little	n
No Debt	12 24%	15 22%	15 11%	32
1-49%	22 45%	29 43%	25 53%	76
50-99%	7 14%	13 19%	13 28%	33
100%	8 17%	11 16%	4 8%	23
n	49	68	47	

$X^2 = 7.05$ Sig. = 31.6% (d.f. =6)

TABLE 133

CONVINCE OTHER FARMERS TO JOIN

PROPORTION OF FARM IN DEBT	5+	3-4	1-2	Never	n
No Debt	3 13%	4 18%	14 25%	11 18%	32
1-49%	8 33%	14 64%	25 44%	29 47%	76
50-99%	7 29%	3 14%	11 19%	12 20%	33
100%	6 25%	1 4%	7 12%	9 15%	23
n	24	22	57	61	

$X^2 = 8.91$ Sig. = 44.6% (d.f. = 9)

TABLE 134

PARITY SUPPORT

PROPORTION OF FARM IN DEBT	Strong	Average	Weak	n
No Debt	13 14%	9 21%	10 36%	32
1-49%	43 46%	18 42%	15 52%	76
50-99%	22 24%	9 21%	2 8%	33
100%	15 16%	7 16%	1 4%	23
n	93	43	28	

$X^2 = 11.19$ Sig. = 8.5% (d.f. = 6)

TABLE 135

AAM SUPPORT

PROPORTION OF FARM IN DEBT	Strong	Average	Weak	n
No Debt	5 28%	18 17%	9 21%	32
1-49%	8 44%	49 47%	19 45%	76
50-99%	2 11%	23 22%	8 19%	33
100%	3 17%	14 14%	6 15%	23
n	18	104	42	

$X^2 = 2.08$ Sig. = 91.2% (d.f. = 6)

TABLE 136

SIGNIFICANCE OF VARIABLES RELATING TO COMMITMENT

Variable	Protest	Sales	Recruitment	Parity	AAM
SPATIAL/TEMPORAL					
Time of Adoption	Sig.	Sig.	Not Sig.	Sig.	Not Sig.
Distance to Town	Not Sig.	Not Sig.	Sig.	Not Sig.	Not Sig.
COMMUNICATIONAL					
Farmer Memberships	Not Sig.	Not Sig.	Not Sig.	Not Sig.	Not Sig.
Farmers Ask You Advice	Sig.	Sig.	Sig.	Sig.	Sig.
Know Local Organizer	Sig.	Sig.	Sig.	Sig.	Not Sig.
Contact Ag. Extension	Not Sig.	Not Sig.	Not Sig.	Not Sig.	Not Sig.
Know Out of Bus. Farmers	Sig.	Not Sig.	Sig.	Sig.	Not Sig.
BIOGRAPHICAL					
Age	Sig.	Not Sig.	Not Sig.	Sig.	Not Sig.
Education	Not Sig.	Not Sig.	Not Sig.	Not Sig.	Not Sig.
No. of Dependents	Not Sig.	Not Sig.	Not Sig.	Not Sig.	Not Sig.
Political Affiliation	Not Sig.	Not Sig.	Not Sig.	Not Sig.	Sig.

TABLE 136 (continued)

Variable	Protest	Sales	Recruitment	Parity	AAM
RESOURCES					
Acreage Owned	Not Sig.	Not Sig.	Not Sig.	Not Sig.	Not Sig.
Acreage Rented	Sig.	Not Sig.	Not Sig.	Not Sig.	Not Sig.
Farm Size Changes	Not Sig.	Not Sig.	Not Sig.	Not Sig.	Not Sig.
Stored Grain	Sig.	Sig.	Not Sig.	Not Sig.	Not Sig.
Planted Acreage	Sig.	Sig.	Not Sig.	Not Sig.	Sig.
Tech. Improvements Help?	Sig.	Sig.	Not Sig.	Not Sig.	Not Sig.
Fertilizer Use	Not Sig.	Sig.	Not Sig.	Sig.	Not Sig.
FINANCIAL					
Income	Not Sig.	Not Sig.	Not Sig.	Not Sig.	Not Sig.
No. of Income Sources	Not Sig.	Not Sig.	Not Sig.	Not Sig.	Not Sig.
Off-Farm Income	Sig.	Not Sig.	Not Sig.	Not Sig.	Not Sig.
Farm in Debt	Sig.	Not Sig.	Not Sig.	Sig.	Not Sig.

related to farmer commitment. Of the five measures of commitment, the level of participation in protests was most related to the independent variables.

In the beginning of this chapter, a comparison is drawn between social and technological innovations. Specifically, research on the levels of adoption of a social innovation is set forth as one of the objectives in the present study of farmer commitment toward the AAM. In some respects, technological and social innovations are incongruent. The adoption of social innovations are often immediate; while technological adoption exhibits a lag of several years between awareness and adoption. The financial investment required to purchase technology also constrain its adoption through space by such factors as agency establishment and infrastructure requirements. In contrast, social innovations are infrastructure independent. In the present study, however, some similarities between technical and social innovations remain. Creation of the AAM local office is an excellent example of agency establishment. In addition, farmer commitment appears to be a suitable measure of the level of adoption of a social innovation. As an example, those farmers most actively engaged in recruitment and protest have certainly adopted the ideals of the AAM to the greatest extent.

In summary, time of adoption is a better indication of farmer commitment than the distance a farmer traveled to his local office. Moreover, the personal communication variables are consistently more influential than non-personal

communication in influencing farmer behavior. This conclusion is in agreement with the results obtained in Chapter Five, even at the more-rigorous 5% level of significance. Although the farmer's age was shown to be significant in two cases, the remaining biographical variables serve as only poor indicators of commitment. However, at the 5% significance level, age was revealed to be insignificantly related to commitment. Farmer resource variables which were most strongly related to commitment include those factors which can change over short time intervals. Specifically, associations with commitment were most readily determined from grain storage, planted acreage, and fertilizer usage. On the other hand, resources which gradually change over time were less important. These resources include changes in farm size or the number of acres owned. Lastly, financial variables were surprisingly unimportant in determining farmer commitment.

CHAPTER VII

ANALYSIS ON IMPACTS OF THE AMERICAN AGRICULTURE MOVEMENT

Oklahoma farmers have expressed a concern toward farming as a viable occupation; moreover, a measure of this farmer discontent is reflected in their plans for the future. Thus, the objective of this chapter is to assess the impact of the recent farmer's strike upon the future plans of Oklahoma farmers. The four measures of farmer impacts utilized from the survey include intended future changes in farm size, intention to remain in farming, past encouragement of children to enter farming and future intention to encourage children to enter farming.

While the most contributions to diffusion analysis have concentrated on the diffusion process and the conditions which preceeded diffusion, to fully express the influence of diffusion, its aftermath should also be considered.

The analysis of Chapter Seven similar in format to Chapters Five and Six, includes four measures of impact compared to a series of 20 variables. Many of these variables may be influential controls in determining the future plans of Oklahoma farmers. For example, the farmers' strike has

given farmers a new insight toward farming as a career. The impact of this new perspective is measured in terms of the future intentions of farmers. Hence, in this chapter, analysis is conducted on the future plans of farmers. These farmer impacts include plans to increase the size of farms, the intention by farmers to remain in farming, and past and future encouragement of children to enter farming. The 20 variables analyzed for their relationship to farmer impacts are:

SPATIAL/TEMPORAL	Distance to town with AAM office
COMMUNICATION	Most regular source of farming news
	Frequency of advice from farming magazines
	Frequency of advice from radio or TV
	Frequency of contact with agricultural extension agent
	Number of out of business farmers known to respondent
BIOGRAPHICAL	Age
	Education
	Number of dependents
	Political affiliation
RESOURCES	Acreage owned
	Acreage rented from others
	Changes in farm size in last 5 years
FINANCIAL	Income
	Proportion of income from off farm sources
	Proportion of farm debt
COMMITMENT	Protest participation
	Sales of farm produce
	Parity support
	AAM support

7.1 Spatial/Temporal Effects

The only spatial factor considered in this chapter is the distance traveled to the farmer's local AAM office (Tables 137 to 140). Table 137, which reveals distance to

TABLE 137

FUTURE FARM INCREASES

		Yes	No	n
DISTANCE TO TOWN	0-9	29 49%	66 63%	95
WITH AAM OFFICE	10-19	13 22%	25 24%	38
(IN MILES)	20+	17 29%	14 13%	31
	n	59	105	

$x^2 = 6.13$ Sig. = 9.8% (d.f. = 2)

TABLE 138

REMAIN IN FARMING

		Yes	No	n
DISTANCE TO TOWN	0-9	87 57%	8 71%	95
WITH AAM OFFICE	10-19	33 23%	15 21%	38
(IN MILES)	20+	30 20%	1 8%	31
	n	150	14	

$x^2 = 1.57$ Sig. = 67.0% (d.f. = 2)

TABLE 139

HAVE CHILDREN BEEN ENCOURAGED TO FARM

		Yes	No	n
DISTANCE TO TOWN	0-9	31 54%	64 60%	95
WITH AAM OFFICE	10-19	14 25%	24 22%	38
(IN MILES)	20+	12 21%	19 18%	31
	n	57	104	

$x^2 = 0.46$ Sig. = 91.0% (d.f. = 2)

TABLE 140

WILL CHILDREN BE ENCOURAGED TO FARM

		Yes	No	n
DISTANCE TO TOWN	0-9	31 52%	64 62%	95
WITH AAM OFFICE	10-19	12 20%	26 25%	38
(IN MILES)	20+	17 28%	14 13%	31
	n	60	104	

$x^2 = 5.59$ Sig. = 13.6% (d.f. = 2)

local AAM office as significantly related to the farmer's plans for changes in farm size, permits the inference that those farmers planning to expand their farms are more distant from their local office. However, the conclusion that the distance to the local office has influenced farmer plans is likely spurious. Rather, farmers further from town probably have paid cheaper land rents, resulting in a lower expense for the expansion of farming operations by distant farmers.

Moreover, distance traveled to the local office was not significantly related to farmer intentions to remain in farming (Table 138), past encouragement of children to enter farming (Table 139), or future encouragement of children to enter farming (Table 140).

7.2 Communication

The five variables, grouped into a communication classification, include: the most regular source of farming news, frequency of farming advice from farm magazines, frequency of farming advice from radio or TV, frequency of contact with agricultural extension agent, and the number of out-of-business farmers known to the respondent. The analysis for this section is encompassed in Tables 141 through 160. Here, each of the five measures of communication is analyzed for its relationship to the four impact variables. In every case, no significant relationship was established between farmer impacts and the communication measures.

