IDENTIFICATION AND EFFECTIVENESS OF INFORMATION SOURCES USED BY OKLAHOMA FARMERS IN MAKING DECISIONS ABOUT ALTERNATIVE AGRICULTURAL ENTERPRISES

By

ROBERT DEAN KEATING

Bachelor of Arts

Fort Hays State University

Hays, Kansas

1976

Submitted to the Faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
for the Degree of
MASTER OF SCIENCE
May, 1989

IDENTIFICATION AND EFFECTIVENESS OF INFORMATION SOURCES USED BY OKLAHOMA FARMERS IN MAKING DECISIONS ABOUT ALTERNATIVE AGRICULTURAL ENTERPRISES

Thesis Approved:

Robert Terry
Thesis Adviser

James D. White

Charles M. Voyles

Norman N. Durham
Dean of the Graduate College

ACKNOWLEDGEMENTS

The writer expresses sincere appreciation to many people whose advice, cooperation and understanding helped transform this research study from ideas into reality.

Gratitude is expressed to Dr. Robert Terry, my major adviser; Charles Voyles, who was responsible for my joining the Oklahoma State University staff and entering the academic program; Dr. James White, who offered valuable advice regarding this study; Dr. James Key, who led the effort in structuring the research; and Dave Gallatin, who shared the concerns and goals during the months of development and implementation of this study.

Appreciation also is offered to the hundreds of Oklahoma farmers who contributed their time and personal responses to the research.

Deep appreciation is expressed to my wife, Sharon, daughter, Lori, and son, Brent, for their sacrifice of family time during an important period of their lives and for their love, patience and understanding.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

The cornerstone of agricultural production is information. Without obtaining relevant information about production practices, equipment and marketing, farmers would have great difficulty managing their businesses. Chances of profitability in the modern agricultural environment would be low.

Information sources available to farmers are many and diverse. Some sources, such as farm magazines and radio and television farm news broadcasts, are basic and general. Some sources, such as Cooperative Extension publications, government agency personnel and commercial industry representatives, are specific for addressing certain topics or needs much more directly and deeply.

Farmers must utilize all information sources they judge will be beneficial to them in making decisions about the various aspects of their businesses. Sources of precise information are especially important when farmers are making decisions about selecting and managing types of agricultural enterprises that are alternatives to traditional enterprises in their operations or common to their region.

When the success of a business enterprise depends largely on the quality of information the operator uses to make decisions, that businessman, who is a farmer in this case, is likely to seek information from sources in which he has the most confidence. He wants information based on proven research or experience, not on guesses or someone else's unsubstantiated personal preferences. He wants information that can be applied to specific situations he will encounter, not information that has been developed by people far removed from the reality of the

day-to-day management of his operation.

Farmers seem to be selective in the information sources they value most in making decisions within various aspects of their enterprises. For decades, farmers have gleaned a broad range of information from farm magazines about producing commodities. Radio broadcasts have been a popular source of up-to-the-hour market information. County extension agents and their programs have been easily accessible sources for assistance in planning efficient inputs and implementing progressive practices. U.S. Department of Agriculture agencies and their personnel also have been utilized as local authorities regarding farm policy provisions. Representatives of commercial manufacturers or suppliers have been visible sources for details regarding the benefits of their lines of products. And, also important in rural America, other farmers are valuable information sources regarding practices or ideas with which they can relate positive or negative experiences.

In recent years the scope of information sources available for regular use has expanded. General farm magazines now place more emphasis on marketing and financial management information. Radio air time includes more farm-related news. Television farm news and market reports are more common.

Videoconferences from land-grant universities have emerged as channels of information regarding many agricultural topics. Advertising and industry promotion have boomed as visible information sources for farmers. Individual and company-affiliated consultants also have been available for farmers' use.

Disseminating information that can be beneficial to farmers operating in a constantly changing environment is a challenge in terms of both quality and timeliness. Today many farmers have easy access to information that pertains to their specific needs and interests as a result of a vast array of resources and "state-of-the-art" technology. However, some sources meet farmers' needs better than others, while some sources offer specific information that is more relevant to different aspects of specific enterprises. In addition, some sources seem to be more

reputable -- because of tradition, past personal experiences or performance -- to supply pertinent information to farmers.

Statement of the Problem

During the recent unstable period for the agricultural economy, many Oklahoma farmers have identified a need to diversify their operations beyond production of traditional commodities such as wheat, cotton and beef cattle. Enhancement of family income has been the primary reason for seeking other commodities or services to market. However, in order to make decisions about development and maintenance of alternative agricultural enterprises, farmers must use reliable sources of information about producing and marketing non-traditional commodities.

One source is not likely to provide sufficient information to allow a farmer to make decisions about all aspects of his alternative agricultural enterprise. Different sources may be beneficial for specific decisions regarding planning, financial management, equipment purchases, production practices or marketing. Not all mass media, government or industry sources normally provide the depth of information adequate for making decisions in all areas of an operation. A farmer may benefit most by utilizing one source more heavily for a particular type of information, while seeking information from a different source for making decisions in another area.

Managers of alternative agricultural enterprises must utilize information sources that fill their needs best. Also, individuals or organizations planning information programs must realize the sources farmers turn to most readily when seeking the information they need. Harritt (1987) noted that farmers were dealing with complex problems in managing their operations, while the methods utilized to provide solutions many times were archaic and created a more difficult situation.

Purpose of the Study

The purpose of the study was to identify the sources of information used by Oklahoma farmers involved in all existing types of alternative agricultural enterprises and to identify the effectiveness of those sources in making decisions about selecting, developing and maintaining those alternative enterprises.

Objectives of the Study

In order to accomplish the purpose, the research was directed toward the following objectives:

1. To identify the types of alternative agricultural enterprises being operated by Oklahoma farmers.

2. To identify factors that encouraged Oklahoma farmers to include alternative agricultural enterprises in their farming operations.

3. To identify sources of information utilized in decision-making by Oklahoma farmers who have engaged in alternative agricultural enterprises.

4. To determine farmers' perceptions of the effectiveness of information sources used in making decisions regarding alternative agricultural enterprises.

5. To identify information sources used most by farmers involved in alternative agricultural enterprises when those farmers were divided demographically by farming classification, age and education level.

6. To determine what information sources were most useful to farmers in making decisions within specific phases of their alternative agricultural enterprises (i.e., in planning, financial management, legal, equipment and material purchasing, production, harvesting or marketing phases.)

Assumptions of the Study

Regarding this research study, the following basic assumptions were made:

1. Agricultural producers who begin or maintain an alternative enterprise must utilize information about some aspects of production or marketing from sources outside their own knowledge or experience to some degree in order to achieve market competitiveness and maintain income-production potential from the enterprise.

2. Respondents could distinguish the level of effectiveness of information received from various sources which they utilized.

3. Responses made by producers regarding their sources of information were sincere and reliable.

Scope of the Study

All Oklahoma agricultural producers who could be identified as having started some type of alternative enterprise to generate primary or supplemental income were included in the target population for the study. An alternative enterprise was defined as any new, different or non-traditional enterprise for a geographic agricultural area intended to improve farm profits or make better utilization of agricultural resources.

A telephone survey was selected as the most accurate and high-yielding method of data collection for the purposive study. Names of producers involved in some type of alternative agricultural enterprise were submitted by county Extension agricultural agents in Oklahoma and were collected from membership lists of producer organizations such as the Oklahoma Vegetable Association, the Oklahoma Fruit Growers Association, The Oklahoma Pecan Growers Association, the Oklahoma Herb Growers and Marketers Association, the Oklahoma Angora Goat Producers, the Oklahoma Christmas Tree Growers Association, the Catfish Farmers of Oklahoma, farmers market associations and from personal referrals.

Respondents included in the research data were those producers who affirmed they were involved in an agricultural production program that was

considered an alternative enterprise for the state of Oklahoma or their area.

Definitions

The following definitions will aid readability and understanding of the study:

Alternative agricultural enterprise: Any new, different or non-traditional enterprise for a geographic agricultural area intended to improve farm profits or make better utilization of agricultural resources.

Traditional enterprises: Production of the major income-producing agronomic and livestock commodities such as beef cattle, dairy, hogs, sheep, wheat, cotton, peanuts, soybeans, corn, grain sorghum and alfalfa.

Adoption of alternative enterprise: After considering, and possibly trying, production of an alternative commodity, a farmer decides to implement the production enterprise into his farming business.

Information sources: The people, organizations or news media which a farmer utilizes to collect information to help him make decisions about managing his farming business.

Effectiveness of information source: The value, as judged by a producer, derived from information received from a source as that information affected the management or success of the alternative agricultural enterprise.

Farm management: Allocating time, effort, knowledge and resources toward making a farming business involving production of commodities of the operator's choice as profitable as possible.

Continuing education: Acquisition of knowledge intended to help a person improve his/her standard of living or merely to collect new ideas or information.

Mass media: Channels of information capable of reaching intended audiences spread across a geographic area, as opposed to an audience gathered at one location and accessible face-to-face by the person disseminating information.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The purpose of this chapter was to review previous literature pertaining to the processes of communication of information to farmers, adoption of new practices by farmers and decision-making about alternative agricultural enterprises.

The major divisions of literature related to the study are (1) Alternative agricultural enterprises for farmers; (2) Adoption of new technologies and practices; (3) Making farm management and production decisions; (4) How farmers benefit from continuing education programs; (5) Information sources used by farmers; and (6) Improving Cooperative Extension information and delivery systems.

Alternative Agricultural Enterprises for Farmers

Alternative is defined in the American Heritage Dictionary (1976) as "allowing or necessitating a choice between two (or more than two) things" (p. 39). An alternative agricultural enterprise is commonly thought of as any agriculture-based operation chosen by a farmer to replace or supplement production of traditional agricultural commodities in a region or locale in order to increase net income.

Traditional enterprises of major importance in Oklahoma in the 1980s include beef cattle, dairy, hogs, sheep, wheat, cotton, peanuts, soybeans, corn, grain sorghum and alfalfa. Enterprises considered alternatives in Oklahoma in the 1980s

include fruits, vegetables, Christmas trees, catfish, Angora goats and lease hunting. Some alternative enterprises are more practical for certain regions of Oklahoma than other areas of the state, mainly because of environmental factors such as annual rainfall, seasonal rainfall, soil type or general topography.

Production of fruit and vegetable crops being studied by university and private industry researchers is possible in nearly every area where supplemental irrigation is possible. However, practicality of raising various fruit and vegetable crops for commercial marketing is higher in certain areas than it is in others. Johnson (1986) pointed out that two overriding factors influence the feasibility of farmers beginning any kind of fruit or vegetable enterprise. The first is availability of adapted varieties and seed sources. The second factor is availability of an adequate market for the product.

Johnson added that possibly the largest cash income potential for Oklahoma farmers considering an alternative agricultural enterprise is with production of horticultural crops. But, those types of enterprises also involve the highest risk crops and require a large investment and a high level of management.

Oklahoma State University agriculturists, in their summary of the state's general agricultural outlook in the publication Oklahoma Agriculture 2000 (1982) noted that Oklahoma's geographical location and diverse climate allows for a variety of horticultural crops, such as the food crops of vegetables, fruits and nuts and the ornamental enterprises of floriculture, nurseries and turf production.

Potential for expansion of many horticulture industries in Oklahoma is high, the report said, with the notation that acreage in vegetable crops, which was 31,000 acres in 1982, could increase two-to-three-fold during the following 20 years. The report continued that production of peaches, pecans, blackberries and strawberries have the highest potential for expansion, and that the crops are well adapted to family or large-scale farming in Oklahoma.

The report added, however, that Oklahoma producers are unlikely to

diversify the crops being grown in their operations unless they are presented with alternative enterprises that come with higher potential for profit than traditional commodities.

While the potential for increasing commercial vegetable production exists in many areas of Oklahoma, Causley (1986) wrote that:

> Commercial vegetable production usually requires more initial investment, closer management and more stringent market considerations than crops most state producers grow. In addition, labor requirements are higher than that of traditional agronomic crops in Oklahoma (p. 2).

Wickwire (1985) stated that:

> For any agricultural enterprise to be successful, not only does the potential producer need to have the management skills and physical resources to produce the enterprise, he must also be able to market it. Effective marketing is crucial to successful vegetable production (p. 69).

According to Bonner and Moore (1987), farmers facing unparalleled economic adversity in production of traditional crops are particularly receptive to consideration of changes in the 1980s, and the time is opportune for university agricultural researchers and Cooperative Extension specialists to address those farmers' needs.

They quoted Lee Polopolus, professor of food and resources economics at the University of Florida, as saying alternative crops have a niche in modern U.S. agriculture and, while alternative crops are not the wholesale solution for every farmer encountering an economic squeeze in production of traditional crops, there are places for many types of enterprises in agriculture.

Bellmon (1988) stated that marketing of alternative agricultural products can be particularly beneficial for wheat or beef producers who sell their commodities once or twice a year and then must budget their living and operating expenses and loan repayment over the remainder of the year. He added that production of alternative commodities can increase farm income, help spread risk

and improve utilization of farm labor.

Nelson (1988) pointed out that a farmer shouldn't be drawn into any alternative enterprise without taking a good look at all his resources. Those include land, labor, capital and management ability. Any farmer considering a specific alternative enterprise also should think about his own personal interests, his management and marketing skills, and whether the enterprise will be technically or economically feasible in his operation.

Turning to production of vegetable crops is not a way out of a debt crisis for a farmer because the risk is too high with those types of crops, according to Motes (1986). Oklahoma farmers producing traditional grain and livestock commodities should not be lured into beginning large-scale fruit or vegetable enterprises simply by large profit incentives. Production and marketing risks also can be large, especially during the developmental stages of an enterprise.

Production of an alternative crop should be attempted only by producers who are willing to go through some changes, because an alternative agricultural enterprise requires changes in farming strategies, farming practices and marketing attitudes, Motes pointed out.

