

FACTORS AFFECTING DECISIONS REGARDING ALTERNATIVE
AGRICULTURAL ENTERPRISES BY FARMERS
AND RANCHERS IN OKLAHOMA

By

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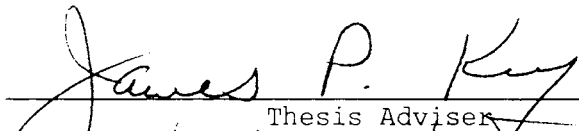
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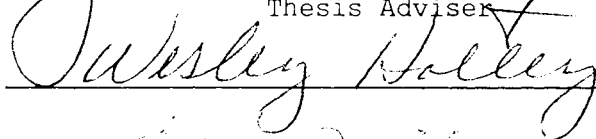
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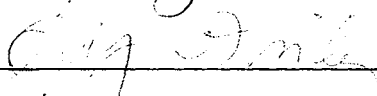
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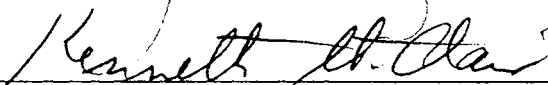
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AND RANCHERS IN OKLAHOMA


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CHAPTER I

INTRODUCTION

Oklahoma, with the establishment of the Wes Watkins Agricultural Research and Extension Center and South Central Research Laboratory in Atoka County in 1985, began its search for alternative agricultural enterprises to meet the needs of southeastern Oklahoma. Oklahoma State University continued its involvement with alternative agricultural enterprises by hosting a satellite videoconference on October 30, 1987. The videoconference on Alternative Enterprises for Oklahoma Agriculture Producers was produced simultaneously at the Wes Watkins Agricultural Research and Extension Center near Lane, Oklahoma and at the Oklahoma State University campus through the use of satellite communication technology.

As the importance of alternative agricultural enterprises continued to grow for the state of Oklahoma, a Governor's Conference on Alternative Opportunities for Oklahoma Farmers was held in November, 1988, with Governor Henry Bellmon hosting at Oklahoma State University. Governor Bellmon (1988) stated:

Oklahomans need to capitalize on the state's advantages in filling markets for alternative agricultural commodities. Our climate and geographic location relative to markets and population centers is excellent (np).

A Center for Alternatives In Agriculture was created in 1988 at

Oklahoma State University to coordinate research and information about potential alternatives for Oklahoma producers. Dr. Ray Campbell, (1989) coordinator, commented:

Diversification of Oklahoma's agricultural base through development of production and marketing systems for viable alternative products is a way to provide economic growth for agricultural producers and the entire state. However, information about potential alternatives and their production, marketing and utilization needs to be evaluated and then disseminated in a systematic way (p. 2).

The last few years have been compared to the "great depression years" as far as the negative impact on farms, farm families and farm communities. Oklahoma has not been immune to these influences caused by economic conditions.

Oklahoma agriculture is extremely specialized in wheat and beef cattle production. This specialization is consistent with prospects in the next decade for highest average profits but makes the state's agricultural economy sensitive to setbacks in wheat and cattle prices. Producers are unlikely to diversify unless they are presented with profitable alternative enterprises (Agriculture 2000, 1982, p.19).

With the low farm economy that United States farmers have had to contend with, some farmers have seen a need to try to diversify into non-traditional or alternative agricultural enterprises. As a result of the situation, a longitudinal study was initiated by the Oklahoma State University Agricultural Education Department in conjunction with the establishment of the Wes Watkins Agricultural Research and Extension Center at Lane, Oklahoma.

The first phase was to identify the perceptions of the importance and feasibility of alternative agricultural enterprises by vocational agriculture teachers and county extension agricultural agents for adoption by Oklahoma farmers and ranchers. With the completion of this phase, it was found that vocational agriculture

teachers and county extension agricultural agents perceived that management, record keeping and marketing skills were the most important skills for the success of alternative agricultural enterprises (Harritt, 1987).

Statement of the Problem

Opinions and perceptions of Oklahoma farmers and ranchers were needed to provide information about the reasons for rejecting or adopting alternative agricultural enterprises. A study was needed of Oklahoma farmers and ranchers in all areas of the state to provide answers to the following questions: What types of alternative agricultural enterprises are being pursued in Oklahoma, and what factors encourage or discourage the use of alternative agricultural enterprises?

Purpose of the Study

The purpose was to survey Oklahoma farmers and ranchers about their perceptions concerning alternative agricultural enterprises.

Objectives of the Study

The following specific objectives were developed in order to accomplish the purpose of this study:

1. To determine Oklahoma farmers' and ranchers' interest and/or involvement in alternative agricultural enterprises.
2. To identify alternative agricultural enterprises that were presently being tried by Oklahoma farmers and ranchers, the number trying and the scope of the alternatives.

3. To determine the perceived profitability of those alternative agricultural enterprises in which Oklahoma farmers are engaged.