TABLE 141

FUTURE FARM INCREASES

		Yes		No		n
MOST REGULAR SOURCE OF FARMING NEWS	Radio or TV	33	57%	47	46%	80
	Newspaper	8	14%	24	24%	32
	Farm Magazine	17	29%	29	30%	46
	n	58		100		

$X^2 = 3.63$ Sig. = 30.4% (d.f. = 2)

TABLE 142

REMAIN IN FARMING

		Yes		No		n
MOST REGULAR SOURCE OF FARMING NEWS	Radio or TV	73	48%	7	64%	80
	Newspaper	30	21%	2	14%	32
	Farm Magazine	41	31%	5	22%	46
	n	144		14		

$X^2 = 1.77$ Sig. = 62.2% (d.f. = 2)

TABLE 143

HAVE CHILDREN BEEN ENCOURAGED TO FARM

		Yes		No		n
MOST REGULAR SOURCE OF FARMING NEWS	Radio or TV	29	52%	51	49%	80
	Newspaper	9	17%	23	23%	32
	Farm Magazine	17	31%	29	28%	46
	n	55		103		

$X^2 = 0.80$ Sig. = 84.9% (d.f. = 2)

TABLE 144

WILL CHILDREN BE ENCOURAGED TO FARM

		Yes		No		n
MOST REGULAR SOURCE OF FARMING NEWS	Radio or TV	27	46%	53	52%	80
	Newspaper	11	20%	21	21%	32
	Farm Magazine	20	34%	26	27%	46
	n	58		100		

$X^2 = 1.31$ Sig. = 72.6% (d.f. = 2)

TABLE 145

FUTURE FARM INCREASES

FREQUENCY OF FARMING ADVICE FROM FARM MAGAZINES	Yes	No	n
Very Often	2 3%	8 8%	10
Often	28 48%	40 38%	68
Seldom	25 42%	43 41%	68
Never	4 7%	14 13%	18
n	59	105	

$x^2 = 3.40$ Sig. = 33.3% (d.f. = 3)

TABLE 146

REMAIN IN FARMING

FREQUENCY OF FARMING ADVICE FROM FARM MAGAZINES	Yes	No	n
Often	72 48%	6 43%	78
Seldom	62 41%	6 43%	68
Never	16 11%	2 14%	18
n	150	14	

$x^2 = 0.28$ Sig. = 98.1% (d.f. = 2)

TABLE 147

HAVE CHILDREN BEEN ENCOURAGED TO FARM

FREQUENCY OF FARMING ADVICE FROM FARM MAGAZINES	Yes	No	n
Very Often	5 9%	5 5%	10
Often	22 39%	46 43%	68
Seldom	26 46%	42 39%	68
Never	4 7%	14 13%	18
n	57	107	

$x^2 = 2.81$ Sig. = 42.2% (d.f. = 3)

TABLE 148

WILL CHILDREN BE ENCOURAGED TO FARM

FREQUENCY OF FARMING ADVICE FROM FARM MAGAZINES	Yes	No	n
Very Often	5 8%	5 5%	10
Often	27 45%	41 39%	68
Seldom	26 43%	42 40%	68
Never	2 4%	16 16%	18
n	60	104	

$x^2 = 6.18$ Sig. = 10.3% (d.f. = 3)

TABLE 149

FUTURE FARM INCREASES

FREQENCY OF FARMING ADVICE FROM RADIO OR TV (PER DAY)		Yes		No		n
	4+	11	19%	18	17%	29
	3	12	20%	16	15%	28
	2	20	34%	38	36%	58
	1	16	27%	33	32%	49
	n	59		105		

$X^2 = 0.91$ Sig. = 82.2% (d.f. = 3)

TABLE 150

REMAIN IN FARMING

FREQUENCY OF FARMING ADVICE FROM RADIO OR TV (PER DAY)		Yes		No		n
	3+	56	37%	1	i%	57
	2	50	33%	8	57%	58
	1	44	30%	5	36%	49
	n	150		14		

$X^2 = 5.52$ Sig. = 13.9% (d.f. = 2)

TABLE 151

HAVE CHILDREN BEEN ENCOURAGED TO FARM

FREQUENCY OF FARMING ADVICE FROM RADIO OR TV (PER DAY)		Yes		No		n
	4+	13	23%	16	15%	29
	3	10	17%	18	17%	28
	2	20	35%	38	35%	58
	1	14	25%	35	33%	49
	n	57		107		

$X^2 = 2.14$ Sig. = 54.5% (d.f. = 3)

TABLE 152

WILL CHILDREN BE ENCOURAGED TO FARM

FREQUENCY OF FARMING ADVICE FROM RADIO OR TV (PER DAY)		Yes		No		n
	4+	14	23%	15	14%	29
	3	11	18%	17	16%	28
	2	22	37%	36	35%	58
	1	13	22%	36	35%	49
	n	60		104		

$X^2 = 3.98$ Sig. = 26.4% (d.f. = 3)

TABLE 153

FUTURE FARM INCREASES

FREQUENCY OF CONTACT WITH AGRICULTURAL EXTENSION AGENT		Yes	No	n
	5+	3 5%	5 5%	8
	3-4	6 10%	5 5%	11
	1-2	22 37%	36 34%	58
	Never	28 48%	59 56%	87
	n	59	105	

$x^2 = 2.29$ Sig. 51.4% (d.f. = 3)

TABLE 154

REMAIN IN FARMING

FREQUENCY OF CONTACT WITH AGRICULTURAL EXTENSION AGENT		Yes	No	n
	3 +	18 12%	1 7%	19
	1-2	56 37%	2 14%	58
	Never	76 51%	11 79%	87
	n	150	14	

$x^2 = 4.13$ Sig. = 25.7% (d.f. = 2)

TABLE 155

HAVE CHILDREN BEEN ENCOURAGED TO FARM

FREQUENCY OF CONTACT WITH AGRICULTURAL EXTENSION AGENT		Yes	No	n
	3+	4 9%	15 13%	19
	1-2	25 42%	33 32%	58
	Never	28 49%	59 55%	87
	n	57	107	

$x^2 = 1.94$ Sig. 59.8% (d.f. =2)

TABLE 156

WILL CHILDREN BE ENCOURAGED TO FARM

FREQUENCY OF CONTACT WITH AGRICULTURAL EXTENSION AGENT		Yes	No	n
	5+	3 5%	5 5%	8
	3-4	6 10%	5 5%	11
	1-2	24 40%	34 33%	58
	Never	27 45%	60 57%	87
	n	60	104	

$x^2 = 3.26$ Sig. = 35.3% (d.f. = 3)

TABLE 157

FUTURE FARM INCREASES

NUMBER OF OUT OF BUSINESS FARMERS		Yes		No		n
	5+	30	51%	61	58%	91
	3-4	13	22%	19	18%	32
	1-2	11	19%	20	19%	31
	None	5	8%	5	5%	10
	n	59		105		

$x^2 = 1.52$ Sig. = 67.9% (d.f. = 3)

TABLE 158

REMAIN IN FARMING

NUMBER OF OUT OF BUSINESS FARMERS		Yes		No		n
	5+	84	56%	7	50%	91
	3-4	28	19%	4	29%	32
	1-2	28	19%	3	21%	31
	None	10	6%	0	0%	10
	n	150		14		

$x^2 = 1.71$ Sig. = 63.4% (d.f. = 3)

TABLE 159

HAVE CHILDREN BEEN ENCOURAGED TO FARM

NUMBER OF OUT OF BUSINESS FARMERS		Yes		No		n
	5+	30	53%	61	57%	91
	3-4	14	25%	18	17%	32
	1-2	12	20%	19	18%	31
	None	1	2%	9	8%	10
	n	57		107		

$x^2 = 4.19$ Sig. = 24.2% (d.f. = 3)

TABLE 160

WILL CHILDREN BE ENCOURAGED TO FARM

NUMBER OF OUT OF BUSINESS FARMERS		Yes		No		n
	5+	29	48%	62	60%	91
	3-4	13	22%	19	18%	32
	1-2	16	27%	15	14%	31
	None	2	3%	8	8%	10
	n	60		104		

$x^2 = 5.30$ Sig. = 15.1% (d.f. = 3)

7.3 Biographical

The four biographical factors tested for their relationship to farmer impacts include age, education, number of dependents, and political affiliation. The age of the respondent has been proved of significant relationship to his intention to increase the farm size (Table 161). A 0.0% significance strongly implies that the younger farmers intend to increase farm size, while older farmers plan no further farm increases. With respect to their intent to remain in farming (Table 162), younger farmers plan to continue farming, while older farmers plan to quit or retire. Furthermore, age was defined as unrelated to the past encouragement of children to enter farming (Table 163). However, Table 164 reveals that age is related (0.2% significance) to a farmer's future intention to encourage the entrance of his children into farming. The inference in this case is that younger farmers intend to encourage their children to enter farming to a greater degree than do older farmers.

Furthermore, the level of education completed by the farmer was significantly related to his plans for additional farm increases. The results, given in Table 165, indicate that the better educated farmers intend to increase farm acreage. However, education was not demonstrated to be related to intentions to remain in farming (Table 166), or to past and future encouragement of children to enter farming (Tables 167 and 168).

TABLE 161

FUTURE FARM INCREASES

AGE	Yes		No		n
20-39	37	63%	14	13%	51
40-59	20	34%	58	55%	78
60+	2	3%	33	32%	35
n	59		105		

$x^2 = 47.15$ Sig. = 0.03% (d.f. = 2)

TABLE 162

REMAIN IN FARMING

AGE	Yes		No		n
20-39	50	33%	1	7%	51
40-59	76	51%	2	14%	78
60+	24	16%	11	79%	35
n	150		14		

$x^2 = 29.9$ Sig. = 0.02% (d.f. = 2)

TABLE 163

HAVE CHILDREN BEEN ENCOURAGED TO FARM

AGE	Yes		No		n
20-39	19	33%	32	30%	51
40-59	22	39%	56	52%	78
60+	16	28%	19	18%	35
n	57		107		

$x^2 = 3.47$ Sig. = 17.6% (d.f. = 2)

TABLE 164

WILL CHILDREN BE ENCOURAGED TO FARM

AGE	Yes		No		n
20-39	28	47%	23	22%	51
40-59	19	32%	59	57%	78
60+	13	21%	22	21%	35
n	60		104		

$x^2 = 12.41$ Sig. = 0.2% (d.f. = 2)

TABLE 165

FUTURE FARM INCREASES

EDUCATION	Yes		No		n
High School	14	24%	50	48%	64
Some College	20	34%	37	35%	57
College Degree	25	42%	18	17%	43
n	59		105		

$X^2 = 14.71$ Sig. = 0.1% (d.f. = 2)

TABLE 166

REMAIN IN FARMING

EDUCATION	Yes		No		n
High School	56	37%	8	57%	64
Some College	94	63%	6	43%	100
n	150		14		

$X^2 = 2.06$ Sig. = 38.9% (d.f. = 1)

TABLE 167

HAVE CHILDREN BEEN ENCOURAGED TO FARM

EDUCATION	Yes		No		n
High School	25	44%	39	36%	64
Some College	17	30%	40	37%	57
College Degree	15	26%	28	27%	43
n	57		107		

$X^2 = 1.14$ Sig. = 56.7% (d.f. = 2)

TABLE 168

WILL CHILDREN BE ENCOURAGED TO FARM

EDUCATION	Yes		No		n
High School	18	30%	46	44%	64
Some College	22	37%	35	34%	57
College Degree	20	33%	23	22%	43
n	60		104		

$X^2 = 3.90$ Sig. = 14.2% (d.f. = 2)

Two relationships were established between farmer impacts and the number of family dependents. In Table 169, for example, the number of dependents was significantly related (0.3%) to the farmer's proposed increase of farm acreage, an increase desired by those farmers with larger families. This desire to increase farm acreage may develop for several reasons. First, a farmer with a large family possesses an increased production capacity due to the captive labor pool. Furthermore, a farmer with a large family may desire an increased acreage which may be subsequently divided among his children as an inheritance. According to Table 170, the larger families also intend to remain in farming; fully 79% of those farmers planning to quit farming have only one or two dependents. Clearly, farming in the U.S. remains a family enterprise, whose retention may be best accomplished in extended families with many children.