Concentration on management skills can be a wise investment for a producer who is undertaking production and marketing of fruits and vegetables and who is unfamiliar with the requirements, according to Lloyd (1987). Time allocated to planning a new enterprise can prove particularly valuable.

Motes (1987) also noted that the main factor determining success or failure of an alternative agricultural enterprise may be the attitude of the producer. Factors that often are related to a producer's attitude about major shifts in farming strategy are age, health and willingness to learn and follow recommended practices. Lack of an attitude of total commitment may be the most critical obstacle to developing a successful alternative agricultural enterprise.

Adoption of New Technologies and Practices

New farming practices are adopted to varying degrees and over varying time periods by different producers. Many factors can influence the adoption process. Financial need can have a large effect on the rate of adoption. Land and equipment capabilities and the costs of converting needed resources can have either positive or negative influence on adoption of new technologies or practices. Influence from friends and neighbors, change agents such as Cooperative Extension personnel, and commercial and industry representatives can be major reasons for beginning an adoption process with new technologies or practices in farming.

Adoption normally is not accomplished with quickness and finality. For most producers, the adoption process is somewhat methodical and is not irreversible during most of its stages. Rogers (1963) presented five usual stages into which social scientists divide the adoption process. They were:

> 1. Awareness stage--the individual is exposed to the innovation but lacks complete information about it.
> 2. Interest stage--the individual becomes interested in a new idea and seeks additional information about it.
> 3. Evaluation stage--the individual mentally applies the innovation to his present and anticipated future situation and then decides whether or not to try it.
> 4. Trial stage--the individual uses the innovation on a small scale in order to determine its utility in his own situation.
> 5. Adoption stage--the individual decides to continue full use of the innovation (p. 19).

Rogers (1963), in a later writing, placed adopters into five categories: (1) innovators or those willing to take more risks; (2) early adopters or those respected as role models who possess steadying influence; (3) the early majority or those who approach adoption with deliberation after observing the success of earlier adopters; (4) the late majority or those who typically are skeptical and enter the adoption process only under peer pressure; and (5) laggards or those who hold strongly to traditional practices and do not want to take risks involved with charting new courses.

Rate of adoption of new practices or innovations does not depend solely on the individuals involved, however, Rogers explained. Characteristics that can be assigned to the innovations themselves affect their rate of adoption.

Characteristics he listed were (1) relative advantage, or the degree to which an innovation or new practice is superior to the practice it supercedes; (2) compatibility, or the degree to which an innovation is consistent with existing values, past experiences and prejudices of the adopters; (3) complexity, or the relative degree to which an innovation is difficult for the potential adopter to understand and put to use; (4) divisibility, or the degree to which an innovation can be tried on a limited basis. Rogers pointed out that research findings indicate almost no potential user adopts a new idea or practice without trying it on a limited scale first.

Another characteristic noted by Rogers was communicability, or the degree to which the results of an innovation can be communicated to potential adopters. He gave as an example of an innovation with low communicability early use of pre-emergence herbicides, which received slow acceptance because of the absence of dead weeds to show effectiveness.

Lionberger (1961) noted that sources of information also have an important influence on an adopter as he progresses through the adoption process in agriculture.

Lionberger wrote:

> Sources of information vary in relation to both the stage of adoption the farmer is in and to his relative position in the adoption cycle. At the awareness stage, mass media--newspapers, magazines, radio, television--are the most frequent source of information about new ideas and practices. The one exception is the late adopter, who is more likely to first learn about a practice from other farmers.
>
> At the interest stage, the mass media and other farmers again rate high as information sources, but for somewhat different reasons than at the awareness stage. Various agricultural agencies are likely to be important at this second stage, too, particularly for early adopters and in connection with practices involving changes in techniques or farming operations.

> Other well-regarded farmers become the most useful sources at the evaluation stage. They are considered to have the requisite experience and are readily available for consultation. They are also likely to be sympathetic to the needs of the information seeker and to understand his problems.
>
> For the "how do I apply it?" questions arising at the trial stage, several sources are most frequently used. Salesmen and dealers commonly supply the answers to questions concerning commercial products. Other farmers continue to be important, particularly for questions closely related to existing farming operations. For more complex practices less closely related to existing operations, the county agent, vocational agriculture teacher and other such professionals or specialists are in demand.
>
> Finally, at the adoption stage, when a farmer has decided in favor of continued use of a new idea or practice, self-satisfaction and the satisfaction of others to whom he often refers are most important. For some, research findings from government and industry help reinforce decisions made; for others the experiences of other successful farmers are most important (pp. 5-6).

Rogers (1963) added two generalizations about the roles of information sources in the adoption process. One was that impersonal information sources, in which there is no face-to-face contact, are most important to adoption at the awareness stage, and personal information sources, in which there is a face-to-face exchange between the communicator and the receiver, are most important at the evaluation stage of adoption.

His second generalization was that "cosmopolite" information sources, which are from outside an adopter's community, are most important at the awareness stage, and "localite" information sources, which operate within the loose confines of community interaction, are most important at the evaluation stage of adoption.

Rogers supported the second generalization by stating that:

> In the early stages of the adoption process, the idea must enter from external sources. Gradually the innovation is planted within a community and becomes a part of the local culture. Then, local information sources become important in the evaluation stage (p.20).

In an earlier work, Rogers (1962) pointed out that the adoption of an innovation requires a decision by an individual. Decision-making is the process by which an evaluation of the meaning and consequences of alternative lines of

conduct is made, he wrote.

Rogers added that decision-making is a process that can be divided into a sequence of stages. Decision-making involves the following steps: (1) observing the problem; (2) making an analysis of it; (3) deciding the available courses of action; (4) taking one course; and (5) accepting the consequences.

Lionberger and Gwin (1982) outlined stages that can be identified during the innovation to information dissemination to adoption processes between individuals or groups. They are:

(1) Innovation -- it must be developed by one party;

(2) Validation -- the use and practicality of the innovation are tested;

(3) Information dissemination -- communication of the innovation is spread to the people who are the intended or practical users of it;

(4) Informing and persuading (or legitimizing) functions -- the innovation gains acceptance on the part of the users; and

(5) Integration -- the users begin working it into their management plans.

Lionberger and Gwin also listed likely responses by people receiving messages about ideas or innovations through mass media channels. According to their studies, the receivers either:

(1) Ignore the message. They turn the message off or do not retain any knowledge of it;

(2) Become exposed. They listen and retain the information for their possible uses;

(3) Seek more information. Their curiosity or attention is aroused. They seek out further sources that can supply more details.

(4) Do what is suggested. They accept the information and put it to use.

Lionberger and Gwin added that:

> If the target audience is favorably disposed to what is communicated, the change agent may achieve the educational objectives merely by providing information. Fortunately, most

> farmers are likely to be interested in learning new things about farming. In this case, the educational problem becomes mostly one of providing the right information in a timely and understandable manner. Mass media channels are particularly useful in providing farmers with the routine information they need. This includes current information on weather, markets and farming operations (p. 145).

Havelock (1971) wrote about "variable utility of communication media" and divided information sources into categories defined by "one-way diffusion," "one-way feedback" and "two-way transmissions" (p. 9-1).

He said one-way media are effective means of informing mass audiences about an innovation. One-way transmission media and their specially "tuned-in" audiences often serve to catalyze further information-seeking within the user system as a whole. For a few specialized users, such as the innovators, one-way media may be sufficient for evaluation, trial and adoption, he pointed out.

The two-way transmissions are imperative for the adoption of innovations requiring alterations in attitude or behavior, Havelock added.

Making Farm Management and Production Decisions

Heady (1954) explained that successful farm management requires a balance between risk-taking and conservatism in decisions. He added that:

> Successful farm management requires learning. Good managers spend time learning and making decisions on the basis of what they learn. They learn from other farmers, from newspapers and magazine articles, from bulletins and pamphlets, from Extension agents or trade specialists or from radio and television. Learning and mental processes must be exercised continuously because the world does change. Changes in weather, new farming practices, farm programs, and prices constantly require that the manager, as a learner, continue to observe, obtain and weigh information, analyze and then make his decisions (pp. 17-18).

A model of the innovation-decision process, as developed by Rogers and Shoemaker (1971) consists of four sequential functions or stages:

> (1) knowledge--the individual is exposed to the innovation's existence and gains some understanding of how it functions; (2) persuasion--the individual forms a favorable or unfavorable attitude toward the innovation; (3) decision--the individual engages in activities which

> lead to a choice to adopt or reject the innovation; and (4) confirmation--the individual seeks reinforcement for the innovation-decision he has made, but he may reverse his previous decision if exposed to conflicting messages about the innovation (p. 132).

Farm income variability from year to year and between periods of years is characteristic of agriculture on the Great Plains, as pointed out by Aanderud (1964). Main reasons are price changes due to marketing systems of supply and demand and weather variability. A farm operator is not capable of making all the adjustments necessary to limit fluctuations in his income, Aanderud noted. Some influences are society-generated, such as government-sponsored commodity price support programs and tax provisions. However, a farm operator normally has decision-making authority over such variables as flexibility, product diversification and selection of low-risk enterprises.

How Farmers Benefit from Continuing Education Programs

Education is the cornerstone of adoption of new ideas, practices and technology by adults in agriculture. Educational opportunities, whether highly structured or loosely structured, provide agricultural producers with means of gaining access to new information they can consider adapting to their needs and management plans.

Information gleaned through mass media channels or specialized publications sometimes is insufficient for allowing producers to accumulate all pertinent details and make informed decisions about managing their operations. But structured educational efforts of agencies or organizations should be coordinated so the information offered from various sources is complementary rather than contradictory or confusing.

Educational programs for agricultural producers during periods of rapid transition of technology require coordinated efforts by all agencies actively engaged in providing educational programs and disseminating agricultural

information, suggested Bishop (1972).

As the agricultural system has advanced in the U.S., organizations outside the traditional educational system have increased their emphasis on research and dissemination of research findings, and producers have increasingly looked toward those organizations as sources of the most up-to-date information, Bishop wrote, and added:

> ...to justify its existence, adult education in agriculture must move ahead with maximum educational effectiveness and efficiency. Programs must be developed through a process which involves all educational agencies placing emphasis on local involvement in the development of adult programs. Many efforts to provide integrated adult education programs have been inhibited by the organizational and philosophical separateness of our educational institutions (p. 248).

The various agencies and organizations involved in agricultural education efforts can fill distinct roles in offering information and assistance to producers in position for adopting changes. Leuthold (1980) noted that:

> Past research on farmers' acceptance of new agricultural technology has shown that different sources of information about new items of technology are used to different extents at the different stages of the decision-making process (p. 5).

He added that each separate item of new technology has its own attributes that affect adoption decisions by potential users. He listed the five main attributes that affect the use of each technology as: (1) relative advantage over existing technology; (2) trialability, or the extent the producer can self-test the technology under his own conditions; (3) complexity, or the ease or difficulty in understanding the basic technology; (4) observability, or the extent to which obvious results can be seen; and (5) compatibility with other technologies and management plans in the farming operation.

Iowa educational studies reported by Smith and Kahler (1982) indicated that producers were using mass media channels of communication in accessing information and trying to solve basic problems, but those channels were inadequate in meeting farmers' educational needs. They identified a need for more formal

instruction to offer the latest knowledge in technical agriculture relevant to the producers' most pressing problems.

Smith and Kahler reported from their study that:

> ...participants who placed higher value on instruction were those involved in individual farming operations, were well established in farming, were operating larger acreages, were showing greater profit margins from their farming enterprises, and were participating more extensively in leadership activities in the community (p. 44).

Information Sources Used by Farmers

Individual farmers rate some information sources higher than others in the usefulness of information gained for their needs. And, different farmers have different preferences regarding the sources to which they turn for information. Yet, farmers depend on information sources within similar types for dealing with similar aspects of their operations.

Adams and Parkhurst (1984) quoted a University of Nebraska study conducted by Thomas Brown and Arthur Collins as concluding that farmers placed different priorities of need on various categories of information, such as marketing, production, business management, purchasing supplies and farm policy, and that the farmers surveyed rated the value of information channels differently according to the subject matter for which they were seeking information.

In the follow-up study by Adams and Parkhurst, they asked Nebraska farmers to rate 17 channels of communication as to their importance in supplying the information necessary in implementing the most significant change in their main farming enterprise. They reported that farm magazines were consistently rated as the leading source of change information, and that magazines had the highest rating regardless of the enterprise or change type to which the respondents were referring. Rated behind farm magazines in the top half of important communication channels as sources of change information were newspapers, radio, television, neighbors or other farmers, representatives of private companies,

Cooperative Extension staff, Extension Service or Experiment Station publications, market reports, and tours or field days.

Bay (1980) stated that, in any country, technology transfer from the laboratory to the farmer through a designed system is important. He noted that there is no increase in production--nothing happens--until farmers get, accept and use the research information and improved practices that will help them increase production and improve farm income.

In a study of Canadian strawberry growers, Alleyne and Verner (1969) described results from interweaving studies of four adopter categories -- innovator-early adopter, early majority, late majority and laggards with studies of four categories of information sources -- government, commercial, farm organization and personal.

They reported:

> Personal sources had the highest degree of use within all adopter categories, but were slightly larger among the laggard and late majority respondents. Government information sources, which ranked second in importance for all adopter categories, were used least by laggards (20.3%) and slightly more by the "majority" respondents (26.5%). The highest percentage use of government sources (32.5%) was by the early adopter-innovator category.
>
> The use of commercial and farm organization sources did not show any distinct pattern in terms of adoption performance. Commercial sources were third in importance for all adopter categories except the late majority respondents who used a higher percentage of farm organization sources. Early majority respondents reported the highest percentage use of commercial sources (18.7%), followed by laggards (17.0%), early adopter-innovators (11.5%), with the lowest use by the late majority (9.9%). The least used source type was farm organizations, ranging between 7.4 and 12.1 percent, and there was no significant difference between adopter categories in the proportional use of that source type (p. 11).