4. To determine the factors that encourage and/or discourage Oklahoma farmers and ranchers to try alternative agricultural enterprises.

5. To determine what alternative agricultural enterprises were perceived by Oklahoma farmers and ranchers as being the most promising for farmers in their area.

6. To identify those sources of information that were used most often for decision-making by Oklahoma farmers who were involved in alternative agricultural enterprises.

7. To determine if demographic factors influence the adoption of alternative agricultural enterprises.

Assumptions of the Study

For the purpose of this study the following assumptions were made:

1. Those individual farmers and ranchers selected in the stratified random sample were representative of the general population of farmers and ranchers of Oklahoma.

2. That the responses, opinions and perceptions of the farmers and ranchers were accurate and sincere.

3. That farmers and ranchers had access to telephones.

4. That the data gathering instrument used adequately measured the farmers' and ranchers' responses about alternative agricultural enterprises.

Scope of the Study

An attempt was made to provide an equal opportunity for all farmers and ranchers in Oklahoma to be a part of this study. The population for this study was defined as all farmers and ranchers in Oklahoma according to the Oklahoma 1982 Census. The study was divided into two sections with the first one being a stratified proportional random sample and the second section being all Oklahoma alternative agricultural enterprise adopters who could be identified.

To ensure the most accurate and highest-yielding method of data collection a telephone survey was used. The farmers and ranchers were required to have telephone service to have an equal chance to be in this study.

Limitations of the Study

The following limitations of the study were recognized by the researcher:

1. For a farmer or rancher to be in the sample, they would have to have a telephone with a number that was available to the researcher.
2. Not all farmers were on county Extension agricultural lists, but the Extension lists were the best source of names available for farmers and ranchers in the state.
3. The study was limited to the ability of the respondents to interpret and respond to the survey instrument and the communication ability of the individual making the calls.

Definition of Terms

For a more complete understanding of certain terms used in this study, the following terms and phrases were defined:

Alternative Agricultural Enterprises: 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 producing and marketing fruits, vegetables, other crops, livestock or agricultural products normally considered non-traditional in that farmer or ranchers' area of Oklahoma.

Random Sample Group: This refers to those individuals who are part of the proportional stratified random sample of Oklahoma farmers and ranchers.

Alternative Agriculture Group: This term refers to the individuals who make up the total identified alternative agricultural enterprise group of farmers and ranchers in Oklahoma.

Alternative Adopters: This refers to those individuals who have used or are actively involved in non-traditional agriculture enterprises.

Perceptions: The act of perception is defined as insights, intuitions (Webster, 1984) e.g.

Opinions: According to Webster (1984), opinion may be defined as a belief or idea held with confidence but not substantiated by direct proof or knowledge.

Attitudes: Webster (1984) defined attitude as a state of mind or feeling or disposition.

Full-time farmer: A farmer or rancher who has no outside job, and is a full-time farmer.

Part-time farmer: A farmer or rancher who has a part-time outside job, and is a part-time farmer.

Sundown farmer: A farmer or rancher who has a full-time outside job, and is farming on the side.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The purpose of this chapter was to present for the reader an overview of material which was related to the subject of this study. The presentation of this background information was divided into four major areas and a summary. The major divisions of literature related to the study were: (1) the agricultural economy in Oklahoma, (2) information sources available to farmers and ranchers, (3) studies of agricultural diffusion, adoption, and innovation, and (4) alternative agricultural enterprises.

The Agricultural Economy in Oklahoma

Oklahoma economy has had a history of ups and downs. Duncan (1956) reported that Oklahoma as determined by the 1950 Agricultural Census had 38 counties in the low-income group. He pointed out that these counties were located in the southeastern portion of the state. The government plan to correct the problem in 1956 according to Duncan was stated in a message by President Eisenhower as:

The Rural Development Program will be conducted broadly as well as in selected counties, and will involve special education work by the cooperative Federal-State Extension Service, research on farming and marketing problems of

low-income farmers by Federal and State agencies, and assistance in providing employment information by the Department of Labor (p. 13).

The economy of Oklahoma and particularly that portion related to agriculture has experienced very drastic adjustments in the last few years. The problem of more raw product availability than the market would support created havoc in the farm sector in Oklahoma and throughout America. Oklahoma had the added problem of high dependency upon the energy industry, which crashed about the same time farm prices went down. This created a rate several times higher than normal in Oklahoma for farm bankruptcies and foreclosures (Woods, 1988). In turn this caused the financial ruin of banks, businesses, and individuals that relied on an economy sparked by agriculture and energy industries.

Woods & Sanders (1987) stated that, "The linkages between agriculture and Oklahoma are strong, particularly in areas where the primary economic base is agriculture" (p. 1). These reasons caused Oklahoma people to be concerned with alternatives for economic development opportunities.

The term economic development refers to an expansion of the economic base through efficient allocation and use of available resources. A working definition for economic development could be any activity which provides additional jobs and income given a community's standard or quality of life (p. 1).