Nonetheless, no relationship is observed between family size and intention to encourage children to enter farming (Tables 171 and 172). Finally, political affiliation was considered for its relationship to farmer impacts. In the four examples presented (Tables 173 to 176), no relationship has been established.

7.4 Resources

Three resource variables have been considered for their influence impacts: the acreage owned, the acreage rented, and changes in farm size over the past five years. No significant relationship has been established between

TABLE 169

FUTURE FARM INCREASES

NUMBER OF DEPENDENTS		Yes		No		n
	1-2	18	30%	61	58%	79
	3-4	31	52%	35	33%	66
	5-6	10	18%	9	9%	19
	n	59		105		

$x^2 = 11.72$ Sig. = 0.3% (d.f. = 2)

TABLE 170

REMAIN IN FARMING

NUMBER OF DEPENDENTS		Yes		No		n
	1-2	68	45%	11	79%	79
	3-6	82	55%	3	21%	85
	n	150		14		

$x^2 = 5.79$ Sig. = 6.8% (d.f. = 1)

TABLE 171

HAVE CHILDREN BEEN ENCOURAGED TO FARM

NUMBER OF DEPENDENTS		Yes		No		n
	1-2	27	47%	52	49%	79
	3-4	22	39%	44	41%	66
	5-6	8	14%	11	10%	19
	n	57		107		

$x^2 = 0.52$ Sig. = 77.0% (d.f. = 2)

TABLE 172

WILL CHILDREN BE ENCOURAGED TO FARM

NUMBER OF DEPENDENTS		Yes		No		n
	1-2	23	38%	56	54%	79
	3-4	27	45%	39	37%	66
	5-6	10	17%	9	9%	19
	n	60		104		

$x^2 = 4.54$ Sig. = 10.3% (d.f. = 2)

TABLE 173

FUTURE FARM INCREASES

		Yes		No		n
POLITICAL AFFILIATION	Republican	26	44%	32	31%	58
	Democrat	32	52%	68	66%	100
	Independent	1	4%	5	3%	6
	n	59		105		

$x^2 = 3.07$ Sig. = 38.2% (d.f. = 2)

TABLE 174

REMAIN IN FARMING

		Yes		No		n
POLITICAL AFFILIATION	Republican	53	36%	5	36%	58
	Democrat	91	61%	9	64%	100
	Independent	6	3%	0	0%	6
	n	150		14		

$x^2 = 0.59$ Sig. = 89.9% (d.f. = 2)

TABLE 175

HAVE CHILDREN BEEN ENCOURAGED TO FARM

		Yes		No		n
POLITICAL AFFILIATION	Republican	19	33%	39	36%	58
	Democrat	38	67%	68	64%	106
	n	57		107		

$x^2 = 0.17$ Sig. = 97.2% (d.f. = 1)

TABLE 176

WILL CHILDREN BE ENCOURAGED TO FARM

		Yes		No		n
POLITICAL AFFILIATION	Republican	24	40%	34	33%	58
	Democrat	35	57%	65	64%	100
	Independent	1	3%	5	3%	6
	n	60		104		

$x^2 = 0.89$ Sig. = 82.8% (d.f. = 2)

farmer impacts and the number of acres owned by the respondent (Tables 177 to 180). In two cases, however, the acreage a farmer rents from other owners has been defined as significantly related to resources. Table 181 reveals that farmers who intend to increase acreage in the future are currently leasing the most acreage from other land owners. Furthermore, this leasing of farm acreage may represent the trial stage of an adoption process. A farmer who suspects that increased acreage is beneficial can test his innovation through land rental rather than land purchase. By this means, he can test his theory less expensively without completing a long-term purchase obligation. Moreover, farmers who intend to remain in farming tend to lease more acreage than the average farmer (Table 182). For many years, farming technology has focused on time-saving innovations, such as single-step soil preparations, which have given the farmer more time to increase productivity through enlarged farm acreages. Accordingly, those farmers intending to remain in farming must continue to increase farm size.

With respect to past and future encouragement of children to enter agriculture, no significant relationship has been established with acreage rented from other land owners (Tables 183 and 184).

Changes in the size of farm operations during the last five years is related to three farmer impacts. Farmers who have increased the size of their farms in the past five years also intend to increase acreage in the future (Table

TABLE 177

FUTURE FARM INCREASES

ACREAGE OWNED	Yes		No		n
0-99	13	22%	21	20%	34
100-999	38	64%	68	65%	106
1000+	8	14%	16	15%	24
n	59		105		

$x^2 = 0.15$ Sig. = 92.8% (d.f. = 2)

TABLE 178

REMAIN IN FARMING

ACREAGE OWNED	Yes		No		n
0-99	29	19%	5	36%	34
100-999	99	66%	7	50%	106
1000+	22	15%	2	14%	24
n	150		14		

$x^2 = 2.17$ Sig. = 33.9% (d.f. = 2)

TABLE 179

HAVE CHILDREN BEEN ENCOURAGED TO FARM

ACREAGE OWNED	Yes		No		n
0-99	10	18%	24	22%	34
100-999	39	68%	67	63%	106
1000+	8	14%	16	15%	24
n	57		107		

$x^2 = 0.64$ Sig. = 72.5% (d.f. = 2)

TABLE 180

WILL CHILDREN BE ENCOURAGED TO FARM

ACREAGE OWNED	Yes		No		n
0-99	12	20%	22	21%	34
100-999	39	65%	67	64%	106
1000+	9	15%	15	15%	24
n	60		104		

$x^2 = 0.04$ Sig. = 98.3% (d.f. = 2)

TABLE 181

FUTURE FARM INCREASES

ACREAGE RENTED FROM OTHERS		Yes		No		n
	0-99	7	12%	34	32%	41
	100-999	32	54%	47	45%	79
	1000+	20	34%	24	23%	44
	n	59		105		

$x^2 = 8.78$ Sig. = 1.2% (d.f. = 2)

TABLE 182

REMAIN IN FARMING

ACREAGE RENTED FROM OTHERS		Yes		No		n
	0-99	34	23%	7	50%	41
	100-999	72	48%	7	50%	79
	1000+	44	29%	0	0%	44
	n	150		14		

$x^2 = 7.94$ Sig. = 1.8% (d.f. = 2)

TABLE 183

HAVE CHILDREN BEEN ENCOURAGED TO FARM

ACREAGE RENTED FROM OTHERS		Yes		No		n
	0-99	14	25%	27	25%	41
	100-999	27	47%	52	49%	79
	1000+	16	28%	28	26%	44
	n	57		107		

$x^2 = 0.07$ Sig. = 96.6% (d.f. = 2)

TABLE 184

WILL CHILDREN BE ENCOURAGED TO FARM

ACREAGE RENTED FROM OTHERS		Yes		No		n
	0-99	14	23%	27	26%	41
	100-999	28	47%	51	49%	79
	1000+	18	30%	26	25%	44
	n	60		104		

$x^2 = 0.50$ Sig. = 77.7% (d.f. = 2)

185), and plan to remain in farming (Table 186). Although Table 187 reveals that past encouragement of children to enter farming is not related to past changes in the size of farm, those farmers who have recently increased acreage also intend to encourage their children to enter farming (Table 188).

7.5 Financial

Farm income is related to the farmer's intention to increase farm size and remain in farming (Tables 189 and 190 respectively). In addition to planning future farm increases, those farmers with the higher incomes plan to remain in farming. However, income was not demonstrated to be related to past or future plans to encourage children to enter farming (Tables 191 and 192).

The analysis between farmer impacts and proportion of income from off-farm sources is offered in Tables 193 to 196. While proportion of off-farm income is unrelated to future increases in farm size, intention to remain in farming, or future encouragement of children to enter farming, past encouragement of children to enter farming is related to proportion of off-farm income (Table 195). In those cases where a large portion of income derived from off-farm jobs, farmers have not encouraged their children to enter agriculture.

The proportion of farm in debt is related to the farmer's intention to increase farm size and remain in farming (Tables 197 and 198, respectively). A 0.2% level of significance is given for the association which suggests

TABLE 185

FUTURE FARM INCREASES

CHANGES IN FARM SIZE DURING LAST 5 YEARS	Yes		No		n
Increased	48	82%	38	36%	86
Constant	9	15%	47	45%	56
Decreased	1	3%	14	19%	15
n	58		99		

$X^2 = 31.4$ Sig. = 0.04% (d.f. = 2)

TABLE 186

REMAIN IN FARMING

CHANGES IN FARM SIZE DURING LAST 5 YEARS	Yes		No		n
Increased	85	58%	1	9%	86
Constant	50	35%	6	45%	56
Decreased	9	7%	6	46%	15
n	144		13		

$X^2 = 25.64$ Sig. = 0.02% (d.f. = 2)

TABLE 187

HAVE CHILDREN BEEN ENCOURAGED TO FARM

CHANGES IN FARM SIZE DURING LAST 5 YEARS	Yes		No		n
Increased	31	56%	55	53%	86
Constant	16	30%	40	39%	56
Decreased	6	14%	9	8%	15
n	53		104		

$X^2 = 2.74$ Sig. = 43.4% (d.f. = 2)

TABLE 188

WILL CHILDREN BE ENCOURAGED TO FARM

CHANGES IN FARM SIZE DURING LAST 5 YEARS	Yes		No		n
Increased	39	66%	47	47%	86
Constant	16	27%	40	40%	56
Decreased	4	7%	11	13%	15
n	59		98		

$X^2 = 6.53$ Sig. = 8.8% (d.f. = 2)

TABLE 189

FUTURE FARM INCREASES

INCOME (IN THOUSANDS)	Yes		No		n
0-25	7	12%	35	33%	42
25-60	28	47%	40	38%	68
60-100	11	19%	11	11%	22
100+	13	22%	19	18%	32
n	59		105		

$x^2 = 9.78$ Sig. = 2.0% (d.f. = 3)

TABLE 190

REMAIN IN FARMING

INCOME (IN THOUSANDS)	Yes		No		n
0-25	34	22%	8	64%	42
25-60	63	43%	5	29%	68
60+	53	35%	1	7%	54
n	150		14		

$x^2 = 12.55$ Sig. = 0.2% (d.f. = 2)

TABLE 191

HAVE CHILDREN BEEN ENCOURAGED TO FARM

INCOME (IN THOUSANDS)	Yes		No		n
0-25	13	23%	29	27%	42
25-60	24	42%	44	41%	68
60-100	8	14%	14	13%	22
100+	12	21%	20	19%	32
n	57		107		

$x^2 = 0.41$ Sig. = 93.9% (d.f. = 3)

TABLE 192

WILL CHILDREN BE ENCOURAGED TO FARM

INCOME (IN THOUSANDS)	Yes		No		n
0-25	13	22%	29	28%	42
25-60	27	45%	41	39%	68
60-100	7	12%	15	15%	22
100+	13	21%	19	18%	32
n	60		104		

$x^2 = 1.30$ Sig. = 72.9% (d.f. = 3)

TABLE 193

FUTURE FARM INCREASES

PROPORTION OF INCOME FROM OFF-FARM SOURCES		Yes		No		n
	0-9%	14	24%	17	16%	31
	10-29%	14	24%	18	17%	32
	30-59%	8	14%	20	19%	28
	60%+	23	38%	50	48%	73
	n		59		105	