In a research study of north central Oklahoma wheat producers' awareness of integrated pest management practices and information sources behind that awareness, Finley (1981) found that the respondents' first knowledge of integrated pest management came through newspapers (41.07%), magazines (19.55%), county Extension agents (12.00%), other farmers (8.66%), and Extension specialists (7.82%).

Leading sources cited by the respondents in helping them make decisions about adopting integrated pest management practices were county Extension agents (25.68%), newspapers (18.92%), Extension Service specialists (14.86%), other farmers (9.46%), farm supply representatives (8.11%) and magazines (8.11%).

Proctor (1983) surveyed Jackson County, Oklahoma, wheat and cotton producers to determine the sources of agricultural information they were using. He found their top two preferences for mass media sources were magazines and radio. The two leading sources in the category of business and government agencies were the county offices of the Agricultural Stabilization and Conservation Service (ASCS) and the Cooperative Extension Service. The two leading sources in personal contacts were friends and relatives first, followed by Extension personnel.

The top information sources in those categories in frequency of use were radio and magazines in mass media, county ASCS and Extension offices in business and government agencies, and Extension personnel first and then friends and relatives in personal contacts.

In his study of information sources used by south central Oklahoma farmers, Morris (1954) reported that, of 50 producers surveyed, 46 read farm magazines, 46 read farm-related news in newspapers and 46 listened to radio farm programs. Thirty-eight of the producers took advantage of agriculture bulletins offered by the county Extension office or the local vocational-agriculture teacher. Thirty-five producers stated that they also received useful information from other farmers. When asked about their most useful personal contacts for agricultural information, the producers identified as their leading source the vocational-agriculture teacher, followed by the county Extension agent.

Starks (1972), in a study of Kansas wheat producers' production problems and information sources to which they turned for assistance, reported that:

Among mass media sources, farm magazines, newspapers, machinery or oil publications, and television reports were the sources most often utilized. Among

business or government agencies, the county Extension office ranked first, followed by the local cooperative, young farmer classes, Soil Conservation Service, Agricultural Stabilization and Conservation Service, bank farm advisor, and machinery dealers. Leading sources of interpersonal communication were neighbors, relatives, Extension specialists and vocational-agriculture teachers.

His findings also showed that farm magazines were the most frequently used of all the information sources listed in the study, and that farm organizations were not important information sources regarding wheat production problems.

Results from four Illinois studies compiled by Thomas and Evans (1963) showed that farmers considered farm magazines their most important information source. Also rated as highly beneficial sources, in order, were neighbors and friends, county Extension agents, commercial companies' representatives, radio, vocational agriculture instructors, newspapers and farm organizations.

In an earlier Illinois study about farmers' use of federal and state agricultural publications, the Farm Research Institute at the University of Illinois (1958) reported that 81.5% of Illinois farmers knew that U.S. Department of Agriculture publications were available and 66.6% knew that University of Illinois agriculture publications were available. However, 27.6 percent of respondents reported they had used none of the publications from the two sources during the last year, 23.5% said they had used five or fewer publications, 30.0% indicated they had used from 6 to 15 publications, and 18.9 percent said they had used 16 or more publications. Not surprisingly, the researchers found that the heavier a user a farmer was of publications, the higher degree of help he reported he received from those types of publications.

In the same study, the researchers also found that county Extension agents were the preferred source among farmers of information about publications and the preferred source to obtain the publications. The study also showed a correlation between farmers' rates of use of the agricultural publications and the

economic level of their farming operations. The higher the value of agricultural commodities produced on the farm, the higher the rate of use of the publications made by the farmer.

Improving Cooperative Extension Information and Delivery Systems

Key wording of the Smith-Lever Act of 1914 establishing the Cooperative Extension Service concerns "...diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics and to encourage application of the same..."

The Cooperative Extension Service is the most readily apparent source for information regarding many agricultural matters. As agriculture has entered the technological era, Cooperative Extension has had opportunities to remain or become the leading source of information regarding many emerging topics and with many audiences and diverse sub-audiences.

Questions arise continually about whether the time has arrived for Cooperative Extension to redefine its major objectives and gear its programs and resource personnel toward serving specific audiences heretofore not targeted for as much special emphasis as traditional audiences of agricultural producers, farm families and rural youths. Urban families, urban youths, the elderly population, homeowners and home gardeners are audiences placed in the category with potential for receiving upgraded programs.

The objectives of Cooperative Extension, out of necessity, must be broad and serve the needs of diverse audiences, noted Brown (1981). However, Cooperative Extension must not stray away from development of needed programs for its diverse audiences within agriculture. In fact, unparalleled opportunities exist for innovative program development between Cooperative Extension and other information-oriented and assistance-oriented groups. Brown further

emphasized that:

> Extension is not the only source of agricultural information available to farmers, and in some areas it is not the most important. Extension must reassess its real strengths and make adjustments to assure a high quality program. This could mean dropping some programs completely, teaming up with private business to find sufficient resources to impact on a problem, and cooperate with other agencies to assure maximum return from the investment of public funds (p. 862).

But communication is more than information delivery, according to Springer (1981). Cooperative Extension personnel must identify the needs of their intended audiences, determine how people want to receive information, the form of that information so it will be of most benefit to them, what message should be formulated to reach that goal best, and the best medium through which the message should be transmitted, he said. A key element often is selection of the most effective method and medium to carry messages to Cooperative Extension audiences to achieve intended goals. Some communication channels simply are not effective for certain subjects and audiences.

Awa and Crowder (1978) suggested that Cooperative Extension professionals concerned with disseminating information to agricultural producers must recognize the diversity of sources and communication channels through which those farmers seek agricultural information.

Their study of information sources used by New York farmers, and Cooperative Extension's role in serving those farmers' information needs, showed that, while all information sources were recognized as being potentially useful, certain sources filled specific needs of farmers better than others. For example, farm magazines and Cooperative Extension publications are viewed as the most useful sources for addressing information needs in specific situations.

However, Awa and Crowder added that:

> Commercial dealers were found to be readily accessible sources and are in a strategic position to communicate with farmers when their credibility has been established. Clearly, they're a determining force in decisions to adopt new farm practices. However, when a final

> decision must be made, it's fellow farmers who are most often consulted.
>
> Extension agents aren't always the primary nor the most frequently contacted source, but they do seem important as "information validators." Farmers know they can depend on Extension for timely information about new farming developments. In general, our findings indicate a tendency for farmers to look to other sources for initial information, with the Extension agent assuming an intermediate role (p. 25).

No single approach to serving agricultural producers' information needs will be adequate, and Cooperative Extension needs to employ a variety of approaches designed to meet local needs in the best way possible, according to Nolan and Lasley (1979). They conducted a study regarding Missouri farmers' contacts with various aspects of Cooperative Extension's information delivery system.

They indicated the highest contact group with all Cooperative Extension communication channels tended to be younger farmers and those operating larger farms. Furthermore, in planning programs in the past, Cooperative Extension personnel have traditionally assumed their main audience was relatively homogeneous. But, as Nolan and Lasley, noted:

> The last three decades have witnessed a marked change in the social structure of rural America. Our concern is that Extension's programming hasn't seen a corresponding adjustment. This has resulted in a substantial erosion of political support directly proportioned to Extension's declining clientele base (p. 25).

Findings of Lyons and Hillison (1983) in a study of Virginia tobacco farmers' perceptions of Cooperative Extension and its programs indicated that positive relationships existed between rural clients' attitudes toward Cooperative Extension, their degree of participation in the agency's programs and the amount of knowledge they possessed regarding functions of the Cooperative Extension Service.

The most significant finding concerned differences in farmers' perceptions according to the size of farm being operated. They reported that attitude, participation and knowledge scores for small flue-cured tobacco producers sampled

were lower than the large flue-cured tobacco producers' scores. In most instances the scores were significantly lower.

Summary

This review of literature presented information from six key areas related to the objectives of the study. Areas of emphasis were: alternative agricultural enterprises for farmers, adoption of new technologies and practices, making farm management and production decisions, how farmers benefit from continuing education programs, information sources used by farmers, and improving Cooperative Extension information and delivery systems.

Alternative agricultural enterprises offer some farmers opportunities to diversify their businesses, spread out their risk and improve their farm's income-producing potential. Production of alternative commodities feasible for an area also can help diversify and strengthen the agricultural economy of that area. If markets exist for specific alternative products and if the commodities can be produced efficiently and economically in an area, they may have a place in the agriculture of the area.

Adoption of agricultural enterprises by farmers often is because of potential those enterprises have for improving financial return in the total farming operation. Other farmers adopt new enterprises because of influence from friends or family. Availability of information about producing and marketing the alternative is very important in the adoption process.

Five stages of the adoption process normally conducted by a farmer considering a new idea or practice are the awareness stage, interest stage, evaluation stage, trial stage and adoption stage.

Most farm management and production decisions are made by a farmer with the intent of maintaining a balance between risk-taking and conservatism. Decisions normally are made in response to price and environmental influences.

Education plays an important role in farmers' adoption of new ideas, practices and technology. More input is needed into farmers' decisions than the mass media information they receive. To maintain a progressive attitude toward comprehensive management of a modern farming business, a farmer must be exposed to some extent to educational programs targeted toward improving production efficiency. Studies have shown mass media channels of information have been inadequate in meeting all of a farmer's educational needs.

Farmers place different priorities of need on information useful for various aspects of their businesses. Value of information sources varies according to the subject matter and the purpose for which they are seeking information. For some information needs, farmers rely heavily on personal sources such as friends and neighbors, other producers of the same commodities or perceived experts on the specific subject. Government information sources -- agencies and trusted individuals within those agencies -- are utilized for assistance with some matters.

Organizations of producers dealing with specific commodities or general agriculture are dependable sources for supplying information regarding production, marketing and regulation to their members. Mass media channels are very visible and credible sources of information about agricultural topics.

The Cooperative Extension Service is a source of assistance frequently mentioned as being highly beneficial to agricultural producers, and information dissemination is a key element in the role of Extension in the agricultural system. Important aspects in Cooperative Extension continuing its role as a reliable supplier of information are identifying needs of the intended audiences, determining what information should be provided and selecting the best media for delivering that information.

No single approach to serving producers' information needs will be adequate. Cooperative Extension and other disseminators of information may need to employ a variety of approaches to meet local needs in the best way possible.

In conclusion, the review of literature indicated that adoption of alternative enterprises is a normal and necessary practice in the evolution of agriculture, and that procurement of relevant information from many sources is essential for farmers to make beneficial decisions about adoption and maintenance of alternative enterprises.

CHAPTER III

DESIGN AND METHODOLOGY

Introduction

The purpose of this chapter was to describe the methods and procedures used in conducting this research study. In order to collect data which would provide information relating to the purpose and objectives of this study, the survey population was determined and a telephone questionnaire instrument was developed for data collection. The data collection procedure was established.

Population

The population for this study was comprised of 696 Oklahoma farmers identified as being involved in some type of alternative enterprise.

Identification of those farmers was accomplished by the following methods:

1. Cooperative Extension agricultural agents in all Oklahoma counties were asked to identify agricultural producer clientele in their counties who were involved in some type of alternative agricultural enterprise. (Appendix A)

2. Agricultural producers also were identified as being involved in an alternative agricultural enterprise from their participation in the following producer organizations:

The Oklahoma Vegetable Association.

The Oklahoma Fruit Growers Association.

The Oklahoma Angora Goat Producers.

The Oklahoma Christmas Tree Growers Association.

The Oklahoma Pecan Growers Association.

The Oklahoma Herb Growers and Marketers Association.

Catfish Farmers of Oklahoma.

3. Referrals also were compiled from individuals with knowledge of specific farmers involved in some type of alternative enterprise.

A news release was prepared and disseminated through Oklahoma State University's Agricultural Information Department to daily and weekly newspapers in Oklahoma informing farmers about the upcoming telephone survey and explaining its purpose. (Appendix B)

Preparation of the Instrument

It was decided that a structured telephone questionnaire would provide the highest response rate and would provide the most accurate and usable information.

As Key (1974) pointed out, advantages of a questionnaire include (1) economy of expense and time in collecting data from large numbers of subjects in different locations; (2) uniformity of questions presented to the subjects; and (3) standardization of the method of collecting the needed data. The questionnaire also proved useful for isolating specific questions; therefore observations could be viewed as more objective and standardized, according to Van Dalen (1966). In addition, Randle (1981) stated that a telephone questionnaire provided the largest time and cost benefits.

A combination open form/closed form questionnaire was developed to elicit information about respondents' types of alternative agricultural enterprises, factors encouraging farmers to begin an alternative enterprise, information sources they used in making decisions about their alternative enterprise, their rating of effectiveness of those information sources, and the information sources they found most useful in specific phases of their alternative enterprise. (Appendix C)

The questionnaire was shown to selected Oklahoma Cooperative Extension

Service personnel who have responsibilities that include administrative or subject matter expertise related to agricultural enterprises considered alternatives in Oklahoma. Suggestions were solicited and received from the Extension personnel, and revisions were made in fune-tuning the instrument to provide as practical an approach as possible to the farmers to be surveyed and to elicit responses in accordance with the objectives of the study.

Administering the Instrument

Telephone numbers of survey respondents were obtained along with the county agent referrals, with membership lists from the targeted producer organizations and from local Southwestern Bell and other commercial area telephone directories.

Telephone callers were hired from among the student population of the Oklahoma State University College of Agriculture to assist survey developers in conducting the interviews. Potential callers were instructed about the objectives and administration of the survey form and screened by having them conduct mock telephone calls to survey developers.

Points stressed to potential callers during their orientation included informing respondents of the definition of an alternative agricultural enterprise devised for survey purposes and to adequately ascertain if the respondent was, indeed, involved in an alternative agricultural enterprise for Oklahoma or his area.