When surveying Oklahoma farmers Rogers, Tweeten, and Russell (1984) found that part-time farmers rated higher on the quality of life index than other groups surveyed. Along with this study information was gathered that indicated that perceived quality of life generally increased as farm size increased. Education level

was slightly higher for part-time farmers than for full-time farmers.

While surveying the economic characteristics of small farms in east central Oklahoma Russell, Tweeten, and Rogers (1984) reported the average farm size to be 180 acres as compared to 481 for the state's average. They also concluded that part-time farming as a way of farming is preferred and somewhat permanent way of life for the majority of those involved. Off farm employment was one of the ways part-time farmers raised their life styles. Other farmers were reported as the most important source of information. The production and marketing of fruits and vegetables was not a favored way to raise income.

The methods and requirements for entry into the farming profession have changed a great deal in the last 20 years. Even though it is very difficult to enter farming, many families are taking the challenge. Sanford, Tweeten, Rogers, and Russell (1984) found that part-time farming was a viable option for many. The findings indicated:

The alternative for many operators has been, and will likely continue to be, a combination of farm and non-farm income to support the family. The part-time farming operation can achieve both family and agricultural goals in much the same manner as large commercial farming operations, while small-scale farming alone would fail. The economic payoff from farming will need to increase substantially from improved product prices, production practices, management and marketing before current operators will choose to shift much of their labor from off-farm to farming activities (p. 29).

Information Sources Available to
Farmers and Ranchers

In research about farmers' views of information sources, Lionberger and Francis (1969) found that they were ranked as (1) other farmers, (2) innovators, (3) county extension agents, (4) farm magazines, and (5) television.

Weaver and Miller (1982) found that: "information-use behavior is related to the level of output of agricultural decision makers" (p. 25). The farmers that utilized information sources on a regular basis were more likely to manage problem situations.

Springer (1981) stated: "Information is the giving out of data, the delivery of material. Communication is getting through to people, and for a given purpose" (p. 17) From this definition it is evident that we need to look at how we go about sending information to our clientele in an efficient and effective way. Another point that was brought out is that we should investigate the audience we intend to serve in order to find out their preference for receiving information. Timing is another important consideration when supplying information.

In a study conducted by Uko and Miller (1987) of part-time and small farmers in Ohio, it was concluded that information was needed in the form of education in four areas of (1) farm tax management; (2) marketing farm products; (3) determining farm insurance needs; and (4) farm record keeping.

When Smith and Kahler (1982) surveyed the Iowa farmers about information and education it was found that farm magazines were

rated as the most valued source of information followed by commercial companies and radio. It was noted that the preferred approach to dissemination of agricultural information was by area short courses followed by closed circuit television.

Studies of Agricultural Diffusion, Adoption and Innovation

Rogers (1983) defined diffusion, adoption and innovation as:

Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. It is a special kind of communication, in that the messages are concerned with new ideas. Communication is a process in which participants create and share information with one another in order to reach a mutual understanding (p. 5).

Adoption is the decision to make full use of an innovation as the best course of action available (p. 21).

An innovation is an idea, practice, or object that is perceived as new by an individual or group (p. 11).

While researching vocational agriculture teachers role as a part of the adoption of agricultural technology, Leuthold (1980) reported that "the farmer's own experience with trial results is the most critical factor in the continuance of the technology" (p. 6). The process involves four stages known as: knowledge, persuasion, decision, and confirmation. He contended that one of the vocational agriculture teachers' major objectives should be to train future farmers how to set up experimental procedures to test the advantages of items of technology. Many of the new technologies require changes in other areas of management to maximize performance.

Baker and Toensmeyer (1987) reported that producers of fruit and vegetables in Delaware and New Jersey were locked into years of

tradition. The producers had few plans to expand or modernize their operation. Very few farmers planned to use computers to help with management or marketing techniques. The farmers were not ready to adopt the idea of a computerized marketing system for their fruits and vegetables.

The adoption process for innovations can be defined as the mental process that an individual goes through from the point of hearing about the alternative agricultural enterprise until adoption. Byler and Buckley (1981) explained:

For many innovations, the adoption process includes the following five stages: (1) the awareness stage, (2) the interest stage, (3) the evaluation stage, (4) the trial stage, and (5) the adoption stage" (p. 1).

The study by Byler and Buckley (1981) revealed that the utilization of information during the first stage was the county extension agent most often. Farmers utilized other farmers more often in the second stage, while magazines and extension specialists were used most often in the third stage. Farm supply representatives were the most used source of information in the fourth stage of the adoption process.

Alternative Agricultural Enterprises

Traditional farm enterprises such as wheat, corn, soybeans, cotton, beef cattle, dairy cattle, hogs, sheep, and poultry have been the main source of income for farmers and ranchers. With the lack of profit in some of these main commodities, farmers and ranchers have turned to evaluating alternatives that might increase their total farm or ranch profit. There are many alternatives that are in the trial stage and some that have been on the fringes for

several years. These alternatives include: fruits, vegetables, angora goats, llama, ostrich, alligators, bees, deer, rabbits, wild flowers, mushrooms, herbs, catfish, leases for hunters, and many others.