$X^2 = 3.27$ Sig. = 35.1 (d.f. = 3)

TABLE 194

REMAIN IN FARMING

PROPORTION OF INCOME FROM OFF-FARM SOURCES		Yes		No		n
	0-29%	56	37%	7	50%	63
	30%+	94	63%	7	50%	101
	n		150		14	

$X^2 = 0.84$ Sig. = 70.3% (d.f. = 1)

TABLE 195

HAVE CHILDREN BEEN ENCOURAGED TO FARM

PROPORTION OF INCOME FROM OFF-FARM SOURCES		Yes		No		n
	0-9%	18	32%	13	12%	31
	10-29%	10	17%	22	20%	32
	30-59%	7	12%	21	20%	28
	60%+	22	39%	51	48%	73
	n		57		107	

$X^2 = 9.46$ Sig. = 2.4% (d.f. = 3)

TABLE 196

WILL CHILDREN BE ENCOURAGED TO FARM

PROPORTION OF INCOME FROM OFF-FARM SOURCES		Yes		No		n
	0-9%	15	25%	16	15%	31
	10-29%	15	25%	17	16%	32
	30-59%	7	12%	21	20%	28
	60%+	23	38%	50	49%	73
	n		60		104	

$X^2 = 5.75$ Sig. = 12.4% (d.f. = 3)

TABLE 197

FUTURE FARM INCREASES

PROPORTION OF FARM IN DEBT	Yes		No		n
No Debt	5	9%	27	26%	32
1-49%	28	47%	48	46%	76
50-99%	11	19%	22	21%	33
100%	15	25%	8	7%	23
n	59		105		

$X^2 = 14.4$ Sig. = 0.2% (d.f. = 3)

TABLE 198

REMAIN IN FARMING

PROPORTION OF FARM IN DEBT	Yes		No		n
No Debt	24	16%	8	57%	32
Some Debt	126	84%	6	43%	132
n	150		14		

$X^2 = 14.08$ Sig. = 0.2% (d.f. = 1)

TABLE 199

HAVE CHILDREN BEEN ENCOURAGED TO FARM

PROPORTION OF FARM IN DEBT	Yes		No		n
No debt	10	18%	22	21%	32
1-49%	27	47%	49	46%	76
50-99%	12	21%	21	20%	33
100%	8	14%	15	13%	23
n	57		107		

$X^2 = 0.23$ Sig. = 97.2% (d.f. = 3)

TABLE 200

WILL CHILDREN BE ENCOURAGED TO FARM

PROPORTION OF FARM IN DEBT	Yes		No		n
No debt	8	13%	24	23%	32
1-49%	27	45%	49	47%	76
50-99%	17	28%	16	16%	33
100%	8	14%	15	14%	23
n	60		104		

$X^2 = 5.09$ Sig. = 16.5% (d.f. = 3)

that farmers intending to increase farm acreage have the largest proportion of farm indebtedness. Interestingly, the conclusion drawn from Table 198 is that farmers with the least debt intend to leave farming. These two observations, together with the results in Table 161, indicate a relationship between age, indebtedness, and desire to remain in farming. While young farmers assume a large debt with the intention of remaining in farming, older farmers have paid most of their debt and intend to retire. In addition, no relationships have been established between farm indebtedness and encouragement of children to enter farming (Tables 199 and 200).

7.6 Commitment

The final analysis concerned with farmer impacts is related to four measures of commitment toward the farmer protest movement: protest participation, sales of farm produce, parity support, and overall support of the AAM. That no significant relationship exists between farmer impacts and frequency of participation in protests is revealed in Tables 201 to 204. In regard to the sales of farm produce, a significant relationship is established (Table 208) with future intention to encourage children to enter farming. The inference drawn from this relationship is that farmers whose sales are less-than-normal will not encourage their children to enter farming. Additionally,

TABLE 201

FUTURE FARM INCREASES

PROTEST PARTICIPATION		Yes		No		n
	5+	17	29%	36	34%	53
	3-4	6	10%	18	17%	24
	1-2	14	24%	23	22%	37
	Never	22	37%	28	27%	50
	n	59		105		

$x^2 = 3.06$ Sig. = 38.3% (d.f. = 3)

TABLE 202

REMAIN IN FARMING

PROTEST PARTICIPATION		Yes		No		n
	3+	72	48%	5	36%	77
	1-2	33	22%	4	29%	37
	Never	45	30%	5	35%	50
	n	150		14		

$x^2 = 0.77$ Sig. = 84.9% (d.f. = 2)

TABLE 203

HAVE CHILDREN BEEN ENCOURAGED TO FARM

PROTEST PARTICIPATION		Yes		No		n
	5+	18	32%	35	33%	53
	3-4	7	12%	17	16%	24
	1-2	13	23%	24	22%	37
	Never	19	33%	31	29%	50
	n	57		107		

$x^2 = 0.58$ Sig. = 90.1% (d.f. = 3)

TABLE 204

WILL CHILDREN BE ENCOURAGED TO FARM

PROTEST PARTICIPATION		Yes		No		n
	5+	16	27%	37	36%	53
	3-4	9	15%	15	14%	24
	1-2	13	22%	24	23%	37
	Never	22	36%	28	27%	50
	n	60		104		

$x^2 = 2.16$ Sig. = 54.0% (d.f. = 3)

TABLE 205 FUTURE FARM INCREASES

SALES OF FARM PRODUCE	Yes		No		n
Average	23	39%	26	25%	49
Sold Less	25	42%	43	41%	68
Sold Little	11	19%	36	34%	47
n	59		105		

$x^2 = 5.83$ Sig. = 11.9% (d.f. = 2)

TABLE 206 REMAIN IN FARMING

SALES OF FARM PRODUCE	Yes		No		n
Average	46	31%	3	21%	49
Sold Less	62	41%	6	43%	68
Sold Little	42	28%	5	36%	47
n	150		14		

$x^2 = 0.65$ Sig. = 87.0% (d.f. = 2)

TABLE 207 HAVE CHILDREN BEEN ENCOURAGED TO FARM

SALES OF FARM PRODUCE	Yes		No		n
Sold More	5	9%	2	2%	7
Average	16	28%	26	24%	42
Sold Less	20	35%	48	45%	68
Sold Little	16	28%	31	29%	47
n	57		107		

$x^2 = 5.23$ Sig. = 15.6% (d.f. = 3)

TABLE 208 WILL CHILDREN BE ENCOURAGED TO FARM

SALES OF FARM PRODUCE	Yes		No		n
Sold More	5	8%	2	2%	7
Average	19	32%	23	22%	42
Sold Less	21	35%	47	45%	68
Sold Little	15	25%	32	31%	47
n	60		104		

$x^2 = 6.41$ Sig. = 9.3% (d.f. = 3)

the level of farm produce sold is unrelated to future farm increases (Table 205), intention to remain in farming (Table 206), or to past encouragement of children to enter farming (Table 207).

Tables 209 to 212 provide the analysis for farmer support of parity. Although no relationship exists between the level of support for parity and intention to increase farm acreage, plans to remain in farming, or past encouragement of children to enter agriculture, future encouragement of children is related to parity support (Table 212). Those farmers who do not intend to encourage their children to enter farming voice strongest support of parity.

The last measure of commitment considered in this analysis is overall support of the American Agriculture Movement. No relationship is established between farmer impacts and overall support of the AAM (Tables 213 to 216). Many farmers have made a distinction between the objectives of the AAM and the AAM organization. These results appear to indicate that many farmers concurrently offer strong support to parity while giving weaker support to the AAM as the vehicle to achieve this goal.

7.7 Conclusion

In this chapter, the four variables selected as a measure of the agriculture movement's impact on farmer activities include changes in farm size, intention by

TABLE 209

FUTURE FARM INCREASES

PARITY SUPPORT	Yes		No		n
Strong	28	47%	65	62%	93
Average	21	36%	22	21%	43
Weak	10	17%	18	17%	28
n		59		105	

$x^2 = 4.46$ Sig. = 22.8% (d.f. = 2)

TABLE 210

REMAIN IN FARMING

PARITY SUPPORT	Yes		No		n
Strong	87	58%	6	43%	93
Average	37	25%	6	43%	43
Weak	26	17%	2	14%	28
n		150		14	

$x^2 = 2.14$ Sig. = 55.3% (d.f. = 2)

TABLE 211

HAVE CHILDREN BEEN ENCOURAGED TO FARM

PARITY SUPPORT	Yes		No		n
Strong	28	49%	65	61%	93
Average	18	32%	25	23%	43
Weak	11	19%	17	16%	28
n		57		107	

$x^2 = 2.11$ Sig. = 55.2% (d.f. = 2)

TABLE 212

WILL CHILDREN BE ENCOURAGED TO FARM

PARITY SUPPORT	Yes		No		n
Strong	24	40%	69	66%	93
Average	24	40%	19	18%	43
Weak	12	20%	16	16%	28
n		60		104	

$x^2 = 12.04$ Sig. = 0.2% (d.f. = 2)

TABLE 213

FUTURE FARM INCREASES

AAM SUPPORT	Yes		No		n
Strong	5	9%	13	12%	18
Average	37	62%	67	64%	104
Weak	17	29%	25	24%	42
n	59		105		

$x^2 = 0.90$ Sig. = 63.7% (d.f. = 2)

TABLE 214

REMAIN IN FARMING

AAM SUPPORT	Yes		No		n
Strong	18	12%	0	0%	18
Average	95	63%	9	64%	104
Weak	37	25%	5	36%	42
n	150		14		

$x^2 = 2.29$ Sig. = 31.8% (d.f. = 2)

TABLE 215

HAVE CHILDREN BEEN ENCOURAGED TO FARM

AAM SUPPORT	Yes		No		n
Strong	4	7%	14	13%	18
Average	38	67%	66	62%	104
Weak	15	26%	27	25%	42
n	57		107		

$x^2 = 1.41$ Sig. = 49.4% (d.f. = 2)

TABLE 216

WILL CHILDREN BE ENCOURAGED TO FARM

AAM SUPPORT	Yes		No		n
Strong	3	5%	15	14%	18
Average	40	67%	64	62%	104
Weak	17	28%	25	24%	42
n	60		104		

$x^2 = 3.51$ Sig. = 17.3% (d.f. = 2)

farmers to remain in farming, and past and future encouragement of their children to enter agriculture. The analysis in Chapter Seven, which identifies variables related in some manner to these measures of farmer impacts, is similar to the analysis in Chapters Five and Six in its grouping of related variables into six categories: spatial/temporal, communication, biographical, resources, financial, and commitment. The relative contribution of these six groups of variables in establishing a relationship to farmer impacts is summarized in Table 217.

One spatial variable is considered in this chapter. This variable, the distance traveled to the local AAM office, did not establish a relationship to the majority of farmer impact variables, however. The communication variables consisted of both media and personal methods of contact with the farmer; yet, none of the 20 Chi-square tests attempting to show a relationship with communication were significant. As a result, this author has concluded that communication bears little influence on the activities farmers have planned for their future or the future of their children.