Emphasis also was placed on making certain the callers understood the specific types of production enterprises listed on the questionnaire, other possible responses from producers, and categories under which those commodities or services should be placed. Callers also were instructed regarding the scope and function of information sources listed on the questionnaire.

When survey developers were confident that callers understood the objectives of the survey, the terms and definitions included in the questionnaire

and the approach that was desired in communication with respondents, callers were allowed to make their initial telephone contacts.

Surveying began in August, 1988, and ended in February, 1989. Calls were placed from 6 to 10 p.m. Monday through Thursday of most weeks during that period.

Very close to 100 percent of Oklahoma farmers identified as operating some type of alternative enterprise agreed to respond to the survey questions and furnished information about their alternative enterprises.

Analysis of Data

The survey provided the following information: (1) types of alternative enterprises being operated by Oklahoma farmers; (2) factors that encouraged adoption of alternative enterprises; (3) information sources used by Oklahoma farmers in operating alternative enterprises; (4) effectiveness of information sources as rated by Oklahoma farmers operating alternative enterprises; and (5) information sources used by Oklahoma farmers in selected phases of their alternative enterprises.

The survey involved subjective judgments which resulted in qualitative data. The survey also was designed to quantify the responses given, which allowed use of statistical procedures to aid in data interpretation. Data within the descriptive study were interpreted primarily by frequency distributions and percentages, and some data also were presented in the form of means and standard deviations.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

The purpose of this chapter was to describe information sources used most and rated as most effective in their decision-making by Oklahoma farmers who have tried some type of alternative enterprise in their farming operation.

The chapter describes the survey population by farming classification, age and level of education; identifies the variety of alternative enterprises being operated by Oklahoma farmers surveyed; presents factors stated by respondents as reasons they adopted an alternative enterprise; identifies information sources respondents have used in making decisions about their alternative enterprises; and describes the level of effectiveness respondents rated each information source used.

Population

The population of this study was comprised of Oklahoma farmers identified as being involved in some type of alternative enterprise from lists obtained from county Extension agricultural agents and from membership lists of the Oklahoma Vegetable Association, the Oklahoma Fruit Growers Association, the Oklahoma Pecan Growers Association, the Oklahoma Herb Growers and Marketers Association, the Oklahoma Angora Goat Producers, the Oklahoma Christmas Tree Growers Association, the Catfish Farmers of Oklahoma, farmers market associations, from referrals and from miscellaneous sources that identified individual alternative agriculture operations.

A total of 696 farmers involved in alternative enterprises provided information via the telephone survey. Useful data was gathered from farmers in all 77 Oklahoma counties.

Characteristics of Respondents

Of the farmers involved in alternative enterprises, 335 were identified as farming full-time (Table I), 197 were farming part-time while working at a part-time outside job, and 156 were sundown farmers who had a full-time job and were farming during off-hours and weekends.

TABLE I

DISTRIBUTION OF RESPONDENTS BY FARMING CLASSIFICATION

Classification	Frequency Distribution N	%
Full-Time	335	48.7
Part-Time	197	28.6
Sundown	156	22.7
Total	688*	100

*Eight respondents declined to provide demographic data about themselves.

The average age of the farmers surveyed was 51 years. The largest percentage of respondents (28.1) was in the age range of 40 to 49 years (Table II). The next largest percentage (25.7) was in the 50 to 59 age range. Those two age groups comprised almost 54 percent of respondents.

TABLE II

DISTRIBUTION OF RESPONDENTS BY AGE

Age	Frequency Distribution N	%
17 to 29	18	2.6
30 to 39	124	18.0
40 to 49	193	28.1
50 to 59	177	25.7
60 to 69	120	17.5
70 or Older	56	8.1
Total	688*	100

*Eight respondents declined to provide demographic data about themselves.

TABLE III

DISTRIBUTION OF RESPONDENTS BY HIGHEST LEVEL OF EDUCATION COMPLETED

Educational Level Completed	Frequency Distribution N	%
8 or Fewer Years	17	2.4
1 to 2 Years of High School	20	2.9
3 to 4 Years of High School	211	30.7
1 to 2 Years of College	112	16.3
3 to 4 Years of College	212	30.8
More Than 4 Years of College	116	16.9
Total Respondents	688*	100

*Eight respondents declined to provide demographic data about themselves.

The grade completed by respondents during their formal education averaged 14. The largest percentage of respondents (30.8) had completed three to four years of college (Table III), just slightly ahead of the percentage of respondents completing three to four years of high school (30.7).

Alternative Enterprises

Commodities being produced in alternative enterprises being operated by respondents included many types of vegetables and fruit, melons, Christmas trees, pecans, sod, nursery stock, herbs, grasses, catfish, Angora goats, ostriches, llamas, manufactured equipment and lease hunting.

Among the alternative enterprises being operated by larger numbers of Oklahoma farmers surveyed (Table IV) were tomatoes (132), pecans (116), peaches (100), watermelons (93), sweet corn (91), cantaloupes (87), squash (74), apples (73), okra (72), Angora goats (59), Christmas trees (53) and catfish (34).

Factors Encouraging Alternatives

Factors that encouraged respondents to adopt their particular alternative enterprise(s) in their farming operations also were identified (Table V).

High potential for profit (38.9 percent of respondents) was the leading factor. Genuine desire to produce the commodity (33.5 percent) also was a leading response. Other common factors included encouragement from friends, relatives or neighbors (18.4 percent) and low profit from traditional enterprises (18.0) percent.

Information Sources Being Used

Other farmers were identified as the sources used by the most respondents when obtaining information to aid decision-making about their alternative enterprises (Table VI). Of the 696 respondents, 574 or 82.5 percent acknowledged using information provided by other farmers about their particular type of

TABLE IV

DISTRIBUTION OF TYPES OF ALTERNATIVE ENTERPRISES BEING OPERATED BY OKLAHOMA FARMERS

Enterprise	Frequency Distribution N	%
Tomatoes	132	19.0
Sweet Corn	91	13.1
Squash	74	10.6
Okra	72	10.3
Green Beans	55	7.9
Cucumbers	55	7.9
Peppers	53	7.6
Blackeyed Peas	48	6.9
Broccoli	33	4.7
Asparagus	32	4.6
Cauliflower	17	2.4
Peas	32	4.6
Potatoes	32	4.6
Turnips	27	3.9
Cabbage	26	3.7
Sweet Potatoes	23	3.3
Onions	21	3.0
Spinach	19	2.7
Cauliflower	17	2.4
Lettuce	8	1.2
Beets	5	0.7
Eggplant	4	0.6
Greens	4	0.6
Carrots	3	0.4
Radishes	3	0.4
Garlic	3	0.4
Brussel Sprouts	1	0.1
Watermelons	93	13.4
Cantaloupes	87	12.5
Pumpkins	30	4.3
Peaches	100	14.4
Apples	73	11.0
Strawberries	58	8.3
Blackberries	43	6.2
Grapes	28	4.0
Blueberries	22	3.2
Plums	17	2.4
Cherries	13	1.9
Nectarines	9	1.3
Pears	9	1.3
Apricots	9	1.3
Raspberries	3	0.4
Boysenberries	2	0.3
Kiwi	1	0.1

Table IV (Continued)

Enterprise	Frequency Distribution N	%
Pecans	116	16.7
Christmas Trees	53	7.6
Old World Bluestems	32	4.6
Nursery Trees/Plants	25	3.6
Herbs	23	3.3
Sod	12	1.7
Flowers	12	1.7
Greenhouse Plants	10	1.4
Pine Trees	7	1.0
Sunflowers	5	0.7
Mungbeans	4	0.6
Range Grass Seed	3	0.4
Walnut Trees	3	0.4
Mushrooms	2	0.3
Cannas	2	0.3
Sesame	1	0.1
Canola	1	0.1
Pearl Millet	1	0.1
Guar	1	0.1
Indian Corn	1	0.1
Gourds	1	0.1
Angora Goats	59	8.5
Catfish	34	4.9
Sheep	26	3.7
Ostriches	15	2.2
Bees	7	1.0
Poultry	6	0.9
Emus	5	0.7
Llamas	4	0.6
Dogs	3	0.4
Dairy Goats	3	0.4
Rabbits	3	0.4
Parakeets	2	0.3
Crawfish	2	0.3
Bass	2	0.3
Pigeons	2	0.3
Pheasants	2	0.3
Quail	2	0.3
Alligators	1	0.1
Guinea Pigs	1	0.1
Manufacturing	7	1.0
Firewood	5	0.7
Hunting Leases	4	0.6
Wheat Weaving	1	0.1
Guest Ranch	1	0.1
Meat Processing	1	0.1

Multiple responses about alternative enterprises in their operations were given by many farmers; therefore, the total of percentages exceeds 100 percent.

TABLE V

DISTRIBUTION OF RESPONDENTS ACCORDING TO FACTORS THAT ENCOURAGED ADOPTION OF ALTERNATIVE ENTERPRISES

Factor	Frequency Distribution N	%
Low Profit from Traditional Enterprises	125	18.0
High Potential for Profit	271	38.9
Less Risk than Previous Enterprises	12	1.7
Encouragement from Friends Relatives or Neighbors	128	18.4
Genuine Desire to Produce the Commodity	233	33.5
Encouragement from Financial Lender	3	0.4
Desire to Reduce Workload	11	1.6
Health Concerns	7	1.0

Multiple factors were cited by some respondents; therefore, the total of percentages exceeds 100 percent.

TABLE VI

DISTRIBUTION AND RANK ORDER OF INFORMATION SOURCES USED BY OKLAHOMA FARMERS OPERATING ALTERNATIVE ENTERPRISES

Information Source	Frequency Distribution N	%	Rank
Monthly or Weekly Farm Publications	424	60.9	5
Daily or Weekly Newspapers	219	31.5	8
Radio	124	17.8	13
Television	165	23.7	11
Cooperative Extension Fact Sheets, Newsletters or other Publications	511	73.4	2
Cooperative Extension Videoconferences	82	11.8	15
Young Farmers Organization	47	6.8	16
Farm or Grower Organizations	366	52.5	6
Vo-Tech Farm Management Program	41	5.9	17
County Extension Agents	511	73.4	2
State or Area Extension Specialists	425	61.1	4
Vocational Agriculture Instructors	84	12.1	14
County ASCS or SCS Personnel	216	31.0	9
Other Farmers	574	82.5	1
Manufacturer or Supplier Representatives	289	41.5	7
Buyer or Processor Representatives	185	26.6	10
Professional Consultants	146	21.0	12

Multiple information sources used were cited by most respondents; therefore, the total of percentages exceeds 100 percent.

alternative enterprise.

County Extension agents and Cooperative Extension fact sheets, newsletters or other publications were tied as the second most utilized sources of information about alternatives, with 511 affirmative responses for each source, or 73.4 percent of farmers surveyed.

Other leading information sources were state or area Extension specialists (425), monthly or weekly farm publications (424), farm or grower organizations (366), manufacturer or supplier representatives (289), daily or weekly newspapers (219), county ASCS or SCS personnel (216) and buyer or processor representatives (185).

Information Sources Used According to Demographic Groups

The most widely used information sources also were identified by demographic groupings according to farming classification, age and education level.

Of the 696 Oklahoma farmers identified as being involved in some type of alternative enterprise and responding to the telephone survey, 688 provided demographic information about themselves.

According to Farming Classification

Other farmers were the leading information sources identified by all three groups divided according to farming classification -- full-time farmers, those farming part-time and also maintaining a part-time outside job, and sundown farmers who had a full-time outside job and were farming during off-hours and weekends (Table VII).

Of the 335 respondents classified as full-time farmers, 82.1 percent received information about their alternative enterprises from other farmers. Other leading

TABLE VII

DISTRIBUTION OF INFORMATION SOURCES USED ACCORDING TO CLASSIFICATION OF FARMERS OPERATING ALTERNATIVES

Information Sources	Full-Time		Part-Time		Sundown	
	Frequency Distribution					
	N	%	N	%	N	%
Monthly or Weekly Farm Publications	206	61.5	112	56.9	103	66.0
Daily or Weekly Newspapers	106	31.6	55	27.9	55	35.3
Radio	67	20.0	18	9.1	37	23.8
Television	75	22.4	34	17.3	53	34.0
Cooperative Extension Fact Sheets, Newsletters or other Publications	236	70.4	145	73.7	127	81.4
Cooperative Extension Videoconferences	42	12.5	19	9.6	21	13.5
Young Farmers Organization	31	9.3	4	2.0	11	7.1
Farm or Grower Organizations	171	51.0	110	55.8	82	52.6
Vo-Tech Farm Management Program	22	6.6	4	2.0	15	9.6
County Extension Agents	250	74.6	153	77.7	105	67.3
State or Area Extension Specialists	223	66.6	121	61.4	79	50.7
Vocational Agriculture Instructors	47	14.1	16	8.1	21	13.5
County ASCS or SCS Personnel	116	34.6	39	19.8	60	38.5
Other Farmers	275	82.1	167	84.8	127	81.4
Manufacturer or Supplier Representatives	153	45.7	69	35.0	65	41.7
Buyer or Processor Representatives	106	31.6	36	18.3	42	27.0
Professional Consultants	80	23.9	26	13.2	39	25.0

Multiple factors were cited by some respondents; therefore, the total of percentages exceeds 100 percent.

information sources by percentage were county Extension agents (74.6); Cooperative Extension fact sheets, newswletters or other publications (70.4); state or area Extension specialists (66.6); and monthly or weekly farm publications (61.5).

Of the 197 respondents who were farming part-time, 84.8 percent utilized other farmers for information. Percentages of other leading information sources were county Extension agents (77.7); Cooperative Extension fact sheets, newsletters or other publications (73.7); state or area Extension specialists (61.4); and monthly or weekly farm publications (56.9).