The factor to remember for farmers considering alternative crops should be maximizing profits, although survival of the family farm could be the primary factor. According to Polopolus, (1987) diversification will most likely increase risk to the farming operation. Along with diversified alternative farming increased levels of management services are required. Knowledge of technology is very important for alternative agricultural enterprises in order to reach the most efficient production possible. Alternatives have to contribute to total operation profits to be feasible.

Oklahoma has made giant strides toward alternative agricultural enterprise development with the establishment of the Wes Watkins Agricultural Research and Extension Center. It is the response to the need for new and improved enterprises for southeastern Oklahoma. Research is conducted on vegetable crops like asparagus, broccoli, cabbage, sweet corn, tomatoes, cucumbers, okra, snap beans, onions, peas, and fruit crops like peaches, blackberries, and strawberries (Taylor, 1988). This information was provided by the Progress Report along with a great amount of detail on various enterprises.

Oklahoma State Extension Specialists' have produced mounds of fact sheets for the public use on vegetable, fruit, and other plant production. There are pamphlets estimating costs, risks, profits, labor availability and so on. Lilley (1988) reported that Oklahoma catfish producers had sales of \$9.2 million in 1987. According to

the Oklahoma Agricultural Statistics Service, Oklahoma was the fourth largest state in catfish sales in 1987. Hays (1989) stated that Oklahoma catfish producers were utilizing 1,428 acres of water surface area. Value of sales from Oklahoma hatchery operations totaled \$4.7 million during 1987. Fish consumption by Americans has increased from about ten pounds in 1960 to about 15.4 pounds in 1987. Representative Wes Watkins established a public trust, under the sponsorship of Red Ark Development Authority, to help develop the economic base of southeastern Oklahoma. A processing plant located at Holdenville went into operation in the fall of 1987.

A similar cooperative operation was established in Mississippi through the cooperation of several state, federal and private groups with the muscadine grape project. Bateman, Sollie, and Stenmark (1987) investigated a case study of muscadine grapes, a potential agricultural alternative enterprise for farmers in the southeast states. It had to be established that grapes could be grown, juice manufactured and sold at a profit. Since this beginning, a plant has been established in Mississippi and 500 new acres of muscadine grapes have been planted in Mississippi alone. The processing plant is marketing jam, jelly and pancake syrup besides juice from muscadine grapes and expansion is planned.

With the importance of alternative agricultural enterprises being advocated on a statewide basis a Center for Alternatives in Agriculture was established in 1988 at Oklahoma State University with Dr. Ray Campbell as coordinator. It was to act as a center for information, communication, coordination, and resource acquisition. The Center for Alternatives in Agriculture promoted the Governor's

Conference on Alternative Opportunities for Oklahoma Agricultural Producers on November 15-16, 1988 as a way of informing the Oklahoma people. Governor Bellmon in his speech mentioned the climate and location of Oklahoma as positive reasons for promoting alternative agricultural enterprises. "Having alternative crops to send to market in the off seasons helps a great deal," said Governor Bellmon (1988). He mentioned catfish, ostriches, and wildlife as alternatives. He emphasized that agriculture is the key to economic development for Oklahoma.

Mackenzie (1988) found that for every deer bagged in Delaware that \$1,670 in hunting-related expenditures was generated. Hunters in Delaware spend approximately \$2.3 million annually for deer hunting. Around 16,000 hunters harvest about 2,000 deer each year on public land. This study did not include the significant, but unknown, number of hunters that hunt exclusively on private lands. He suggested that the private wildlife management potential for profit was high. Thomas (1987) reported that an alternative enterprise for some farmers and ranchers would be the utilization of their land for recreational purposes. The main thing Thomas warned the land owners to remember was that the "recreational experience" was the product for sale. Each landowner should investigate the advantages and disadvantages before making a decision about recreational leasing.

Summary

This review of literature presented the background information with emphasis on four areas: the agricultural economy in Oklahoma,

the information sources available to farmers and ranchers, the studies of agricultural diffusion, adoption, and innovation, and alternative agricultural enterprises.

Yes the economy has suffered in Oklahoma, but as Governor Bellmon (1988) said, "I am sure that we have in this room some who are innovative enough to make use of developments as they occur." We must realize that Oklahoma is in a world market and use that knowledge to improve market potential for Oklahoma agricultural products.

There are many identified information sources for farmers and ranchers that are available but according to research the needs are not always met. Printing news or an information document about a phase of agriculture that is not read has served no purpose. It appears that the need for information and the method by which it is distributed to farmers should be evaluated in more detail.