Biographical variables, on the other hand, provide a high level of influence upon the future intentions of farmers. Specifically, the age of farmers is a primary determinant of future activities with respect to future farm increases, intention to remain in farming, and future

TABLE 217

SIGNIFICANCE OF VARIABLES RELATING TO FARMER IMPACTS

Variable	Farm Increases	Remain in Farming	Have Encouraged Children	Will Encourage Children
SPATIAL/TEMPORAL				
Distance to AAM Office	Sig.	Not Sig.	Not Sig.	Not Sig.
COMMUNICATION				
Source of Farming News	Not Sig.	Not Sig.	Not Sig.	Not Sig.
Advice from Farming Magazines	Not Sig.	Not Sig.	Not Sig.	Not Sig.
Advice from Radio or TV	Not Sig.	Not Sig.	Not Sig.	Not Sig.
Agricultural Extension Agent	Not Sig.	Not Sig.	Not Sig.	Not Sig.
Out of Business Farmers	Not Sig.	Not Sig.	Not Sig.	Not Sig.
BIOGRAPHICAL				
Age	Sig.	Sig.	Not Sig.	Sig.
Education	Sig.	Not Sig.	Not Sig.	Not Sig.
Number of Dependents	Sig.	Sig.	Not Sig.	Not Sig.
Political Affiliation	Not Sig.	Not Sig.	Not Sig.	Not Sig.

TABLE 217 (continued)

Variable	Farm Increases	Remain in Farming	Have Encouraged Children	Will Encourage Children
RESOURCES				
Acreage Owned	Not Sig.	Not Sig.	Not Sig.	Not Sig.
Acreage Rented	Sig.	Sig.	Not Sig.	Not Sig.
Changes in Farm Size	Sig.	Sig.	Not Sig.	Sig.
FINANCIAL				
Income	Sig.	Sig.	Not Sig.	Not Sig.
Off-Farm Income	Not Sig.	Not Sig.	Sig.	Not Sig.
Farm in Debt	Sig.	Sig.	Not Sig.	Not Sig.
COMMITMENT				
Protest Participation	Not Sig.	Not Sig.	Not Sig.	Not Sig.
Sales of Farm Produce	Not Sig.	Not Sig.	Not Sig.	Sig.
Parity Support	Not Sig.	Not Sig.	Not Sig.	Sig.
AAM Support	Not Sig.	Not Sig.	Not Sig.	Not Sig.

encouragement of children to enter farming. The results which considered age show farmers to be acting in a rational manner. For example, younger farmers have the energy, drive, and longevity which more readily enable them to assume indebtedness and farm expansion. In contrast, older farmers nearing retirement will either maintain farm size or leave farming completely.

Farmer resources have been revealed as an important determinant in regard to the agricultural movement's impact on farmers. In particular, the number of acres rented from other landowners and recent changes in farm size have directly influenced the decisions made by farmers concerning their future activities. Closely related to resources are the financial factors which have also influenced farmer impacts. Both income and farm indebtedness are influential in determining the future behavior of farmer activities. In addition, the final group of variables attempted to establish a relationship between farmer impacts and farmer commitment toward the objectives of the American Agriculture Movement. For the most part, commitment toward the objectives of the agricultural movement did not significantly influence the future plans of farmers.

When significance was determined at the more rigorous 5% level, three relationships were no longer considered valid. These relationships included distance traveled against future farm increases, and future encouragement of children into farming by both farm sales and farm size changes. Considered

together, the remaining variables of at least 5% significance reinforce the observation that the impact of the AAM strike on farmers is not determined by either communication or spatial influences. Clearly, the future intentions of farmers are a personal matter, not controlled by loyalty to an organization, but rather determined by biographical influences and farmer resources. As a result, the future intentions of AAM farmers are minimally influenced by the will of the American Agriculture Movement.

CHAPTER VIII

SUMMARY AND CONCLUSION

The remarks in Chapter Eight, summarizing the analysis presented in previous chapters, concludes with the significance of this work in relation to current diffusion theory. Specifically, this analysis summation considers the contribution of several variables on the time of adoption of the AAM, commitment to the farmer movement, and its impact on Oklahoma farmers. In addition, the results of this analysis indicate an apparent dichotomy in the farming community. The results of this survey clearly point to a fundamental disagreement among farmers concerning the direction which modern farming practice should follow.

Furthermore, concluding remarks of this chapter evaluate the conceptual framework of contemporary diffusion theory. While recent contributions have significantly expanded diffusion theory, the author suggests that current diffusion theory is now inadequate to explain some aspects of the diffusion of social innovations. Finally, this chapter presents avenues for continued research.

8.1 Summary of Analysis

Chapters Five, Six, and Seven have analyzed the influence of several variables on adoption time, commitment, and impact.

As Table 218 reveals, each variable group has received a rank from one (most important) to six (least important) in its relative importance toward explaining adoption time, commitment, and impact. The criterion used in determining the importance of the variable group is the ratio of significant to nonsignificant relationships, as determined by the Chi-square analysis. In those variable groups where a large number of associations was deemed significant, that variable group was considered important in explaining either time of adoption, commitment, or impact.

TABLE 218

VARIABLE RANKINGS BY ADOPTION TIME, COMMITMENT, AND IMPACT

	Adoption Time	Commitment	Impact
Spatial/Temporal	2	2	4
Personal communication	1	1	5
Impersonal communication	5	6	6
Biographical	6	5	3
Resources	3	3	1
Financial	4	4	2

Of the six variable groups considered, face-to-face oral communication ranks as the most important variable group in influencing both the time of farmer adoption and the commitment farmers have held toward the American Agriculture Movement. Furthermore, the spatial/temporal category serves

as the second most influential group, again for both adoption time and commitment. In regard to the remaining ranks for time of farmer adoption, the third, fourth, fifth, and sixth variable groups include resources, financial, impersonal communication, and biographical, respectively. Except for a reversal of the last two variable groups, the ranking of variables for commitment remains identical to that for adoption time. Moreover, since the variable groups for adoption time and commitment are nearly identical in rankings, this author suggests that factors important to adoption time likewise remain important to commitment. This conclusion is reinforced by Tables 26, 27, and 29 in Chapter Six.

The variable rankings for the impact measure remain distinctively different from the rankings given for adoption time and commitment. In essence, effect of the agricultural strike upon farmers seems to be determined at a more personal level. Specifically, the farmer's resources and his financial condition serve as the two most important variable groups. Hence, the impact of the agricultural movement in determining the farmer's behavioral response is based primarily on his financial well-being and resource availability. Biographical variables, such as age and education, also contribute though to a lesser extent, in explaining the farmer impact of the AAM.

Another interesting phenomenon is the reversed order of importance given to spatial/temporal and communication variables groups. While these variable groups are of primary

importance in determining time of adoption and commitment in determination of farmer impacts, communication and spatial/ temporal variables are relegated to insignificance.

8.2 Farmers Divided

The results of this survey have lucidly revealed a difference of opinion among farmers. This division, however, extends beyond the immediate boundaries erected for this study on the American Agriculture Movement; instead, this disagreement claims as its basis the fundamental structure and operation of farms throughout the United States. For many decades the size of farms in the U.S. has continued to expand; yet, at the same time, the number of farms has declined. In addition, technology has kept pace by providing new products, permitting farm sizes to grow even larger. In effect, increasing farm size and technology have together restructured the economic fabric on the American farm. And to keep pace with these expanding economies of scale, many young farmers have assumed a debt which will not be repaid within their lifetime.

In light of this debt assumption, many farmers have questioned the correctness of a farm policy which promotes the destruction of the American family farm. The major concerns of these two disparate viewpoints include the following rationales. To those farmers advocating continued expansion, ever-increasing farm sizes have permitted economies of scale; in addition, a large economy of scale means that with increasing farm size, the per unit cost of producing

an agricultural product will decrease. Undoubtedly, this accomplishment remains one of the greatest achievements in the U.S.: the American farmer can produce more food with less labor than a farmer in any country in the world. One question, however, remains: "At what point does this economy of scale fail to become a true economic savings?" This is the basic question asked by farmers who desire a return to smaller farm operations. Spurring the small-farm advocates is their equally desirable quest for conservation and land husbandry. Many of our large farms, corporation farms, have extended responsibility for the farm operation to many individuals who work for the company rather than the farm itself. In addition, a large farm is no longer characterized as a truck farm, but rather a monoculture, an operation growing the single, most-profitable crop in view of the given climate and soil type. As ecologists are aware, susceptibility to destruction increases with decreasing variety in plant life..

Several specific observations, extracted from the survey, point to this difference of opinion among farmers. Some of these specific details about large-farm advocates include the following information: farmers currently holding the most acreage are planning the largest acreage increases in the future. In addition, this same group accrues both the largest income and the largest percentage of indebtedness. As one might expect, the attitude of the large-farm advocate toward technology is favorable, with

the large-farm operation also remaining more predisposed toward an increased use of technology.

Through farm policy regulations, and particularly the Set-aside Program, the U.S. government exercises control over farm size. However, the Federal government is often accused of profiteering at the expense of the American farmer. Specifically, our inexpensive grains are sold overseas at large profits, an action which facilitates the Federal balance of payments. In August, 1979, the U.S. government ended the Set-aside Program, a program designed to guarantee farmers a minimum payment price for their produce if they would "set aside," or not plant, a portion of their farm acreage. Thus, the largest farm operators, financially capable of setting aside a larger portion of their farmland, always received the largest set-aside payments. Now, however, the large farm operator will be forced to use all of his acreage in competition with operators of smaller and middle-sized farms, with an avalanche of grain as the expected result since every farmer will now be producing at full capacity. As a consequence, the lower prices received for grain will decrease the income farmers receive for their labor.

Clearly, the future direction of the AAM movement is closely allied with Federal farm policy. If the government farm policy satisfies the needs of AAM members, the AAM organization will no longer have a function. Experiences of earlier farm movements reveal that the farm organization

can control its destiny; the reason for the failure of a majority of farmers' movements is simply indecisiveness. Yet the few survivors received strong leadership, adopting a business enterprise to insure their longevity. Likewise, the American Agriculture Movement, after two years of existence, stands at the crossroads of failure or success. The AAM has shown neither outward signs of dynamic leadership at a national level nor inclinations toward a business enterprise. While offering only a speculation, this author contends that the AAM will likely fail and primarily for these two reasons.

8.3 A Contribution to Diffusion Theory

Previous research in the field of geographic diffusion theory is used in constructing a conceptual framework for the diffusion of innovations. The majority of diffusion contributions have primarily focused on the adoption behavior of individuals. A worthwhile review of this literature concerned with individual adoption behavior is provided by Brown and Cox, 1971. More recently, work by Hanham [27] and Brown [7] has considered the supply-related aspects of diffusion. Together, these approaches have expanded the conceptual framework for diffusion analysis currently in use.

A short explanation of these approaches provides the necessary context for this present research. The entire framework for diffusion theory rests upon three points. The first point considers the provision and availability of the

innovation to be diffused. For example, diffusion of an innovation may be limited by the propagator for a variety of reasons. Quite often the release of an innovation is limited for economic reasons (see Griliches, 1957). In addition, many innovations are limited by the supporting infrastructure. For example, electrification is a prerequisite for the adoption of any electrical applicance.

The strategies used by the propagator to induce adoption serves as the second point in the diffusion theory framework. The time at which a potential adopter can adopt will be constrained both by the time and place in which the diffusing agency is established. Furthermore, awareness of the innovation on the part of the potential adopter is influenced by the proximity of the diffusing agent, as well as the publicity strategy of the agent.