Other farmers and Cooperative Extension fact sheets, newsletters or other publications ranked highest as information sources used by the 156 sundown farmers, with 81.4 percent each. Other leading sources by percentage were county Extension agents (67.3); monthly or weekly farm publications (66.0); and farm or grower organizations (52.6).

Other farmers received their highest percentage of use among part-time farmers (84.8); Cooperative Extension fact sheets, newsletters or other publications among sundown farmers (81.4); county Extension agents among part-time farmers (77.7); state or area Extension specialists among full-time farmers (66.6); monthly or weekly farm publications among sundown farmers (66.0); and farm or grower organizations among part-time farmers (55.8).

Other farmers received their lowest percentage of use among sundown farmers (81.4); Cooperative Extension fact sheets, newsletters or other publications among full-time farmers (70.4); county Extension agents among sundown farmers (67.3); state or area Extension specialists among sundown farmers (50.7); monthly or weekly farm publications among part-time farmers (56.9); and farm or grower organizations among full-time farmers (51.0).

<u>According to Age</u>

Other farmers also were the most widely used information source identified

TABLE VIII

DISTRIBUTION OF INFORMATION SOURCES USED ACCORDING TO AGE GROUP OF OKLAHOMA FARMERS OPERATING ALTERNATIVE ENTERPRISES

Information Sources	Age Group											
	17 - 29		30 - 39		40 - 49		50 - 59		60 - 69		70 -	
	Frequency Distribution											
	N	%	N	%	N	%	N	%	N	%	N	%
Monthly or Weekly Farm Publications	8	44.4	79	63.7	116	83.0	108	61.0	73	60.8	40	71.4
Daily or Weekly Newspapers	6	33.3	41	33.1	52	26.9	53	29.9	41	34.2	26	46.4
Radio	6	33.3	29	23.4	31	16.1	24	13.6	21	17.5	11	19.6
Television	3	16.7	27	21.8	42	21.8	40	22.6	32	26.7	21	37.5
Cooperative Extension Fact Sheets, Newsletters or other Publications	14	77.8	91	73.4	136	70.5	133	75.1	92	76.7	45	80.4
Cooperative Extension Videoconferences	0	0	30	24.2	21	10.9	18	10.2	20	16.7	4	7.1
Young Farmers Organization	2	11.1	10	8.1	16	8.3	4	2.3	8	6.7	2	3.6
Farm or Grower Organizations	5	27.8	62	50.0	99	51.5	104	58.8	68	56.7	28	50.0

Table VIII (Continued)

Information Sources	Age Group 17 - 29		30 - 39		40 - 49		50 - 59		60 - 69		70 -	
	Frequency Distribution											
	N	%	N	%	N	%	N	%	N	%	N	%
Vo-Tech Farm Management Program	0	0	11	8.8	13	6.7	11	6.2	7	5.8	1	1.8
County Extension Agents	12	66.7	88	71.0	133	68.9	132	74.6	95	79.2	47	83.9
State or Area Extension Specialists	9	50.5	75	60.5	121	62.7	116	65.5	75	62.5	28	50.0
Vocational Agriculture Instructors	4	22.2	24	19.3	26	13.5	18	10.2	19	15.8	4	7.1
County ASCS or SCS Personnel	5	27.8	44	35.5	62	32.1	60	33.9	31	25.8	14	25.0
Other Farmers	14	77.8	105	84.7	163	84.5	147	83.1	96	80.0	48	85.7
Manufacturer or Supplier Representatives	5	27.8	54	43.5	80	41.5	81	45.8	48	40.0	21	37.5
Buyer or Processor Representatives	4	22.2	36	29.0	66	34.2	44	24.9	29	24.2	6	10.7
Professional Consultants	4	22.2	28	22.9	43	22.2	37	20.9	25	20.8	9	16.1

by respondents in all six age groups (Table VIII).

According to the 18 respondents ages 17 to 29, other farmers and Cooperative Extension fact sheets, newsletters or other publications were used by 77.8 percent of them. Other leading sources by percentage were county Extension agents (66.7); state or area Extension specialists (50.5); and monthly or weekly farm publications (44.4).

Of the 124 respondents ages 30 to 39, other farmers were used for information by 84.7 percent of them, followed by Cooperative Extension fact sheets, newsletters or other publications (73.4); county Extension agents (71.0); monthly or weekly farm publications (63.7); and state or area Extension specialists (60.5).

Among the 193 respondents ages 40 to 49, 84.5 percent used other farmers for information, followed by monthly or weekly farm publications (83.0); Cooperative Extension fact sheets, newsletters or other publications (70.5); county Extension agents (68.9); and state or area Extension specialists (62.7).

Of the 177 respondents ages 50 to 59, 83.1 percent used other farmers for information. Other leading sources were Cooperative Extension fact sheets, newsletters or other publications (75.1); county Extension agents (74.6); state or area Extension specialists (65.5); and monthly or weekly farm publications (61.0).

The 120 respondents ages 60 to 69 also identified other farmers as leading information sources, with 80.0 percent use. Other leading sources included county Extension agents (79.2); Cooperative Extension fact sheets, newsletters or other publications (76.7); state or area Extension specialists (62.5); and monthly or weekly farm publications (60.8).

Of the 56 respondents ages 70 or older, other farmers were used by 85.7 percent of them, followed by county Extension agents (83.9); Cooperative Extension fact sheets, newsletters or other publications (80.4); monthly or weekly farm publications (71.4); and state or area Extension specialists and farm or grower

organizations with 50 percent each.

Other farmers received their highest percentage of use as information sources among the respondents in the age group of 70 years or older (85.7); Cooperative Extension fact sheets, newsletters or other publications also among age group 70 years or older (80.4); county Extension agents also among age group 70 years or older (83.9); state or area Extension specialists among age group 50 to 59 years (62.5); monthly or weekly farm publications among age group 40 to 49 years (83.0); and farm or grower organizations among age group 50 to 59 years (58.8).

Other farmers received their lowest percentage of use as information sources among the respondents in the age group 17 to 29 years (77.8); Cooperative Extension fact sheets, newsletters or other publications among age group 40 to 49 years (70.5); county Extension agents among age group 17 to 29 years (66.7); state or area Extension specialists among age group 70 years or older (50.0); monthly or weekly farm publications among age group 17 to 29 years (44.4); and farm or grower organizations also among age group 17 to 29 years (27.8).

According to Education Level

Other farmers were nearly unanimous as the most widely used information source among respondents divided into eight groups according to their highest level of education completed (Table IX).

The only exception was among respondents with eight or fewer years of education. Of those 17 respondents, county Extension agents were the most used information source, with 88.2 percent. Other leading sources were Cooperative Extension fact sheets, newsletters or other publications (82.4); monthly or weekly farm publications (76.5); other farmers (70.6); and farm or grower organizations (58.8).

Of the 20 respondents completing one or two years of high school, other farmers were used by 85.0 percent, followed by county Extension agents (65.0);

TABLE IX

DISTRIBUTION OF INFORMATION SOURCES USED ACCORDING TO EDUCATION LEVEL OF OKLAHOMA FARMERS OPERATING ALTERNATIVE ENTERPRISES

Information Sources	Education Level											
	0 - 8		9 - 10		11 - 12		13 - 14		15 - 16		17 -	
	Frequency Distribution											
	N	%	N	%	N	%	N	%	N	%	N	%
Monthly or Weekly Farm Publications	13	76.5	7	35.0	119	56.4	65	58.0	138	65.1	83	71.6
Daily or Weekly Newspapers	6	35.3	8	40.0	53	25.1	40	35.7	65	30.7	47	40.5
Radio	5	29.4	3	15.0	28	13.3	20	17.9	43	20.3	25	21.6
Television	8	47.1	4	20.0	43	20.4	30	26.8	49	23.1	31	26.7
Cooperative Extension Fact Sheets, Newsletters or other Publications	14	82.4	12	60.0	149	70.6	77	68.8	161	75.9	98	84.5
Cooperative Extension Videoconferences	2	11.8	1	5.0	25	11.8	13	11.6	30	14.2	28	24.1
Young Farmers Organization	3	17.6	1	5.0	17	8.1	4	3.6	15	7.1	24	20.7
Farm or Grower Organizations	10	58.8	8	40.0	107	50.8	50	44.6	127	59.9	68	58.6

Table IX (Continued)

Information Sources	Education Level											
	0 - 8		9 - 10		11 - 12		13 - 14		15 - 16		17 -	
	Frequency Distribution											
	N	%	N	%	N	%	N	%	N	%	N	%
Vo-Tech Farm Management Program	1	5.9	1	5.0	15	7.1	5	4.5	13	6.1	6	5.2
County Extension Agents	15	88.2	13	65.0	155	73.5	86	78.6	153	72.7	93	80.2
State or Area Extension Specialists	7	41.2	10	50.0	122	57.8	65	58.0	142	67.0	79	68.1
Vocational Agriculture Instructors	0	0	2	10.0	32	15.2	14	12.5	21	9.9	15	12.9
County ASCS or SCS Personnel	5	29.4	5	25.0	54	25.6	38	33.9	70	33.0	44	37.9
Other Farmers	12	70.6	17	85.0	182	86.3	91	81.3	172	81.1	100	86.2
Manufacturer or Supplier Representatives	6	35.3	5	25.0	77	36.5	49	43.8	106	50.0	46	39.7
Buyer or Processor Representatives	2	11.8	4	20.0	55	26.1	34	30.4	62	29.2	28	24.1
Professional Consultants	5	29.4	4	20.0	34	16.1	22	19.6	50	23.6	31	26.7

Cooperative Extension fact sheets, newsletters or other publications (60.0); state or area Extension specialists (50.0); and farm or grower organizations and daily or weekly newspapers, with 40.0 percent each.

Among the 211 respondents completing three or four years of high school, other farmers were used by 86.3 percent, followed by county Extension agents (73.5); Cooperative Extension fact sheets, newsletters or other publications (70.6); state or area Extension specialists (57.8); and monthly or weekly farm publications (56.4)

Of the 112 respondents completing one or two years of college, other farmers were identified as the most used information source by 81.3 percent. Other leading sources were county Extension agents (78.6); Cooperative Extension fact sheets, newsletters or other publications (68.8); and state or area Extension specialists and monthly or weekly farm publications, with 58.0 percent each.

Among the 212 respondents completing three or four years of college, other farmers were used by 81.1 percent, followed by Cooperative Extension fact sheets, newsletters or other publications (75.9); county Extension agents (72.7); state or area Extension specialists (67.0); and monthly or weekly farm publications (65.1).

Of the 116 respondents completing more than four years of college, 86.2 percent used other farmers for information. Other leading sources were Cooperative Extension fact sheets, newsletters or other publications (84.5); county Extension agents (80.2); monthly or weekly farm publications (71.6); and state or area Extension specialists (68.1).

Other farmers received their highest percentage of use as information sources among the respondents completing one or two years of high school (86.3) and those with more than four years of college (86.2); Cooperative Extension fact sheets, newsletters or other publications among respondents completing more than four years of college (84.5); County Extension agents among respondents with eight or fewer years of education (88.2); state or area Extension specialists also among

respondents completing more than four years of college (68.1); monthly or weekly farm publications among respondents with eight or fewer years of education (76.5); and farm or grower organizations among respondents with three or four years of college (59.9).

Other farmers received their lowest percentage of use among the respondents with eight or fewer years of education (70.6); Cooperative Extension fact sheets, newsletters or other publications among respondents completing one or two years of high school (60.0); county Extension agents also among respondents completing one or two years of high school (65.0); state or area Extension specialists among respondents with eight or fewer years of education (41.2); monthly or weekly farm publications among respondents completing one or two years of high school education (35.0); and farm or grower organizations also among respondents completing one or two years of high school education (40.0).

Effectiveness of Information Sources

Respondents then rated the effectiveness of the information sources they had used (Table X). Ratings were made on a scale of 1 to 5, with 5 being the most effective and 1 being least effective.

State or area Extension specialists were rated as the most effective source of information by respondents who used them. Of those 425 respondents, 46.4 percent rated the effectiveness of their information as 5, while 34.8 percent rated it 4, 14.8 percent rated it 3, 3.1 percent rated it 2 and only 0.9 percent rated it 1. The mean of the ratings was 4.23 on the 5-point scale.

Cooperative Extension fact sheets, newsletters and other publications ranked second in rating of effectiveness by users, with a mean of 4.00. Of the 511 users, 34.4 percent rated them 5, with 38.7 percent rating them 4 and 20.4 percent rating them 3., 4.9 rating 2 and 1.6 percent rating them 1.