The adoption process stages have to be worked through for each innovator at his/her own pace. Some adopt very early while others wait until the majority have adopted and some never change or adopt. It appears that educators and extension personnel need to develop methods that farmers and ranchers identify with in order to get them to become adopters. We should try to approach it at the level at which they will learn, not at the level of our own professional ideals.

Alternative agricultural enterprises have been around for centuries. They are the enterprises that are waiting for the right time and place to be adopted by the majority. It would be safe to venture that hard red winter wheat was once an alternative

agricultural enterprise in Oklahoma, just as cattle were an alternative to buffalo. Alternative agricultural enterprises are not suited for everyone and, as the literature indicates, they are often high risk enterprises. Which alternative agricultural enterprises that are in the trial stage now will become traditional enterprises of the future?

Will Oklahoma follow the example of the muscadine project in Mississippi and find the alternative agricultural enterprise which can lead to manufacturing and economic improvement?

In conclusion, the review of literature indicated that alternatives and the adoption process were normal to the overall improvement of the agricultural economy. More information was needed about the alternative agricultural enterprises that were in the adoption process in Oklahoma. Alternative agricultural enterprises have been a reality for agriculture, this has been the method of American agricultural success.

CHAPTER III

METHODOLOGY AND PROCEDURE

Introduction

The purpose of this chapter was to describe the methods used and the procedures followed in accomplishing the objectives of this study.

The objectives of the study were:

1. To determine Oklahoma farmers' and ranchers' interest and/or involvement in alternative agricultural enterprises.

2. To identify alternative agricultural enterprises that were presently being tried by Oklahoma farmers and ranchers, the number trying and the scope of the alternatives.

3. To determine the perceived profitability of those alternative agricultural enterprises in which Oklahoma farmers are engaged.

4. To determine the factors that encourage and/or discourage Oklahoma farmers and ranchers to try alternative agricultural enterprises.

5. To determine what alternative agricultural enterprises were perceived by Oklahoma farmers and ranchers as being the most promising for farmers in their area.

6. To identify those sources of information that were used most often for decision-making by Oklahoma farmers who were involved in alternative agricultural enterprises.

7. To determine if demographic factors influence the adoption of alternative agricultural enterprises.

To accomplish the objectives of this study it was deemed necessary to interview two groups. The first was a random sample of all farmers and ranchers in Oklahoma in order to be able to generalize to all farmers and ranchers in the state. The second group was all producers in Oklahoma who could be identified as being involved in alternative agricultural enterprises. This group was called the alternative agriculture group. If farmers or ranchers in the random sample group were involved in alternative agricultural enterprises, they also were included in the alternative agriculture group. Throughout this study the groups will be referred to as the random sample group and the alternative agriculture group.

This study was coordinated with the assistance and cooperation of the Director of the Oklahoma Cooperative Extension Service, District Supervisors, County Extension Agricultural Agents from each county in Oklahoma, and the researcher's graduate committee members. The information was collected from August, 1988, through February, 1989.

A telephone survey instrument technique was used to obtain data needed to collect information concerning the opinions of farmers and ranchers about alternative agricultural enterprises for the study. Kerlinger (1986) reported: "Surveys can be conveniently classified by the following methods of obtaining information: personal

interview, mail questionnaire, panel and telephone" (p. 378). He goes on to rank them as personal interview, panel, telephone and then mail questionnaire in order of importance.

Sample and Population

The sample for this study was selected from the adult farming population of the state of Oklahoma. The population size of 72,523 was determined by the 1982 Oklahoma Census of Agriculture (1984) which was the most recent one available at the time. Isaac & Michael (1987) provided a table used: ".....for determining needed size S of a randomly chosen sample from a given finite population of N cases such that the sample proportion p will be within $\pm .05$ of the population proportion P with a 95 percent level of confidence" (p. 193). The table for determining needed sample size indicated that 383 respondents were needed to achieve a confidence level of 95 percent.

The sampling procedure selected was a proportional stratified random sampling technique. Van Dalen (1979) explained that stratified random sampling helps eliminate sampling error and that proportional stratification allows the researcher to achieve even greater representation in the sample.

The first step of the procedure was to stratify the state into the four districts; Northeast district, Northwest district, Southeast district and Southwest district that the Cooperative Extension Service uses as Administrative Districts (See Appendix A). The total population for each district was determined by adding the population of farmers and ranchers found in each county of that

district. It was determined that the population was: northeast - 22,090, northwest - 14,051, southeast - 17,788, and southwest - 18,594. The proportion was calculated by dividing the district population by the state population. For example:

$$\frac{22,090 \text{ total population in the northeast district}}{72,523 \text{ total state population}} = 30.45\% \text{ of sample}$$

The percentage computed from the above formula for each district was multiplied by the total sample size (383) to determine the number of farmers and ranchers required for each district. For example:

$$30.45\% \text{ of sample} \times 383 = 116 \text{ farmers and ranchers selected}$$

northeast district (sample size)

This same procedure was used to calculate the number in the random sample from the other districts. The calculated sample size of farmers and ranchers for each district can be seen in Table I.