The third and most widely studied point of the diffusion theory framework considers the behavior of the individual adopter. Studies on the behavior of individual adopters encompass two broad areas of exploration. First, one area considers the stage of development of the diffusion process with respect to location. Typical studies have identified the diffusing source and its primary, diffusing, and condensing stages of development [26, 43]. The second area of investigation considers the role of interpersonal communication in determining the time of individual adoption of an innovation [59].

8.3.1 Time of adoption.--Much of the present research has relied heavily on the theoretical examinations and empirical evidence subsumed in the three points mentioned above. In this sense, major portions of current diffusion theories have affirmed this research, while other segments of diffusion theory have offered no support. Clearly, theories on the provision and availability of an innovation afford no relevance to time of adoption of the American Agriculture Movement. Although the motivation for farmers to join the AAM was largely economic, their criteria for adopting the AAM innovation was a social consideration. Thus, features such as the presence or absence of a supporting infrastructure remain irrelevant since the farmers' strike was a social innovation; indeed, a farmer's decision to accept the AAM was not constrained by infrastructure requirements. In addition, the potential adopter was not limited by financial barriers. Instead, the primary consideration of the farmer contemplating AAM adoption was the social risk of allegiance to this organization.

On the other hand, the time of AAM adoption is supported by diffusion theories which consider the propagator strategies used to induce adoption. The location and time of creation of the local AAM strike office serves as an excellent example of a diffusing agency establishment. Although many potential AAM adopters attained the awareness stage of the adoption process, further stages of adoption awaited the establishment of the AAM local office. For example, Table 4

significantly establishes a positive relationship between the time a local AAM office opened and the time of individual adoption. Specifically, earliest farmer memberships were achieved in areas where the local AAM office was created at an early date. The AAM also engaged in publicity strategies to induce adoption. Leaders of the AAM traveled to numerous out-of-state communities in an attempt to expand membership and establish new diffusing agencies (AAM local offices). A noteworthy case is the active recruiting of farmers in Mississippi and Alabama in the spring of 1978. More than 85 AAM local offices were established in these two states as a result of farmer campaigns and publicity (Fig. 2 and 3). In this context, theories on propagator strategies have been valuable in understanding the American Agriculture Movement.

Finally, the time of AAM adoption is supported by diffusion theories on individual adoption behavior. Particularly, research on the logistic function and time of adoption offers valuable information. Both the national data on the establishment of the local AAM office and the Oklahoma data on individual farmer adopters have diffused over space and time; thus the logistic function remains a practical tool for interpretation (Fig. 19). The extensive literature on the role of interpersonal communication is also useful in explaining the time of AAM adoption. In the present research, the single most important factor in explaining adoption time is personal communication. In regard to the role of communication and time of adoption, this current work clearly distinguishes

between personal and impersonal modes of communication (Table 218). Apparently, the time of adoption of a social innovation receives only minor influence from mass communication techniques. The present survey results show that despite early widespread media attention, the majority of Oklahoma farmers first heard about the agricultural strike through neighbors or friends. Additional measures revealing the significance of personal influence include: the relationship between early adoption and AAM recruitment through personal acquaintances (Table 7), the early adoptions which resulted from personal knowledge of farmers who had gone out-of-business (Table 8), and earliest adoptions by farmers with no agricultural extension agent communication.

8.3.2 Farmer commitment.--Farmer commitment toward the American Agriculture Movement also receives a partial explanation from diffusion theory. Theories on propagator strategies that induce adoption explain some of the factors which influence commitment. For example, the creation of a local AAM office (the diffusing agency) strongly influenced local commitment toward the AAM by the time and location of its establishment. Accordingly, commitment appeared strongest when the local office was established at an early date and near to the farmer. A comparison of Figures 2, 3, and 4 clearly illustrate this point in the case of Texas, Arkansas, and Mississippi. A scattering of offices were established in January of 1978, with the three states acquiring maximum adoption by June of that year. The loss in AAM offices in

October of 1978 was caused primarily by the disassociation of late-adopting local offices. Hence, the author suggests that earliest adopters of the farmers' strike exhibit the strongest commitment.

Furthermore, the publicity strategy used by the AAM to induce adoption is also explained by current diffusion theory. The AAM used both personal and impersonal communication strategies to promote its cause. Behaving as a grass-roots movement, the AAM strengthened membership commitment through informal, personal communications with neighboring farmers. Evidence supporting this conclusion is noted by the high levels of significance given to the association between commitment and the frequency other farmers ask the respondent for advice (Tables 41-45). In these five cases, frequency of communication is greatest when commitment is strongest. In addition, commitment is strongest with increasing personal knowledge of the local organizer (Tables 46, 48, and 49). Thus, the potential adopter encountered only minor social risk in supporting a strike promoted by his neighbors. Mass communication techniques such as demonstrations and tractorcades were also employed to focus media attention on the farmers' strike. Nonetheless, this study indicates that media techniques did little to strengthen farmer commitment.

An understanding of farmer commitment is also aided by theories probing the behavior of the individual adopter. In these studies, spatial and temporal factors are noted as important influences on farmer commitment. In tables 26, 27,

and 29 very high levels of significance affirm the association between time of adoption and commitment toward the strike. In these instances, highest levels of commitment are exhibited by the earliest adopters. Another measure of commitment, recruiting frequency of new farmer members, is greatest among farmers living closer to the AAM local office (Table 33). Moreover, the results of these studies, as shown by the logistic function, reveal that earlier adopters of the AAM experienced the strongest commitment toward the farmers' strike.

Theories on the provision and availability of an innovation, however, offer little assistance in understanding farmer commitment. The adoption of the AAM represents an innovation independent of infrastructure constraints. In addition, AAM promoters did not attempt to limit dispersal of the movement. Hence, theories explaining the controlled release of an innovation for economic reasons cannot be applied to a social innovation attempting universal and immediate adoption.

The variables used in this study which measure commitment are contributed by the author. These five commitment variables include: frequency of protest, reduction of farm sales, frequency of recruiting activity, support of farm parity, and overall support of the AAM. Frequency of farmer protest is revealed to be the strongest indicator of commitment; providing 11 significant associations with respect to time of adoption, communication, biographical, resource, and financial variables. Three measures of farmer commitment,

farm sales, recruiting activity, and parity support performed acceptably well with 6, 5, and 7 significant associations respectively. The variable which measured general support of the AAM provided only 3 significant associations. Some of these variables, particularly protest frequency and support of farm parity, have contributed to a better understanding of diffusion theory. The majority of the commitment variables established a significant association with respect to time of adoption of the AAM social innovation. In addition, all of the commitment variables contribute to a better understanding of the processes and theories of communication. For example, the role of personal influence and oral communication is strongly emphasized by these commitment variables. The overall theoretical contribution of these commitment variables is that the strength of allegiance held by members of a social movement is heightened by personal communication rather than by the mass medium.

8.3.3 Impacts of Adoption.--The present research, specifically probing the impact of the AAM on the farmer, has demonstrated the inappropriateness of current geographic diffusion theory. The impact of a social innovation cannot be explained in terms of (1) the provision and availability of an innovation; (2) propagator strategies to induce adoption; or (3) individual adopter behavior. For example, theories on the provision and availability of an innovation are concerned with limiting the release of an innovation primarily for economic reasons: either the technology is

too expensive or the supporting infrastructure is absent. Hence, current theory on innovation availability offers little to a study concerned with the impacts after adoption. Likewise, theories on the inducement of adoption through propagator strategies offer little support to analysis of innovation impacts. In effect, studies dealing with agency publicity strategies or with the time and location of establishment of a diffusing agency have been concerned with the adoption process to the exclusion of the subsequent after-effects. Similarly, previous research on interpersonal communication and stages of adoption (vis-a-vis the logistic function) offers little insight into the impacts of innovation adoption.

Research concerned with the impact of an innovation is clearly an integral facet of studies on the diffusion of innovations. However, this current research has shown (Table 218) that those variables important to time of adoption and commitment are not at all important in determining the impact of an innovation. This point is demonstrated by three variables introduced by the author which measure the impact of the AAM. These three measures of impact include: the willingness of farmers to remain in farming, future encouragement of children into farming, and the intention by farmers to increase acreage, with the latter being the most consistently significant. These three measures of impact obtained highest levels of association with biographical, resource, and financial variables. More specifically, young farmers intend to

increase farm acreage, remain in agriculture, and encourage their children into farming. In a similar manner, both the lesser educated farmers and farmers with large families intend to remain in farming and to increase farm acreage. Land resources in the form of rented acreage and recent changes in farm acreage are strongly related to the farmers' future plans. Such plans held by farmers are also related to financial matters such that farmers with highest incomes not only intend to remain in farming, but also to increase acreage. In like manner, highest farm indebtedness is associated with intention to remain in farming and future acreage increases. Together, these factors clearly limit the decisions available to the farm community. In terms of a theoretical contribution, the impact or eventual resolution of an innovation is perceived by the individual as a more personal experience. At the impact stage of adoption, the individual behaves in a manner determined by his personal resources, financial condition, and biographical factors. Spatial/temporal influences and communication factors exert only minor influence over the impact of an innovation upon the individual.

Accordingly, this author suggests that the framework which constitutes geographic diffusion theory must be expanded to include the consequences of innovation adoption. Clearly, the features of adoption aftereffects may, like features of adoption, exhibit a spatial component which varies through time. The impact of adopting an innovation reveals a spatial component when the appropriate variables

(biographical, personal resources, and financial) have been altered as a result of innovation adoption. In the case of adopting a technological innovation such as hybrid corn, the innovation may alter a farmer's financial condition, and, consequently, the impact of hybrid corn will vary spatially as determined by its pattern of diffusion and adoption.

This concept has received brief discussion in the literature of those studies which have considered the rejection of a technical innovation after previous adoption (Semple, Brown, & Brown [57]). In contrast, however, the rejection of a social innovation does not return the previous adopter to his original state. Whether a social innovation is adopted and retained, or adopted and subsequently rejected, the individual's viewpoint remains altered. As a consequence, the impact of a social innovation is worthy of study since a residual influence remains even if the social innovation is later rejected.

In particular, one of the major objectives of this research is to identify what types of variables are useful in measuring impacts of a social innovation. As the results in section 8.1 indicate, factors important to the impact of an innovation are clearly different from those factors which are influential during the adoption phases of the innovation. For this reason, the study of innovation impacts should be considered a distinct yet integral part of the conceptual framework for diffusion theory.

8.4 Avenues of Further Research

This present research has explored the usefulness of current diffusion theory in explaining the spread and impact of a social innovation within a rural setting. The overall conclusion reached is that up to a point diffusion theory has been most useful in explaining the activities of the AAM. Yet, much more empirical research is needed on the aftereffects of innovation adoption. In particular, the impact of social innovations, an area having received only minor attention, deserves further investigation. Certainly the diffusion of social innovations is worthy of research for the spatial aspects connected with diffusion. But at the same time, the impacts of such innovations also vary in space and thus are worthy of investigation.