Information from farm or grower organizations received the third highest

TABLE X

USER RATINGS OF EFFECTIVENESS OF INFORMATION SOURCES BY OKLAHOMA FARMERS OPERATING ALTERNATIVE ENTERPRISES

Information Sources	Extremely (5)		Highly (4)		Moderately (3)		Slightly (2)		Not (1)		Mean	SD
	Frequency Distribution											
	N	%	N	%	N	%	N	%	N	%		
Monthly or Weekly Farm Publications	57	13.4	144	34.0	158	37.3	43	10.1	22	5.2	3.40	1.01
Daily or Weekly Newspapers	11	5.0	31	14.2	70	32.0	85	38.3	22	10.0	2.65	1.01
Radio	14	11.3	21	16.9	36	29.0	26	21.0	27	21.8	2.75	1.28
Television	20	12.1	38	23.0	47	28.5	34	20.6	26	15.8	2.95	1.25
Cooperative Extension Fact Sheets, Newsletters or Other Publications	176	34.4	198	38.7	104	20.4	25	4.9	8	1.6	4.00	0.94
Cooperative Extension Videoconferences	21	25.6	19	23.2	22	26.8	12	14.6	8	9.8	3.40	1.28
Young Farmers Organization	6	12.5	12	25.0	11	22.9	9	18.8	10	20.8	2.90	1.34
Farm or Grower Organizations	119	32.5	146	39.9	70	19.1	22	6.0	9	2.5	3.94	0.99

Table X (Continued)

Information Sources	Extremely (5)		Highly (4)		Moderately (3)		Slightly (2)		Not (1)		Mean	SD
	Frequency Distribution											
	N	%	N	%	N	%	N	%	N	%		
Vo-Tech Farm Management Program	10	23.8	15	35.7	10	23.8	4	9.5	3	7.1	3.60	1.17
County Extension Agents	149	29.2	186	36.4	137	26.8	31	6.1	8	1.6	3.86	0.96
State or Area Extension Specialists	197	46.4	148	34.8	63	14.8	13	3.1	4	0.9	4.23	0.88
Vocational Agriculture Instructors	25	29.8	24	28.6	20	23.8	9	10.7	6	7.1	3.63	1.22
ASCS or SCS Personnel	66	30.6	68	31.5	47	21.8	20	9.3	15	6.9	3.69	1.20
Other Farmers	174	30.5	216	37.8	150	26.3	23	40	8	1.4	3.92	0.92
Manufacturer or Supplier Representatives	40	13.9	89	31.0	108	37.6	42	14.6	8	2.8	3.39	0.99
Buyer or Processor Representatives	37	19.9	56	30.1	57	30.6	28	15.1	8	4.3	3.48	1.17
Professional Consultants	54	37.2	45	31.0	30	20.7	11	7.6	5	3.4	3.91	1.09

rating for effectiveness by 366 users of that source, with a mean of 3.94. Other information sources and means of their ratings of effectiveness were other farmers (3.92), professional consultants (3.91), county Extension agents (3.86), county ASCS or SCS personnel (3.69), vocational agriculture instructors (3.63), vo-tech farm management programs (3.60), buyer or processor representatives (3.48), monthly or weekly farm publications (3.40), Cooperative Extension videoconferences (3.40), manufacturer or supplier representatives (3.39), television (2.95), Young Farmers Organization (2.90), radio (2.75) and daily or weekly newspapers (2.65).

Most Used Sources in Management Phases

Respondents also were asked to name the most useful source of information to them in eight possible phases of their alternative enterprises (Table XI). The phases where they were utilizing information included overall decision-making or planning, financial management, legal or tax decisions, seed or raw material purchases, specialized equipment, production practices, harvesting and marketing.

In the overall decision-making or planning phase, 162 respondents cited other farmers as the most useful source of information. Cooperative Extension fact sheets, newsletters or other publications were cited by 103 farmers. Among other most useful information sources in overall decision-making or planning were state or area Extension specialists (90), county Extension agents (82), farm or grower organizations (71), monthly or weekly farm publications (40), professional consultants (24) and buyer or processor representatives (23).

In financial management decisions, professional consultants were named as the most useful information source by 93 respondents. Cooperative Extension fact sheets, newsletters or other publications were named by 33 respondents. Other farmers (22), monthly or weekly farm publications (14) and farm or grower organizations (12) also were named.

In legal or tax decisions, professional consultants working in those

TABLE XI

DISTRIBUTION OF INFORMATION SOURCES USED BY OKLAHOMA FARMERS IN SELECTED PHASES OF THEIR ALTERNATIVE ENTERPRISES

Information Sources	Overall Decision-Making or Planning	Financial Management	Legal or Tax Decisions	Seed or Raw Material Purchases	Specialized Equipment	Production Practices	Harvesting	Marketing
	Frequency Distribution							
	N							
Monthly or Weekly Farm Publications	40	14	14	30	39	42	20	38
Daily or Weekly Newspapers	7	1	1	2	0	4	2	8
Radio	0	0	0	1	0	1	1	3
Television	6	0	0	2	1	7	3	8
Cooperative Extension Fact Sheets, Newsletters or Other Publications	103	33	23	46	15	115	44	23
Cooperative Extension Videoconferences	0	0	0	0	0	0	0	0
Young Farmers Organization	3	0	0	1	0	2	0	2
Farm or Grower Organizations	71	12	7	57	65	60	67	91

Table XI (Continued)

Information Sources	Overall Decision-Making or Planning	Financial Management	Legal or Tax Decisions	Seed or Raw Material Purchases	Specialized Equipment	Production Practices	Harvesting	Marketing
	Frequency Distribution							
	N							
Vo-Tech Farm Management Program	2	12	4	0	0	1	1	0
County Extension Agents	82	5	4	40	16	105	26	29
State or Area Extension Specialists	90	7	7	64	31	111	48	34
Vocational Agriculture Instructors	1	1	0	2	0	0	0	0
ASCS or SCS Personnel	18	4	1	9	3	10	6	6
Other Farmers	162	22	12	137	163	171	156	128
Manufacturer or Supplier Representatives	16	1	1	100	92	20	20	10
Buyer or Processor Representatives	23	5	3	32	15	19	50	62
Professional Consultants	24	93	250	17	6	13	10	18

occupations were named as the most useful information source by 250 respondents. Other responses included Cooperative Extension fact sheets, newsletters or other publications (23), monthly or weekly farm publications (14) and other farmers (12).

Other farmers were named by 137 respondents as the most useful source of information about purchases of seed or raw material for their alternative enterprises. Other leading information sources in this phase of their enterprises were manufacturer or supplier representatives (100), state or area Extension specialists (64), farm or grower organizations (57), Cooperative Extension fact sheets, newsletters or other publications (46), county Extension agents (40), buyer or processor representatives (32) and monthly or weekly farm publications (30).

In obtaining information about specialized equipment, other farmers again were cited as the most useful sources, with 163 responses. Information sources also receiving a high number of responses included manufacturer or supplier representatives (92), farm or grower organizations (65), monthly or weekly farm publications (39), state or area Extension specialists (31), county Extension agents (16), Cooperative Extension fact sheets, newsletters or other publications (15) and buyer or processor representatives (15).

The most useful source for information about production practices again was other farmers, as cited by 171 respondents. Other leading information sources about production practices included Cooperative Extension fact sheets, newsletters or other publications (115), state or area Extension specialists (111), county Extension agents (105), farm or grower organizations (60) and monthly or weekly farm publications (42).

Other farmers were by far the most useful source named regarding harvesting information, with 156 responses. Farm or grower organizations were the next leading source (67), followed by buyer or processer representatives (50), state or area Extension specialists (48) and Cooperative Extension fact sheets, newsletters or other publications (44).

The most useful marketing information also was received from other farmers, according to 128 respondents. Farm or grower organizations also ranked high (91), followed by buyer or processor representatives (62), monthly or weekly farm publications (38), state or area Extension specialists (34), county Extension agents (29) and Cooperative Extension fact sheets, newsletters or other publications (23).

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary of the Study

The purpose of this chapter was to summarize the study's procedures and findings relative to the purpose and objectives. Also presented are conclusions and recommendations based upon the analysis of data collected and observations made in the process of conducting the study.

Purpose

The purpose of the study was to identify the sources of information used by Oklahoma farmers involved in all existing types of alternative agricultural enterprises and to identify the effectiveness of those sources in making decisions about selecting, developing and maintaining those alternative agricultural enterprises.

Objectives

In order to accomplish the purpose, the research was directed toward the following objectives:

1. To identify the types of alternative agricultural enterprises being operated by Oklahoma farmers.

2. To identify factors that encouraged Oklahoma farmers to include alternative agricultural enterprises in their farming operations.

3. To identify sources of information utilized in decision-making by

Oklahoma farmers who have engaged in alternative agricultural enterprises.

4. To determine farmers' perceptions of the effectiveness of information sources used in making decisions regarding alternative agricultural enterprises.

5. To identify information sources used most by farmers involved in alternative agricultural enterprises when those farmers were divided demographically by farming classification, age and education level.

6. To determine what information sources were most useful to farmers in making decisions within specific phases of their alternative agricultural enterprises (i.e., in planning, financial management, legal, equipment and material purchasing, production, harvesting or marketing phases.)

Rationale

A prolonged period of relative instability in profitability of traditional agricultural commodities in Oklahoma persuaded or forced many farmers to turn to some type of alternative enterprise with the intention of increasing income from their farming operation. Diversification into supplemental enterprises or replacing traditional commodities with non-traditional crops or animals offered potential for access to new markets not burdened by surplus stocks.

However, producing alternative commodities on a commercial scale profitably and soon enough to help alleviate financial distress required acquiring information about implementing and managing the new types of enterprises and marketing the commodities. Information needed to be dependable and to provide the producer with the assistance he needed in making the new decisions which confronted him.

Information about most agricultural topics was available to farmers from many sources. In gathering information from diverse sources about new or different types of agricultural enterprises, farmers had to rely on sources that provided them with the most effective information for making decisions within

their own operations and within their capabilities.

What are the alternative enterprises being tried by Oklahoma farmers? What factors encouraged them to try those enterprises? What are the sources of information farmers use in making decisions about their alternative enterprises? How effective do farmers believe the sources of information are that they use? Do they rely on different sources to acquire the information they need to make decisions in different phases of their alternative enterprises, such as financial management, specialized equipment purchasing, harvesting and marketing?

Those are questions for which this study was designed to gather and present data. Determining sources of information farmers rely on for specific needs will allow organizations capable of providing assistance to structure information delivery programs to take advantage of those information channels.

Procedures

Following a review of literature and research pertaining to the study, procedures were established to satisfy the purpose and objectives of the study. Procedures were to: (1) identify the population for the study; (2) develop the instrument for data collection; (3) collect the data; and (4) analyze the findings.

The population for this study was formed by identification of Oklahoma farmers involved in some type of alternative agricultural enterprise. Identification of farmers was determined from lists furnished by county Extension agricultural agents and from membership lists of organizations that are involved in promoting production of commodities considered alternative to traditional Oklahoma agriculture.

Responses about use of some information sources by farmers identified as being involved in alternative enterprises may be biased due to the fact that the population was derived mostly from referrals from county Extension agents and membership lists of organizations. Data collected from those respondents may

reflect higher use of information from those referral sources than data collected from respondents identified independently or from data that could be collected from farmers operating alternative enterprises but who were not identified or surveyed. An attempt was made to identify all Oklahoma farmers involved in some type of alternative enterprise and to not allow findings to be weighted by exclusive reliance on referrals from any group or groups.

Data were collected using a structured telephone questionnaire. Sections of the questionnaire included generating responses regarding the types of alternative enterprises farmers were operating, factors that encouraged them to begin an alternative enterprise, information sources they used in making decisions about their alternative enterprise, their rating of effectiveness of those information sources, and the information sources they found most useful in specific phases of their alternative enterprise.

Data obtained from the instrument were compiled via computer, and a SAS program was used in calculating frequency distributions of the data.

Major Findings

Based on information collected from administering the questionnaire, the following findings can be drawn from this study:

1. Types of alternative agricultural enterprises adopted in Oklahoma were diverse, and the alternative enterprises operated by larger numbers of 696 Oklahoma farmers surveyed involved production of tomatoes (132), pecans (116), peaches (100), watermelons (93), sweet corn (91), cantaloupes (87), squash (74), apples (73), okra (72), Angora goats (59), Christmas trees (53) and catfish (34).

2. Leading factors that encouraged farmers to adopt their particular alternative enterprise(s) were high potential for profit (38.9 percent of respondents), genuine desire to produce the commodity (33.5 percent), encouragement from friends, relatives or neighbors (18.4 percent) and low profit

from traditional enterprises (18.0 percent). Multiple factors encouraging adoption were cited by many respondents, resulting in the total of percentages exceeding 100 percent.

3. Sources used by the highest numbers of respondents to acquire information to help them make decisions about their alternative agricultural enterprises were other farmers (574 of 696 respondents), county Extension agents and Cooperative Extension fact sheets, newsletters or other publications (511 respondents each), state or area Extension specialists (425), monthly or weekly farm publications (424), farm or grower organizations (366), manufacturer or supplier representatives (289), daily or weekly newspapers (219), county ASCS or SCS personnel (216) and buyer or processor representatives (185).

4. Information sources used by the highest numbers of total respondents also were consistently identified as being the leading information sources when the population was divided into demographic groups according to farming classification, age and level of education. Other farmers were consistently used by around 80 percent of respondents in all demographic groups. Cooperative Extension fact sheets, newsletters or other publications and county Extension agents were consistently used by around 70 percent of respondents by group. State or area Extension specialists and monthly or weekly farm publications were consistently used by around 60 percent of respondents in the demographic groups. Farm or grower organizations were consistently used by around 50 percent of respondents in all groups.

5. Information sources rated highest in effectiveness by users, on an ascending scale of 1 to 5, were state or area Extension specialists (mean of 4.23); Cooperative Extension fact sheets, newsletters and other publications (4.00), farm or grower organizations (3.94), other farmers (3.92), professional consultants (3.91), county Extension agents (3.86), county ASCS or SCS personnel (3.69), vocational agriculture instructors (3.63), vo-tech farm management programs (3.60), buyer or

processor representatives (3.48), monthly or weekly farm publications (3.40), Cooperative Extension videoconferences (3.40), manufacturer or supplier representatives (3.39), television (2.95), Young Farmers Organization (2.90), radio (2.75) and daily or weekly newspapers (2.65).

6. The information source cited by respondents as the most useful in the overall decision-making or planning aspect of their alternative agricultural enterprise was other farmers (162).

7. The information source cited by respondents as the most useful in financial management decisions concerning their alternative agricultural enterprise was professional consultants (93).

8. The information source cited by respondents as the most useful in legal or tax decisions concerning their alternative agricultural enterprise was professional consultants (250).

9. The information source cited by respondents as the most useful in making decisions about purchasing seed or raw material for their alternative agricultural enterprise was other farmers (137).

10. The information source cited by respondents as the most useful in making decisions about acquiring specialized equipment for their alternative agricultural enterprise was other farmers (163).

11. The information source cited by respondents as the most useful in making decisions about production practices in their alternative agricultural enterprise was other farmers (171).