The counties were numbered in each district, the Table of Random Numbers (Jaccard, 1983) was used to select four counties at random from each district for a total of 16 counties (See Appendix A). The same procedure was followed to determine the sample size for each county as was used for the districts. For example:

$$\frac{1,164 \text{ total Craig county population}}{3,994 \text{ total district population}} = 29.14\% \text{ of sample}$$

TABLE I
SAMPLE SIZE BY DISTRICT

District	Total Population	Sample Size	Percent of Total Sample
Northeast	22,090	116	30.45
Northwest	14,051	75	19.38
Southeast	17,788	94	24.53
Southwest	18,594	98	25.64
Total	72,523	383	100.00

The percentage calculated from the above formula for each county was multiplied by the total district sample size (116) to determine the number of farmers and ranchers required to constitute the sample selected from each county. For example:

$$\begin{array}{rcl} 29.14\% \text{ of sample} & \times & 116 \\ \text{Craig county} & \text{sample size} & \\ & & = \quad 34 \text{ farmers and} \\ & & \quad \text{ranchers selected} \end{array}$$

The same procedure was used to determine the random sample of farmers and ranchers in each county that was randomly selected. The resulting sample size of farmers and ranchers can be seen in Table II by counties for the entire sample (383) of the study.

Selection of Individuals

In order to obtain a list of names of farmers and ranchers in the selected counties the assistance of the Oklahoma Cooperative Extension Service was secured. A letter was drafted with the approval and signature of the Associate Director of the Oklahoma Cooperative Extension Service explaining the purpose of the survey and asking each of the county Extension agricultural agents to send names, addresses and phone numbers of the farmers and ranchers in their county (See Appendix C). They also were asked to identify any producers in their county who were engaged in alternative agricultural enterprises. At the same time a letter was sent out to all the remaining counties in the state from the Associate Director of the Oklahoma Cooperative Extension Service to the County Extension Agricultural Agent explaining the purpose of the survey

TABLE II
SAMPLE SIZE BY COUNTY

County	Total County Population	Sample Size	Percent of Total Sample
<u>Northeast</u>			
Cherokee	1,087	31	8.09
Craig	1,164	34	8.87
Okfuskee	745	22	5.74
Tulsa	998	29	7.58
Sub total	3,994	116	
<u>Northwest</u>			
Alfalpa	859	19	4.96
Kay	1,025	21	5.48
Logan	951	20	5.22
Woodward	733	15	3.92
Sub total	3,568	75	
<u>Southeast</u>			
Choctaw	977	21	5.48
Pittsburg	1,377	29	7.58
Ponotoc	1,048	22	5.74
Seminole	1,030	22	5.74
Sub total	4,432	94	
<u>Southwest</u>			
Caddo	1,640	38	9.94
Comanche	994	23	6.00
Jackson	671	15	3.92
McClain	977	22	5.74
Sub total	4,282	98	
Total	16,276	383	100.00

(See Appendix C). The agents were asked to supply a list with names and telephone numbers of all producers in their county who were involved in alternative agricultural enterprises. The second letter was to supply names to meet the objectives of the alternative agriculture group for the study. A third letter was sent to the District Director of Cooperative Extension in each district making them aware of the study, noting what was being asked of the agents and asking for their cooperation (See Appendix C).

A number was assigned to each farmer and rancher whose name was on the list from a county. The first farmer or rancher on the list was assigned number one with the last person on the list being assigned the largest number. This list was then used with the table of random numbers (Jaccard, 1983) to select the number of farmers and ranchers who had been determined necessary for the sample from that county. If the sample size for a county was 20, an over sample of 20 additional farmers and ranchers were selected to take care of non-farmers, deceased farmers and those who could not be contacted for one reason or another.

The final step was to acquire telephone numbers of the farmers and ranchers who were randomly selected from each county. The latest editions of telephone directories were used to find the numbers along with the numbers supplied by county Extension agricultural agents from Pittsburg, Woodward, Alfalfa and Craig counties. Then directory assistance was used to try to secure telephone numbers of those who could not be found from telephone directories. Those farmers and ranchers for whom a phone number

could not be found or non farmers were skipped and the next person on the over-sample list was moved up to be part of the random sample for that county. This was repeated until enough people had been contacted in each county to meet the number required for the sample size.

The alternative agriculture group was based on any person who could be identified as being actively involved in alternative agricultural enterprises. All farmers who were identified by Oklahoma Cooperative Extension as being involved in alternative agricultural enterprises were surveyed even if they were not part of the random sample. In fact, all farmers and ranchers who were identified from several sources as being involved in alternative agricultural enterprises were surveyed. These sources included membership lists of the Penn Square Farmers Market Association, the Oklahoma Christmas Tree Growers Association, the Alternative Agricultural Enterprise Videoconference, the Oklahoma Angora Goat Producers, the Governor's Conference on Alternative Agricultural Enterprises, the Catfish Farmers of Oklahoma, the Oklahoma Vegetable Association, the Oklahoma Fruit Growers Association, farmers market associations, and other referrals and miscellaneous sources that identified alternative agricultural enterprises.