One area of future research should determine the appropriateness of variable groups in measuring adopter parameters. As Table 218 indicates, the communication variable group is an appropriate predictor of adoption time. In a similar manner, the communication variable group is well suited as a predictor of commitment. However, the communication variable group is not appropriate in measuring the impact of the AAM social innovation. Instead, variable groups associated with biographical, resource, and financial measures are related to the impacts of innovations. Related to this is the need to acquire better values for measuring the impact of a social innovation. Perhaps the best method for measuring the magnitude of an impact is to determine how the life of a respondent

or those in nearby society have been changed by the innovation. As in this study, questions dealing with the future plans of the respondent appear to work effectively.

Worthwhile research more specifically oriented to the present study would consist of measuring the impact that the removal of the Federal Set-aside Program has exerted upon farmers. The author speculates that the impact will vary according to the farmer's financial and resource condition. Such a study maintains a spatial context since these variable groups also bear relationship to features such as farm size. Without income from the Set-aside Program, our largest farms may no longer be able to compete successfully against middle-sized farms. Instead of an asset bringing in set-aside dollars to the farmer, excessive land ownership may only serve as a liability upon which farmers must pay taxes.

In summary, this present research has answered many questions concerning the cause, spread, and impact of the American Agriculture Movement. Nevertheless, these few answered questions uncover many more unanswered questions and research possibilities which await future exploration.

LIST OF REFERENCES

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1. K.L. Bachman and R.P. Christensen, "The Economics of Farm Size," in Agricultural Development and Economic Growth, eds. H.M. Southworth and B.F. Johnston, Cornell University Press: Ithaca, N.Y. (1967).

2. C.S. Barrett, The Mission, History and Times of the Farmers' Union, Marshall and Bruce Co., Nashville, Tenn. (1909).

3. S.R. Berger, Dollar Harvest: An Expose of the Farm Bureau, AAM Publications, The Plains, Va. (1978), p. 221.

4. W. Berry, The Unsettling of America: Culture and Agriculture, San Francisco: Sierra Club Books (1978), p. 228.

5. P.M. Blaikie, "The Spatial Structure of Information Networks and Innovative Behaviour in the Ziz Valley, Southern Morroco," Geografiska Annaler, 55B (1973), pp. 83-105.

6. L.A. Brown, Diffusion Processes and Location; A Conceptual Framework and Bibliography, Philadelphia: Regional Science Research Institute (1968).

7. L.A. Brown, "Diffusion Process at the Macro and Meso Scales: An Update on a Framework for Future Analysis," Economic Geography, 51 (1975), pp. 185-216.

8. L.A. Brown, "The Market and Infrastructure Context of Adoption: A Spatial Perspective on the Diffusion of Innovation," Economic Geography, 51 (1975), pp. 185-216.

9. L.A. Brown, E.J. Malecki, and A.N. Spector, "Adopter Categories in a Spatial Context: Alternative Explanations for an Empirical Regularity," Rural Sociology, 41 (1976), p. 99-118.

10. L.A. Brown and K.R. Cox, "Empirical Regularities in the Diffusion of Innovation," Annals of the Association of American Geographers, 61 (1971), p. 551-559.

11. L.A. Brown and B. Lentnek, "Innovation Diffusion in a Developing Economy: A Mesoscale View," Economic Development and Cultural Change, 21 (1973), pp. 274-292.

12. L.A. Brown, E.J. Malecki, S.R. Gross, M.N. Shrestha, and R.K. Semple, "The Diffusion of Cable Television in Ohio: A Case Study of Diffusion Agency Location Patterns and Processes of the Polynuclear Type," Economic Geography, 50 (1974), pp. 285-299.

13. E. Casetti, "Why Do Diffusion Processes Conform to Logistic Trends?," Geographical Analysis, 1 (1969), p. 101-105.

14. E. Casetti and R.K. Semple, "Concerning the Testing of Spatial Diffusion Hypotheses," Geographical Analysis, 1 (1969), pp. 254-259.

15. K. Cox, "The Genesis of Acquaintance Field Spatial Structure," Behavioural Problems in Geography, eds. Cox and Golledge (1969) Northwestern University, Evanston, Illinois pp. 146-168.

16. J.A. Crampton, The National Farmers Union, Ideology of a Pressure Group, University of Nebraska Press (1965).

17. DeFleur, Theories of Mass Communication, D. McKay Co., New York (1966) pp. 171.

18. D. Dragovich, "Adoption and Spread of Kikuyu," Professional Geographer, Vol. 28 (1976).

19. F.C. Fliegel, J.E. Kivlin, and G.S. Sekhon, "A Cross-National Comparison of Farmers' Perceptions of Innovations as Related to Adoption Behavior," Rural Sociology, 33 (1968), p. 437-449.

20. W.C. Found, A Theoretical Approach to Rural Land-Use Patterns, New York: St. Martin's Press (1971), p. 190.

21. H. Gardner, Personal Interview, February, 1979.

22. S. Globerman, "Technological Diffusion in the Canadian Tool and Die Industry," Review of Economics and Statistics, 57 (1975), p. 428-434.

23. Z. Griliches, "Hybrid Corn: An Exploration in the Economics of Technological Change," Econometrica, 25 (1957), p. 501-522.

24. T. Hagerstrand, "Aspects of the Spatial Structure of Communication," Papers of the Regional Science Association, 16 (1965), p. 27-42.

25. T. Hagerstrand, "On Monte Carlo Simulation of Diffusion," Quantitative Geography, eds. Garrison and Marble (1967) Northwestern University, Evanston, Illinois, pp. 1-32.

26. T. Hagerstrand, "The Propagation of Innovation Waves," Lund Studies in Geography, Series B, no. 4 (1952).

27. R. Q. Hanham, "Diffusion of Innovation from a Supply Perspective: An Application to the Artificial Insemination of Cattle in Southern Sweden," Doctoral Dissertation, Ohio State University, Columbus, 1973.

28. R.Q. Hanham and L.A. Brown, "Diffusion through an Urban System: The Testing of Related Hypotheses," Tijdschrift Voor Economic en Sociale Geografie, 63 (1972), pp. 388-392.

29. R.Q. Hanham and L.A. Brown, "Diffusion Waves within the Context of Regional Economic Development," Journal of Regional Science, 16 (1976), p. 65-71.

30. D.H. Humphrey, "Innovation Theory and Patterns of Rural Development," Oxford Bulletin of Economics and Statistics, 36 (1974), p. 203-213.

31. E. Katz, "The Two-Step Flow of Communication: An Up-to-Date Report on an Hypothesis," Public Opinion Quarterly, 12 (1957), p. 61-78.

32. O.M. Kile, The Farm Bureau Movement, New York: Macmillan Company (1921).

33. J.E. Kivlin and F.C. Fliegel, "Differential Perceptions of Innovations and Rate of Adoption," Rural Sociology, 32 (1967), p. 78-91.

34. J.E. Kivlin and F.C. Fliegel, "Orientations to Agriculture: A Factor Analysis of Farmers' Perceptions of New Practices," Rural Sociology, 33 (1968), p. 127-140.

35. S. Kuznets, "Innovation and Adjustments in Economic Growth," Swedish Journal of Economics, 74 (1972), p. 431-451.

36. P. Lekvall and C. Wahlbin, "A Study of Some Assumptions Underlying Innovation Diffusion Functions," Swedish Journal of Economics, 75 (1973), p. 362-377.

37. M.S. Lewis-Beck, "Agrarian Political Behavior in the United States," American Journal of Political Science, Vol. 21, August (1977).

38. D.E. Lindstrom, American Farmers and Rural Organizations, University of Illinois, The Garrard Press (1948).

39. R. Mason and A. Halter, "The Application of a System of Simultaneous Equations to an Innovation Diffusion Model," Social Forces (1968).

40. G. McCathern, From the White House to the Hoosegow, The Staked Plains Press (1978), p. 282.

41. J.W. Mellor, The Economics of Agricultural Development, Cornell University Press, Ithaca: N.Y. (1966).

42. J.W. Meyer, "Diffusers and Social Innovations: Increasing the Scope of Diffusion Models," Professional Geographer, 28 (1976), p. 17-22.

43. R.L. Morrill, "The Shape of Diffusion in Space and Time," Economic Geography, 46 (1970), pp. 259-268.

44. R.L. Morrill, "Waves of Spatial Diffusion," Journal of Regional Science, 8 (1968), p. 1-17.

45. A. Nelson, "A Long Row to Hoe," Harpers Magazine, Vol. 256 (May 1978), p. 32-35.

46. A.R. Pred, "Large City Interdependence and the Diffusion of Innovations," Geographical Analysis, 3 (1971), p. 165-181.

47. W.D. Rasmussen, "A Bleak History for Striking Farmers," Farm Index, U.S. Department of Agriculture (Jan. 1978).

48. H.H. Remmers, "A Scale for Measuring Attitudes Toward Any Proposed Social Action," Purdue Research Foundation, Lafayette, Ind., (1960).

49. E.M. Rogers and Shoemaker, Communication of Innovations; A Cross-cultural Approach, New York: Free Press (1971).

50. E.M. Rogers, Modernization Among Peasants: The Impact of Communications, New York: Holt, Rinehart, and Winston, (1969).

51. E.M. Rogers, "Categorizing the Adopters of Agricultural Practices," Rural Sociology, 23 (1958), p. 345-354.

52. E.M. Rogers, and G.M. Beal, "The Importance of Personal Influence in the Adoption of Technological Change," Social Forces, 36 (1958), P. 329-335.

53. B. Ryan and N.C. Gross, "The Diffusion of Hybrid Seed Corn in Two Iowa Communities," Rural Sociology, 8 (1943), p. 15-24.

54. T. Saloutos, Farmer Movements in the South, 1865-1933, University of Nebraska Press (1960).

55. F.H. Sanderson, "The Great Food Fumble," Science, 188 (1975), p. 503-509.

56. M.G. Schluter and T.D. Mount, "Management Objectives of the Peasant Farmer: An Analysis of Risk Aversion in the Choice of Cropping Pattern," Occasional Paper No. 78, Dept. of Agricultural Economics, Cornell University.

57. R.K. Semple, L.A. Brown, and M.A. Brown, "Strategies for the Promotion and Diffusion of Consumer Goods and Services: An Overview," International Regional Science Review, 2 (1967), p. 470-477.

58. B.H. Slicher Van Bath, The Agrarian History of Western Europe, A.D. 500 to 1850, New York: St. Martin's Press.

59. A.N. Spector, L.A. Brown, and E.J. Malecki, "Acquaintance Circles and Communication: An Exploration of Hypotheses Relating to Innovation Adoption," Professional Geographer, Vol. 28, (1976), pp. 277-282.

60. C.C. Taylor, The Farmers' Movement 1620-1920, American Book Company (1953).

61. L. Tweeten, Foundations of Farm Policy, Nebraska: University of Nebraska Press (1972).

62. U.S. Congress. House. Study by the Congressional Research Service on Evaluations of Proposals Guaranteeing Full Parity for Farmers in the Marketplace. 95th Congress, 2d sess., 1978.

63. U.S. Congress. House. The Emergency Agriculture Act of 1978. 95th Congress, 2d sess., 1978, H.R. 6782.

64. U.S. Congress. House. The Food and Agriculture Act of 1977. Pub. L. 95-113, 95th Congress, 1st sess., 1977.

65. U.S. Department of Agriculture. Economics, Statistics, and Cooperatives Service. Analysis of American Agriculture Movement Proposal. Washington, D.C.: Office of Governmental and Public Affairs, 1978.