12. The information source cited by respondents as the most useful in making decisons about harvesting commodities in their alternative agricultural enterprise was other farmers (156).

13. The information source cited by respondents as the most useful in making decisons about marketing commodities from their alternative agricultural enterprise was other farmers (128).

Conclusions

Based on the analysis of data and subsequent findings from completed surveys of Oklahoma producers contacted, it was concluded that:

1. Many Oklahoma farmers were operating enterprises producing alternative or non-traditional agricultural commodities as a means of generating income from their farming operations. Enterprises being operated by larger numbers of farmers involved production of vegetables such as tomatoes, squash, okra and sweet corn; fruits such as peaches and apples; melon crops such as watermelons and cantaloupes; other crops such as pecans and Christmas trees; and animal commodities such as Angora goats and catfish.

2. High potential for profit was the major factor encouraging Oklahoma farmers to adopt some type of alternative enterprise in their farming operation. Other leading factors encouraging adoption of a specific alternative enterprise were genuine desire by the farmer to produce the commodity; encouragement from friends, relatives or neighbors to produce the commodity; and low profit from the farmer's traditional enterprises.

3. Other farmers were the leading source used by Oklahomans to acquire information to help them make decisions about their alternative agricultural enterprises. Information from other farmers was used by more than 80 percent of Oklahomans operating some type of alternative enterprise. It also was concluded that other leading information sources about managing alternative enterprises were county Extension agents; Cooperative Extension fact sheets, newsletters or other publications; state or area Extension specialists; monthly or weekly farm publications; and farm or grower organizations.

4. Other farmers also were the information source used most by Oklahomans operating alternative agricultural enterprises when those alternative producers were divided into demographic groups according to farming

classification, age and level of education. Around 80 percent of alternative producers in all demographic groups consistently used information from other farmers. Other information sources used consistently by high numbers of alternative producers within demographic groups according to farming classification, age and level of education were county Extension agents; Cooperative Extension fact sheets, newsletters or other publications; state or area Extension specialists; monthly or weekly farm publications; and farm or grower organizations.

5. State or area Extension specialists were the sources rated highest in effectiveness of information delivered to farmers operating alternative agricultural enterprises. It also was concluded that other information sources with high effectiveness ratings by users were Cooperative Extension fact sheets, newsletters and other publications; farm or grower organizations; other farmers; professional consultants; and county Extension agents.

6. Other farmers were the information source most useful to Oklahoma farmers in the overall decision-making or planning aspect of their specific alternative agricultural enterprise.

7. Professional consultants were the information source most useful to farmers in financial management decisions concerning their individual alternative agricultural enterprise.

8. Professional consultants also were the information source most useful to farmers in legal or tax decisions concerning their alternative agricultural enterprise.

9. Other farmers were the information source most useful to farmers in making decisions about purchasing seed or raw material for their specific alternative agricultural enterprise.

10. Other farmers also were the information source most useful to farmers in making decisions about acquiring specialized equipment for their alternative

agricultural enterprise.

11. Other farmers were the information source most useful to farmers in making decisions about production practices in their individual alternative agricultural enterprise.

12. Other farmers also were the information source most useful to farmers in making decisons about harvesting commodities in their alternative agricultural enterprise.

13. Other farmers again were the information source most useful to farmers in making decisons about marketing commodities from their alternative agricultural enterprise.

Recommendations

As a result of the findings and conclusions of the study, the following recommendations are made:

1. It is recommended that land-grant universities and other disseminators of research-based information place emphasis on needs of farmers involved in alternative agricultural enterprises for information about producing and marketing major vegetable crops such as tomatoes and okra, major fruit crops such as peaches and apples, melon crops such as watermelons and cantaloupes, animal commodities such as Angora goats and catfish, other commodities such as pecans and Christmas trees, and any other new and economically promising alternatives.

2. Since farmers involved in alternative agricultural enterprises use some sources more than others to acquire information they need in making decisions, and since those farmers rate some sources as more effective for delivering the information they need, it is recommended that land-grant universities fully utilize the capabilities of those highly used sources such as innovative farmers, county Extension agents, state or area Extension specialists, Cooperative Extension publications, farm or grower organizations and farm publications for disseminating

information related to commodities being produced in alternative enterprises.

3. It is recommended that land-grant universities explore the full potential for all information media to disseminate information to farmers who are considering or already managing production of alternative commodities.

4. It is recommended that land-grant universities initiate research to generate information regarding production of new or different alternative commodities with economic potential for their geographic region or commodities which increasing numbers of farmers are indicating an interest in producing. It is further recommended that, if a land-grant university does not have expertise or financial resources to initiate adequate research into production of a commodity, researchers or Extension personnel obtain additional information from other land-grant universities, commodity organizations or other sources within or outside the geographic region in order to meet the information needs of interested farmers.

Recommendations Regarding Methodology

1. It is recommended that all OSU county Extension agricultural agents develop complete lists of all farmers in their counties who are involved in some type of alternative enterprise. The lists should include commodities the farmers are producing and include current telephone numbers.

2. It is recommended that telephone callers conducting an agricultural survey adequately understand the objectives of the study as reflected in the sections of the questionnaire and be able to explain terms or questions to respondents in order to generate responses that will accomplish the objectives.

3. It is recommended that in any further statewide survey concerning alternative enterprises, finer criteria be established to aid researchers, telephone callers, referral sources such as county agents, and respondents in determining what should be considered alternatives uniformly across the state.

Recommendations for Additional Research

1. It is recommended that a study be conducted among farmers involved in alternative enterprises to determine frequency of use and effectiveness of Cooperative Extension information media (i.e., county agents, state and area specialists, fact sheets, newspaper columns, newsletters, radio and television.)

2. It is recommended that, in a study of frequency of use and effectiveness of Cooperative Extension information media, respondents be divided into general categories according to types of commodities being produced (i.e., vegetables, fruits, nuts, trees and plants, and animals.)

3. It is recommended that, in a study of frequency of use and effectiveness of Cooperative Extension information media, respondents be divided into groups by geographic region of the state.

4. It is recommended that a study be conducted among farmers involved in alternative enterprises to determine needs they have in developing effective marketing programs or procedures for their products.

5. It is recommended that a study be conducted among farmers who are identified by county Extension agricultural agents as being most innovative and progressive with the purpose of determining sources of information those farmers utilize most in their decision-making.

A SELECTED BIBLIOGRAPHY

Aanderud, Wallace G. "Income Variability of Alternative Plans, Selected Farm and Ranch Situations, Rolling Plains of Northwest Oklahoma." (Unpub. Ph.D. dissertation, Oklahoma State University, 1964.)

Adams, John L. and Anne M. Parkhurst. Farmer/Rancher Perceptions of Channels and Sources of Change Information. Department of Agricultural Communications Report No. 9, University of Nebraska-Lincoln, 1984.

Alleyne, Patrick E. and Coolie Verner. Personal Contacts and the Adoption of Innovations. Department of Agricultural Economics, British Columbia University, Vancouver, 1969.

Awa, Njoku E. and L. Van Crowder, Jr. "How Extension Stacks Up." Journal of Extension, Vol. 16 (March/April 1978), pp. 19-25.

Bay, Ovid. "The Cooperative Extension Service Information Delivery System and How the Science and Education Administration's Agriculture Research Results Reach Farmers." Science and Education Administration-Extension Report No. 6809-S, June 1980.

Bellmon, Henry G. Speech presented at the Governor's Conference on Alternative Opportunities for Oklahoma Agricultural Producers. Stillwater, OK, November 15-16, 1988.

Bishop, Douglas D. "Multi-Agency Cooperation in Adult Education Needed in 70s." The Agricultural Education Magazine, Vol. 44 (April 1972), pp. 247-268.

Bonner, Jimmy, and Karen L. Moore. "Alternative Crops--More To It Than Planting Seed." Extension Review, Vol. 58 (Winter 1987), p. 19.

Brown, Thomas G. "Changing Delivery Systems for Agricultural Extension: The Extension Teacher--Changing Roles and Competencies." American Journal of Agricultural Economics. Vol. 63, No. 4 (November 1981) pp. 859-862.

Causley, Fred. "Alternative Crops: A Growing Potential." Agriculture at OSU, Vol. 16, No. 3 (Summer 1986) p. 2.

Farm Research Institute. Awareness and Use Among Illinois Farmers of USDA and State Agricultural Publications. University of Illinois, Urbana, 1958.

Finley, George E. "Wheat Producers' Awareness, Attitudes, and Practices Concerning Integrated Pest Management and Production Problems in a Four-County Area of Oklahoma." (Unpub. Ed.D. disseration, Oklahoma State University, 1981.)

Harritt, Garey G. "Perceptions of Vocational Agriculture Teachers and County Extension Agents as to the Importance and Feasibility of Alternative Approaches to Farming in Southeast Oklahoma." (Unpub. Ed.D. dissertation, Oklahoma State University, 1987.)

Havelock, Ronald G. Planning for Innovation Through Dissemination and Utilization of Knowledge. Center for Research on Utilization of Scientific Knowledge, The University of Michigan, Ann Arbor, 1971.

Heady, Earl O. Farm Management Economics. Prentice-Hall, Inc., New York, N.Y., 1954.

Johnson, R.R. "Research Reflections." Agriculture at OSU, Vol. 16, No. 3 (Summer 1986) p. 2.

Key, James P. "The Questionnaire and Interview as Data-Gathering Tools for a Research Investigation." Research Design in Occupational Education, Department of Agricultural Education, Oklahoma State University, 1974.

Leuthold, Frank O. "How Vo-Ag Is a Part of the Adoption of Agricultural Technology." The Agricultural Education Magazine, Vol. 53 (July 1980), pp. 5-6.

Lionberger, Herbert F. Adoption of New Ideas and Practices. The Iowa State University Press, Ames, Iowa, 1961.

Lionberger, Herbert F. and Paul H. Gwin. Communication Strategies: A Guide for Agricultural Change Agents. Interstate Printers and Publishers, Inc., Danville, Ill., 1982.

Lloyd, Renee M. and James R. Nelson, Raymond Joe Schatzer, Daniel S. Tilley and Raleigh A. Jobes "Should I Grow Fruits and Vegetables? Identifying and Evaluating the Possibilities." OSU Extension Facts No. 180, Oklahoma State University (June 1987) pp. 8-9.

Lyons, Lorenza W. and John Hillison. "Rural Clients' Attitudes toward Information Received from the Cooperative Extension Service." Research in Rural Education, Vol. 2, No 3 (Spring 1983) pp. 31-34.

Morris, Paul E. "A Study of the Sources of Agricultural Information Used by Fifty Farmers in a South-Central Oklahoma Community." (Unpub. M.S. report, Oklahoma State University, 1954.)

Motes, James E. "Production Consideration Pros and Cons." Presentation at Alternative Crops for Oklahoma Farmers Seminar. Oklahoma City, OK, October 24, 1986.

Motes, James E. "Vegetables as Alternative Crops." Presentation at Oklahoma Agricultural Economics Association Annual Meeting. Stillwater, OK, April 3, 1987.

Nelson, James R. "Economic Considerations Related to Alternative Agricultural Enterprises." Presentation at the Governor's Conference on Alternative Opportunities for Oklahoma Agricultural Producers. Stillwater, OK, November 15-16, 1988.

Nolan, Michael and Paul Lasley. "Agricultural Extension: Who Uses it?" Journal of Extension. Vol 17 (September-October 1979) pp. 21-27.

Oklahoma Agriculture 2000. Division of Agriculture, Oklahoma State University, Stillwater, OK, 1982.

Proctor, Donald L. "Sources of Agricultural Information Used by Wheat and Cotton Farmers in Jackson County, Oklahoma." (Unpub M.S. thesis, Oklahoma State University, 1983.)

Randle, Thomas E. "Perceptions of Oklahoma Residents toward the Instructional Function of the Oklahoma State University Division of Agriculture." (Unpub. Ed.D. dissertation, Oklahoma State University, 1981.)

Rogers, Everett M. and F. Floyd Shoemaker. Communication of Innovations. The Free Press, New York, N.Y., 1971.

Rogers, Everett M. Diffusion of Innovations. The Free Press, New York, N.Y., 1962.

Rogers, Everett M. "The Adoption Process, Part I." Journal of Extension, Vol. 1, No. 1 (Spring 1963) pp. 16-22.

Rogers, Everett M. "The Adoption Process, Part II." Journal of Extension, Vol. 1, No. 2 (Summer 1963) pp. 69-75.

Springer, Don M. "Can Present Information Delivery Systems Serve Future Livestock Production Systems?" Paper presented at the Symposium on Systems Approaches to Animal Health and Production. Lexington, KY, March 31 - April 2, 1981.

Starks, Leslie O. "Problems Perceived and Information Used by a Group of Kansas Young Farmers in Making Farm Management Decisions in Wheat Production." (Unpub. M.S. report, Oklahoma State University, 1972.)

The American Heritage Dictionary of the English Language. Houghton Mifflin Company, Boston, MA, 1976.

Thomas, Su Ann J. and James F. Evans. Where Farmers Get Information. Agricultural Communications Research Report No. 14, University of Illinois, Urbana, 1963.

Van Dalen, Deobold B. Understanding Educational Research. McGraw-Hill, Inc., New York, N.Y., 1966.

Wickwire, Michael C. "Supplemental Vegetable Crop Mixes for a Cow-Calf and Grain Producer in Bryan and Atoka Counties in Oklahoma." (Unpub. M.S. thesis, Oklahoma State University, 1985).

APPENDIXES

APPENDIX A

CORRESPONDENCE

COOPERATIVE EXTENSION SERVICE

DIVISION OF AGRICULTURE • OKLAHOMA STATE UNIVERSITY
Office of the Dean and Director • 139 Agricultural Hall • (405) 624-5398
Stillwater, Oklahoma 74078

April 1, 1988

Avery Eeds
Kingfisher County Extension Director
County Courthouse
Kingfisher, OK 73750

Dear Avery,

A research study regarding decision-making factors and information sources involved in Oklahoma farmers' adoption of alternative agricultural enterprises is being conducted this spring by the Oklahoma Cooperative Extension Service and Oklahoma Agricultural Experiment Station. A telephone survey will be conducted to gather needed data from producers.