The individual's name, phone number, county and a survey number were entered in dBASE III PLUS Database System to keep track of the information and to make sure that people were called only once. After the respondent had been called the survey number and the rest of the information from the survey was entered into the computer to

be used later in analysis. The data for the random sample and the alternative agriculture group were stored in the same system.

Preparation of the Instrument

It is important to note that the instrument developed for this study was the second part of a three-part research project. The Delphi technique was used by Harritt (1987) as a forecasting tool. The Delphi technique (Isaac & Michael, 1987) consists of one or more rounds of open-ended questionnaires. The information received from that study was instrumental in developing the instrument for this study. A review of instruments used in similar studies was necessary with evaluation of their relevance to the study at hand. From the review it was determined that a combination of components from other instruments would be needed to meet the objectives established in this study.

With the number of people who were to be contacted in the random sample group and the alternative agriculture group, the interview and panel methods of collecting data were ruled out. The use of the mailed questionnaire was considered to be of less value than the use of a telephone survey because of the large percentage of non-respondents who usually were associated with the mailed questionnaire. Since it was especially necessary to get responses from the alternative agriculture group to be able to identify them, the investigator chose the telephone survey as the method for collecting data.

Once it was determined that the telephone survey-interview would be most appropriate for gathering data, several stages were taken to make the instrument applicable in determining the opinions and perceptions of Oklahoma farmers and ranchers about alternative agricultural enterprises. The first stage in the preparation of the interview schedule was to utilize the information gathered from the Delphi technique (Harritt, 1987) and compile a set of general questions that were relevant to assessing the opinions of people in Oklahoma about alternative agricultural enterprises. These questions were derived from the information compiled by Harritt (1987) and related studies [Cosner (1980), Holley (1980), Finley (1981), and Randle (1981)] regarding telephone surveys of Oklahoma farmers. Input regarding the questions to be used in the interview was requested from several other faculty members at OSU, and revisions were made as needed.

The second stage was to make several mock telephone calls to check for applicability and continuity of the questions. Several valid suggestions and questions were raised by those involved. This allowed for revisions and retesting to evaluate the changes. This was carried out several times before proceeding.

The third stage was to provide the OSU Associate Director of the Cooperative Extension Service, members of the researcher's graduate committee, OSU Agriculture College Research Professors, and the Coordinator of the newly created Center For Alternatives in Agriculture at OSU with copies of the telephone survey for final suggestions and approval. It was revised to take into consideration

comments and suggestions for improvement. This was followed with mock telephone interviews.

The length of time required to answer the questionnaire was a concern throughout the process of developing the telephone survey. According to advice of OSU faculty and others, it was felt that the interview time needed to be under 10 minutes in order get information from respondents. The telephone survey was designed to be an "either or" situation with one route for traditional farmers and ranchers and another route for alternative agriculture involvement. The cover page was designed to include survey number, county, date, group, phone, and to answer the question of the respondent being a farmer or rancher, if they had developed any interest in alternative agricultural enterprises and if they were involved in alternative agricultural enterprises. Then, depending on the answer to the question of having tried an alternative agricultural enterprise or not, the interview protocol would route the respondent to the yes or no section. Each of the sections ended with an identical demographic information page (See Appendix D). This allowed the researcher to carry out the objectives for the study with the random sample and the alternative agriculture group with the same telephone questionnaire at the same time. The interview with the farmer or rancher who was in alternative agricultural enterprises took from seven to nine minutes while the one with the producer that was in traditional farming or ranching took about two minutes to complete.

The final stage involved conducting telephone surveys to test the questionnaire that had been devised. This was accomplished by a

pilot test of 10 farmers and ranchers in Payne County who had been identified as being involved in alternative agricultural enterprises by the Payne County Extension Agricultural Agent. After contacting this group, it was concluded the telephone survey was ready to be administered to the farmers and ranchers of Oklahoma.

Coordination of the Survey

A large amount of time and effort was expended to provide coordination and understanding of the telephone survey questionnaire as well as the purpose of this study, to the individuals participating in the study. The primary effort was toward the individuals employed to telephone the farmers and ranchers. Time was spent providing the callers with technical information concerning alternative agricultural enterprises and the purpose of the study. Additional time was spent in orientation of the callers, in asking questions and acquiring the desired information. Reviewing the instrument and understanding its parts and the purpose of the questions were part of the process. The final process was practicing telephone surveys on each other and having a mock telephone interview with the investigator. When the researcher was satisfied that the callers were prepared, they were scheduled to begin calling. The calls were placed from 5:30 to 10:00 pm on Monday through Friday, depending on the callers and the researchers other commitments.