66. J.M. Utterback, "Innovation in Industry and the Diffusion of Technology," Science, 183 (1974), p. 620-626.

67. K.E. Warner, "The Need for Some Innovative Concepts of Innovation," Policy Sciences, 5 (1974), p. 433-451.

APPENDICES

APPENDIX A

AMERICAN AGRICULTURE producers REJECT the current farm program and instead DEMAND the following:

1. 100% of parity for all domestic and foreign used and/or consumed agricultural products.

2. All agricultural products produced for national or international food reserve shall be contracted at 100% of parity.

3. Creation of an entity or structure composed of agricultural producers to devise and approve policies that affect agriculture.

4. Imports of all agricultural products which are domestically produced must be stopped until 100% of parity is reached, thereafter imports must be limited to the amount that the American producers cannot supply.

5. All announcements pertaining to any agricultural producing cycle shall be made far enough in advance that the producer will have adequate time to make needed adjustments in his operation.

These demands dictate the need for possible production and marketing curtailments that will allow supplies to match demand. We are willing to accept these conditions. All commodity groups will participate in the formulation of policies from the local level that affect their respective commodity.

Unless our demands are met by midnight, December 13, 1977, we will be forced to implement the following measures:

1. WE WILL NOT SELL ANY AGRICULTURAL PRODUCTS.

2. WE WILL NOT PRODUCE ANY MORE AGRICULTURAL PRODUCTS.

3. WE WILL NOT BUY ANY AGRICULTURAL EQUIPMENT, PRODUCTION SUPPLIES, OR ANY NONESSENTIAL ITEM.

Our proposals are reasonable. Our goals are obtainable. Our ultimatum is justified. We ask your support. Strike for your homes, farms and ranches and businesses. Strike with the same dedication you have long employed to make this the greatest food-producing nation the world has ever known.
1. Disperse handbills . . . talk to your neighbors.
2. Park your tractors and other farm equipment with a sign saying that we will strike on Dec. 14, 1977, for 100% parity.

Park the tractors on private property next to the highway or right of way.

WE WILL NOT ADVOCATE VIOLENT ACTION. WE WILL NOT CONDONE VIOLENCE BUT

.....WE WILL STRIKE.....

APPENDIX B

The following explanation of the procedure used in the agricultural Set Aside Program is taken from Nelson [p. 33].

> A farmer who voluntarily limits his production by setting aside, or not planting, a given amount of land is eligible for government loans and deficiency payments. The set-aside requirement for wheat is 20 percent of the acreage planted for harvest. The farmer can then borrow $2.25 per bushel from the Commodity Credit Corporation against the costs of production. If the market price rises above the $2.25 loan rate, the farmer can sell his produce for a profit and repay the loan with interest. If the market price falls below the loan rate, the CCC will accept the produce itself as full payment for the loan. The loan rate is therefore the lowest price the participating farmer need accept, and if enough farmers sign up for the program it will have the effect of setting the world price floor.
>
> The farmer is further eligible for deficiency payments. The target price is the "fair" price determined by Congress--$3 a bushel for wheat in 1978--and the amount of the payment is the difference between the target price and the loan rate or the market price, whichever is higher. If wheat remains at its current price of about $2.80, the participating farmer will receive twenty cents a bushel in deficiency payments. If the price falls to $1.80, he will receive seventy-five cents, which is the difference between the target price and the loan rate. This is the maximum payment.

APPENDIX C

TIME OF AAM ADOPTION BY STATE DURING 1978-1979

STATE	JANUARY 1978	JUNE 1978	OCTOBER 1978	MARCH 1979
Alabama	2	42	39	39
Arizona	1	1	2	2
Arkansas	29	45	28	28
California	6	8	1	1
Colorado	37	44	37	38
Delaware	2	3	0	0
Florida	5	11	1	1
Georgia	56	61	34	44
Idaho	10	14	2	2
Illinois	9	37	34	35
Indiana	13	18	0	0
Iowa	10	42	6	6
Kansas	108	113	82	86
Kentucky	11	28	4	4
Louisiana	7	10	10	10
Maine	1	1	1	1
Maryland	5	6	2	2
Michigan	7	21	44	44
Minnesota	9	11	0	0
Mississippi	4	40	1	1
Missouri	56	76	67	67
Montana	29	35	1	1
Nebraska	16	30	48	48
Nevada	0	1	0	0
New Jersey	2	2	0	0
New Mexico	13	17	18	18
New York	1	2	0	0
North Carolina	1	6	0	43
North Dakota	3	10	0	0
Ohio	4	11	0	0
Oklahoma	51	71	27	31
Oregon	3	10	0	0
Pennsylvania	0	1	1	1
South Carolina	30	46	36	36
South Dakota	38	46	41	41
Tennessee	9	12	1	1
Texas	84	118	59	64
Utah	1	3	0	0
Vermont	0	3	0	0
Virginia	8	12	24	30
Washington	6	9	5	5
West Virginia	1	2	1	1
Wisconsin	1	8	8	8
Wyoming	7	9	10	10

APPENDIX D

How did you first hear about the American Agriculture Movement?

- ☐ neighbor or relative
- ☐ radio, TV, farm magazine, or newspaper
- ☐ a representative of the AAM
- ☐ other (please specify) _____

Who was the first person you met that represented the AAM?

- ☐ a neighboring farmer
- ☐ a state AAM organizer
- ☐ a traveling speaker outside of Oklahoma
- ☐ other (please specify)_____

In what month and year did you become active in your local AAM office?_____

How well do you know the organizer of your local AAM office?

- ☐ I am the organizer
- ☐ know him well
- ☐ know him a little
- ☐ do not know him

How often do you rely on farming advice from farm magazines and newspapers?

- ☐ very often
- ☐ sometimes
- ☐ seldom
- ☐ never

What is your most regular source of farming news?

- ☐ radio or TV
- ☐ newspaper
- ☐ farm magazine
- ☐ other (please specify)_____

In a typical day, how many times do you listen to the radio or TV for information on farming news?

- ☐ more than 3 times
- ☐ 3 times
- ☐ 1 time
- ☐ never

How many times did you get farming advice from your local agricultural extension agent over the last 6 months?

- ☐ more than 4 times
- ☐ 3 or 4 times
- ☐ 1 or 2 times
- ☐ never

What is your level of cooperation with the government set-aside program?

- ☐ have increased acreage planted
- ☐ planted acreage has remained about the same
- ☐ have decreased acreage some
- ☐ have decreased acreage to qualify for government requirements
- ☐ have decreased acreage more than government requires

Do technical improvements such as new seed varieties and new farm equipment help the American farmer financially?

- ☐ yes
- ☐ no

Compared to 5 years ago, how much fertilizer do you use?

- ☐ more fertilizer
- ☐ about the same
- ☐ less fertilizer

What is your political affiliation?

- ☐ Republican
- ☐ Democrat
- ☐ Independent
- ☐ other (please specify)_____

What is the nearest town that has an AAM office?_____

What is the name of the nearest town to your farm?_____

In what county do you live?_____

What is your age?_____

What is the highest level of education you have received?

- ☐ elementary school
- ☐ junior high school
- ☐ high school
- ☐ some technical training
- ☐ some college training
- ☐ college degree

Are you associated with other farm groups?

- ☐ none
- ☐ Grange
- ☐ Farm Bureau (including insurance)
- ☐ National Farmers Union (including Farmers Ins. Group)
- ☐ National Farmers Organization
- ☐ other (please specify)_____

Within the last month, how many times have you tried to convince another farmer to join the AAM?

- ☐ more than 4 times
- ☐ 3 or 4 times
- ☐ 1 or 2 times
- ☐ never

Within the last month, how often have other farmers asked you for your ideas on the AAM?

- ☐ more than 4 times
- ☐ 3 or 4 times
- ☐ 1 or 2 times
- ☐ never

Over the last 5 years how many farmers do you know that have gone out of business in your county?

- ☐ more than 4 farmers
- ☐ 3 or 4 farmers
- ☐ 1 or 2 farmers
- ☐ not any farmers

To stay in business, many farmers have gone into debt. How much is your debt right now?

- ☐ I have no outstanding loans
- ☐ I have some debt, but less than half the farm value
- ☐ More than half the farm value, but not completely
- ☐ I have a debt for the value of the entire farm

Over the last 5 years, what changes have you made in the size of your farm operation?

- ☐ I have bought or leased more land from other people
- ☐ the size of my farm operation has not changed
- ☐ I have sold or leased some of my land to other people
- ☐ other (please specify)_____

How many acres of your farm operation

do you own?_____acres
do you rent?_____acres
do you lease to others?_____acres

Do you intend to increase the size of your farm during the next 5 years?

- ☐ yes
- ☐ no

Please check all sources of income.

- ☐ crops and cattle
- ☐ oil leases
- ☐ off-farm job
- ☐ other (please specify)_____

What proportion of your total income is from off-farm sources?
_____% (for example, 20%).

How much of your crop production was still in storage at the end of 1978?

- ☐ almost none was in storage
- ☐ about 25% in storage
- ☐ about 50% in storage
- ☐ about 75% in storage
- ☐ almost all of it was in storage

What was your total income during 1978?

- ☐ less than $10,000
- ☐ $10,000 to $25,000
- ☐ $25,000 to $40,000
- ☐ $40,000 to $60,000
- ☐ $60,000 to $80,000
- ☐ $80,000 to $100,000
- ☐ $100,000 to $150,000
- ☐ Greater than $150,000

Do you intend to remain in farming during the next 5 years?

- ☐ yes
- ☐ no

Including yourself, how many dependents do you have living at home?_____

Have you encouraged your children to develop a career in farming?

- ☐ yes
- ☐ no

In the future, will you encourage your children to develop a career in farming?

- ☐ yes
- ☐ no

How often have you participated in protest activities such as tractor caravans and demonstrations?

- ☐ more than 4 times
- ☐ 3 or 4 times
- ☐ 1 or 2 times
- ☐ never

During 1978, AAM tried to reduce sales of farm produce in order to raise prices. In comparison to previous years, how much produce did you sell last year?

- ☐ sold more than usual
- ☐ average sales
- ☐ sold less than usual
- ☐ sold just enough to get by

The objective of the AAM is to protect the interest of the family farm by establishing an equality or parity of exchange in relation to the rest of the economy. How strong is your support of this AAM objective?

- ☐ very strong
- ☐ strong
- ☐ about average
- ☐ not so strong
- ☐ not strong at all

Following is a list of statements concerning the objective of the AAM. Please place a check mark beside the comments that you agree with.

- ☐ is a practical basis for future planning
- ☐ will soon become an object of bitter distrust
- ☐ has unlimited possibilities
- ☐ is sure to be effective
- ☐ can not do any serious harm
- ☐ can proceed to injurious limits
- ☐ is absurd
- ☐ places great emphasis upon fair-dealing
- ☐ will bring lasting satisfaction
- ☐ will be an influence for right living
- ☐ can not meet the demands of a complex social order
- ☐ is a disgrace to society
- ☐ will destroy our best American institutions
- ☐ will cause too much friction
- ☐ will be all right in some cases
- ☐ has its merits
- ☐ will solve some of the major problems in agriculture

If AAM could do one thing to help you, what is it you specifically want?

- ☐ marketing of crops
- ☐ group purchasing
- ☐ insurance
- ☐ represent you in congressional lobbying
- ☐ other (please specify)_____