Your assistance is needed in supplying a list of producers in your county who are operating some type of alternative agricultural enterprise. The term "alternative agricultural enterprise" encompasses any agriculture-based operation chosen by a farmer to replace or supplement production of traditional agricultural commodities in your area. An alternative agricultural enterprise would include fruit and vegetable crops, plus any other agronomic or horticultural crop, livestock, or agriculturally derived product or service other than traditional agricultural commodities.

Names, addresses and telephone numbers are needed for your county's producers who are involved in an alternative agricultural enterprise.

Please forward your county's list to Dr. James P. Key, Agricultural Education Department, 448 Ag Hall, OSU, by April 11.

Thank you very much for your time and cooperation in forwarding the needed information. Research study findings about alternative agricultural enterprises will provide many benefits in support of the statewide missions of the Oklahoma Cooperative Extension Service and Oklahoma Agricultural Experiment Station.

Sincerely,

T. Roy Bogle
Associate Director

CENTENNIAL
1890 • 1990

Celebrating the Past Preparing for the Future

APPENDIX B

NEWS RELEASE

Agricultural Information Department
OKLAHOMA STATE UNIVERSITY
Stillwater, 405-624-6886
Bob Keating
4-18-88

For Immediate Release

OKLAHOMA FARMERS BEING SURVEYED
ABOUT ALTERNATIVE ENTERPRISES

STILLWATER--Many Oklahoma farmers will be contacted in the coming weeks as part of an Oklahoma State University research study regarding alternative agricultural enterprises.

The survey is being conducted by the Oklahoma Cooperative Extension Service and Oklahoma Agricultural Experiment Station at OSU.

"We want to determine factors causing Oklahoma farmers and ranchers to begin various types of alternative agricultural enterprises in their operations. And we want to determine factors behind decisions they are making in getting their enterprises started and maintaining them profitably," explained Jim Key, director of research in OSU's Agricultural Education Department.

"Plus, we want to find out what types of information and assistance have been most useful in establishing alternative agricultural enterprises, and the most beneficial sources of that information," he added.

Key said results of the statewide survey will help OSU researchers and Extension specialists provide information and assistance that is most helpful to Oklahoma farmers and ranchers as they search for more profitable alternatives to traditional commodities. Farmers caught in an economic squeeze can't take unnecessary risks, he added, and useful information delivered in the most effective ways can help them in making tough decisions.

###

APPENDIX C

INSTRUMENT

_____
Number

TELEPHONE INTERVIEW

_____	_____	_____	_____	_____
County	Date	Time	Group	Phone

Hello_____ my name is _____ and I am with Oklahoma State University. We are surveying Oklahoma farmers about alternative agricultural enterprises for Oklahoma. May we have a few minutes of your time to ask you a few questions?

YES_____ NO_____ If this is a poor time could we call you at a later time. (If so) when?_____ (If no) Thank you for your time. Good-bye.

1. Are you actively involved in farming?

YES_____
NO_____ If NO---Are you interested in becoming involved in alternative agricultural enterprises? YES_____ NO_____ Thank you. Good-bye.

We are especially interested in alternative agricultural enterprises.

We are defining Alternative Agricultural Enterprise as "any new, different or non-traditional enterprise intended to improve farm profits or make better utilization of agricultural resources." This is a fairly broad definition and should include fruits, vegetables, other crops, livestock, or agricultural products normally considered non-traditional in Oklahoma.

2. Have you tried some type of alternative agricultural enterprise?

YES_____ NO_____ If NO Go to SECTION 2 question # 11.

3. What specific alternative agricultural enterprises have you tried?

(What success based on profitability have you had on a scale 1 to 5 with 5 being most profitable for each alternative tried?)

(Extremely, highly, moderately, slightly and not profitable)

			Rating of profitability				
_____	A. VEGETABLES	Acres					
_____	1. Tomatoes	_____	5	4	3	2	1
_____	2. Cucumbers	_____	5	4	3	2	1
_____	3. Peppers	_____	5	4	3	2	1
_____	4. Asparagus	_____	5	4	3	2	1
_____	5. Broccoli	_____	5	4	3	2	1
_____	6. Cauliflower	_____	5	4	3	2	1
_____	7. Sweet corn	_____	5	4	3	2	1
_____	8. Squash	_____	5	4	3	2	1
_____	9. Pumpkins	_____	5	4	3	2	1
_____	10. Okra	_____	5	4	3	2	1
_____	11. Blackeye Peas	_____	5	4	3	2	1
_____	12. Other _____	_____	5	4	3	2	1
_____		_____	5	4	3	2	1
_____	B. FRUIT	Acres					
_____	1. Strawberries	_____	5	4	3	2	1
_____	2. Peaches	_____	5	4	3	2	1
_____	3. Apples	_____	5	4	3	2	1
_____	4. Grapes	_____	5	4	3	2	1
_____	5. Blueberries	_____	5	4	3	2	1
_____	6. Blackberries	_____	5	4	3	2	1
_____	7. Watermelons	_____	5	4	3	2	1
_____	8. Cantaloupes	_____	5	4	3	2	1
_____	9. Other _____	_____	5	4	3	2	1
_____	C. OTHER PLANTS	Acres					
_____	1. Christmas trees	_____	5	4	3	2	1
_____	2. Pecans	_____	5	4	3	2	1
_____	3. Sod	_____	5	4	3	2	1
_____	4. Nursery trees/plants	_____	5	4	3	2	1
_____	5. Flowers	_____	5	4	3	2	1
_____	6. Sunflowers	_____	5	4	3	2	1
_____	7. Other _____	_____	5	4	3	2	1
_____	_____	_____	5	4	3	2	1
_____	D. ANIMALS	Head					
_____	1. Catfish	_____	5	4	3	2	1
_____	2. Poultry	_____	5	4	3	2	1
_____	3. Angora goats	_____	5	4	3	2	1
_____	4. Ostrich	_____	5	4	3	2	1
_____	5. Other _____	_____	5	4	3	2	1
_____		_____	5	4	3	2	1
_____		_____	5	4	3	2	1
_____	E. OTHER ENTERPRISES	Size					
_____	1. Hunting leases	_____	5	4	3	2	1
_____	2. Fishing/picnicking	_____	5	4	3	2	1
_____	3. Manuf. farm equip.	_____	5	4	3	2	1
_____	4. Landscape/design	_____	5	4	3	2	1
_____	5. Farmers Market	_____	5	4	3	2	1
_____	6. Other _____	_____	5	4	3	2	1
_____		_____	5	4	3	2	1

4. What factors encouraged you to try alternative agricultural enterprises?

_____ 1. Low profit from traditional enterprises
_____ 2. High potential for profit
_____ 3. Less risk than previous enterprises
_____ 4. Encouragement from friends, relatives or neighbors
_____ 5. Genuine desire to produce the commodity
_____ 6. Encouragement from financial lender
_____ 7. Desire to reduce workload
_____ 8. Health concerns
_____ 9. Other _____

5. What factors discouraged you while trying alternative enterprises?
_____ 1. Start up costs
_____ 2. Credit
_____ 3. Markets
_____ 4. Labor
_____ 5. Lack of information
_____ 6. Other_____

6. Which additional alternative agricultural enterprises would you most be interested in trying?
_____ 1. Fruits
_____ 2. Vegetables
_____ 3. Crops
_____ 4. Animals
_____ 5. Other_____

7. What do you see as the most promising potential alternative agricultural enterprises for other farmers in your area?

	List
_____ 1. Fruits	_____
_____ 2. Vegetables	_____
_____ 3. Crops	_____
_____ 4. Animals	_____
_____ 5. Other	_____

8. In the next question, I would like you to rate the effectiveness of sources of information you use in making decisions about your alternative agricultural enterprise. Would you please rate, on a scale of 1-5, with 1 being lowest and 5 being highest, the effectiveness of the information sources you use.

(Note to caller: Ask "do you use" and read each source to get a yes or no response.
Ask them to rate effectiveness only on sources where they reply yes.)

Use			Effectiveness				
		Information Source	Extremely	Highly	Moderately	Slightly	Not
yes	no	Monthly or Weekly Farm Publications	5	4	3	2	1
yes	no	Daily or Weekly Newspapers	5	4	3	2	1
yes	no	Radio	5	4	3	2	1
yes	no	Television	5	4	3	2	1
yes	no	Cooperative Extension Fact Sheets, Newsletters or Other Publications	5	4	3	2	1
yes	no	Cooperative Extension Videoconferences	5	4	3	2	1
yes	no	Young Farmers Organization	5	4	3	2	1
yes	no	Farm or Grower Organizations	5	4	3	2	1
yes	no	Vo-Tech Farm Management Program	5	4	3	2	1
yes	no	County Extension Agents	5	4	3	2	1
yes	no	State or Area Extension Specialists	5	4	3	2	1
yes	no	Vocational Agriculture Instructors	5	4	3	2	1
yes	no	County ASCS or SCS Personnel	5	4	3	2	1
yes	no	Other Farmers	5	4	3	2	1
yes	no	Manufacturer or Supplier Representatives	5	4	3	2	1
yes	no	Buyer or Processor Representatives	5	4	3	2	1
yes	no	Professional Consultants	5	4	3	2	1

9. What information source have you found most useful in the following phases of your alternative enterprise? (Note to caller: Read the respondent each phase from left to right and place marks on the appropriate line to the right of the information sources most nearly matching the answers, or list a different response under other.)

Phases >>> / Information Sources	Overall Decision-Making or Planning	Financial Management	Legal or Tax Decisions	Seed or Raw Material Purchases	Specialized Equipment	Production Practices	Harvesting	Marketing
Monthly or Weekly Farm Publications	____	____	____	____	____	____	____	____
Daily or Weekly Newspapers	____	____	____	____	____	____	____	____
Radio	____	____	____	____	____	____	____	____
Television	____	____	____	____	____	____	____	____
Cooperative Extension Fact Sheets, Newsletters or Other Publications	____	____	____	____	____	____	____	____
Cooperative Extension Videoconferences	____	____	____	____	____	____	____	____
Young Farmers Organization	____	____	____	____	____	____	____	____
Farm or Grower Organizations	____	____	____	____	____	____	____	____
Vo-Tech Farm Management Program	____	____	____	____	____	____	____	____
County Extension Agents	____	____	____	____	____	____	____	____
State or Area Extension Specialists	____	____	____	____	____	____	____	____
Vocational Agriculture Instructors	____	____	____	____	____	____	____	____
ASCS or SCS	____	____	____	____	____	____	____	____
Other Farmers	____	____	____	____	____	____	____	____
Manufacturer or Supplier Representatives	____	____	____	____	____	____	____	____
Buyer or Processor Representatives	____	____	____	____	____	____	____	____
Professional Consultants	____	____	____	____	____	____	____	____
Other								
_____	____	____	____	____	____	____	____	____
_____	____	____	____	____	____	____	____	____
_____	____	____	____	____	____	____	____	____

10. What other forms of information or assistance do you need to make decisions concerning alternative agricultural enterprises?

_____

_____

_____

SECTION 3

It would be helpful to us if we could get you to answer some general information questions.

15. What year were you born? _____

16. Were you in FFA? YES _____ NO _____ How many years? _____

17. Were you in 4-H? YES _____ NO _____ How many years? _____

18. What is your highest grade completed in school?

(Circle)

8	9	10	11	12		13	14	15	16	17	18	19	20
				H				A		B		M	P
				S				S		S		S	H
													D

19. Would you classify yourself as a Full-time, Part-time or Sundown farmer?

		Other Occupation
_____	FULL-TIME (No outside job, full-time farming)?	
_____	PART-TIME (Part-time outside job, part-time farming)?	_____
_____	SUNDOWN (Full-time outside job, farming on the side)?	_____

20. What percentage of your work time is spent farming? _____

21. How many acres do you have in your total farming operation? _____

22. What are your principal enterprises?

_____	1. Beef	_____	10. Alfalfa
_____	2. Dairy	_____	11. Grass hay
_____	3. Sheep	_____	12. Grass seed
_____	4. Swine	_____	13. Grain sorghum
_____	5. Horses	_____	14. Corn
_____	6. Poultry	_____	15. Mungbeans
_____	7. Wheat	_____	16. Soybeans
_____	8. Cotton	_____	17. Barley
_____	9. Peanuts	_____	18. Other_____

_____

_____

_____

We appreciate the time you have spent helping us compile information about Oklahoma farmers. Thank You.

Goodbye.

VITA

Robert Dean Keating

Candidate for the Degree of

Master of Science

Thesis: IDENTIFICATION AND EFFECTIVENESS OF INFORMATION SOURCES USED BY OKLAHOMA FARMERS IN MAKING DECISIONS ABOUT ALTERNATIVE AGRICULTURAL ENTERPRISES

Major Field: Agricultural Education

Biographical:

Personal Data: Born in Salina, Kansas, November 11, 1950.

Education: Graduated from Lincoln High School, Lincoln, Kansas, in May, 1968; received Bachelor of Arts Degree from Fort Hays State University, Hays, Kansas, in May, 1976; received Master of Science Degree from Oklahoma State University in May, 1989.

Professional Experience: Associate Editor, High Plains Journal, Dodge City, Kansas, June, 1976 to January, 1983; Managing Editor, High Plains Journal, January, 1983 to February, 1985; Managing Editor, Agricultural Press Service, Agricultural Communications Department, Oklahoma State University, February, 1985 to present.

Professional Organizations: Agricultural Communicators in Education; American Agricultural Editors Association; Pi Delta Epsilon; Society For Collegiate Journalists; Phi Kappa Phi.