Analysis of Data

Because of the large number of respondents and the amount of information that was collected, a survey format was designed in the dBASE III PLUS database system to enter data from the survey questionnaire. The information involved perceptions, attitudes, opinions and subjective judgments which resulted in qualitative data. The survey was designed to quantify the data for use with statistical procedures to aid in interpretation. The data from dBASE III PLUS was saved to a blank file then up loaded into the main frame computer where analysis could be done with the Statistical Analysis System (SAS) using the TSO or Wylbur programs. The statistical procedures used for descriptive statistics included the Proc Sort, Proc Freq and the Proc Means to provide the frequencies, means, standard deviations and N.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

The purpose of this chapter is to present data which were collected to determine the perceptions, opinions and involvement of Oklahoma farmers in alternative agricultural enterprises. The data are presented as they represent the random sample group in Section I and the alternative agriculture group in Section II. The preceding chapter outlined how the data were gathered to accomplish these objectives. The results of this research study can best be reported by breaking this chapter into seven parts, each part represented by an objective.

Section I

Population Background

The population identified for this study was identified as all farmers and ranchers in 77 counties of Oklahoma or 72,523 according to the Oklahoma Census of 1982. The state was divided into four districts and four counties were randomly selected from each district.

A proportional number of producers were randomly selected from these counties for a total sample size of 383.

Findings of the Study

Objective One: To determine Oklahoma farmers' and ranchers' interest and/or involvement in alternative agricultural enterprises. In Table III, the number (N) and percentage (%) of respondents by their involvement and interest was presented for the random sample group. Of the 383 respondents, 110 individuals or 28.7 percent indicated they were involved in alternative agricultural enterprises. Of the remaining 273 respondents, 109 or 28.5 percent were interested in future involvement with alternative agricultural enterprises while 156 or 40.7 percent of the producers reported they were definitely not interested. Another 2.1 percent did not respond to the question.

Objective Two: To identify alternative agricultural enterprises that were presently being tried by Oklahoma farmers and ranchers, the number trying and the scope of the alternatives.

In Table IV, the enterprises that were currently being tried, scope, minimum and maximum value for the scope, and the mean rating for perceived profitability are presented for the adopters in the random group. The enterprises were divided into five categories with the identified alternative agricultural enterprises listed in order of most involvement. In the vegetable section, tomatoes (21.82%) were ranked first, followed by okra (10.91%), squash (8.18%), and ending with turnips, tritacle, beets and carrots with

TABLE III
 DISTRIBUTION OF INVOLVEMENT OR INTEREST IN
 ALTERNATIVE AGRICULTURAL ENTERPRISES

Factors	Frequency Distribution	
	N	%
No Response	8	2.1
Tried alternative agricultural enterprise	110	28.7
Interested in trying alternative agricultural enterprises in the future	109	28.5
Definitely not interested	156	40.7
Total Responses	383	100.0

TABLE IV

DISTRIBUTION OF TYPES OF ALTERNATIVE AGRICULTURAL ENTERPRISES
IN OPERATION BY OKLAHOMA FARMERS AND RANCHERS

Enterprise	Frequency Distribution			Minimum Value	Maximum Value	Profit Rating	
	n (110)	%	Scope			Mean	Standard Deviation
<u>Vegetables</u>							
Tomatoes	24	21.82	12 acres	< 1	5	3.29	1.27
Okra	12	10.91	9 acres	< 1	5	2.67	1.44
Sweet Corn	10	9.09	34 acres	< 1	20	3.00	1.33
Squash	9	8.18	21 acres	< 1	20	3.67	1.12
Cucumbers	8	7.27	3 acres	< 1	1	3.13	0.99
Broccoli	7	6.36	36 acres	< 1	30	3.14	0.69
Green Beans	7	6.36	1 acre	< 1	1	3.00	1.29
Blackeyed Peas	6	5.46	58 acres	< 1	50	3.83	0.98
Peas & Cowpeas	5	4.55	201 acres	< 1	201	2.20	1.10
Potatoes	5	4.55	6 acres	< 1	4	3.40	1.14
Cabbage	5	4.55	35 acres	< 1	30	3.40	0.89
Onions	5	4.55	0 acres	< 1	< 1	3.60	1.14
Asparagus	4	3.64	19 acres	< 1	15	2.75	1.71
Cauliflower	4	3.64	6 acres	< 1	5	3.50	0.58
Peppers	4	3.64	2 acres	< 1	1	3.50	0.57
Pumpkins	3	2.72	50 acres	< 1	30	3.00	1.00
Spinach	2	1.82	30 acres	< 1	30	3.50	0.70
Sweet Potatoes	2	1.82	0 acres	< 1	< 1	3.00	1.41
Turnips	1	.91	2 acres	2	2	2.00	.00
Tritacle	1	.91	1 acre	1	1	3.00	.00
Beets	1	.91	0 acres	< 1	< 1	5.00	.00
Carrots	1	.91	0 acres	1	1	3.00	.00
	126						
<u>Fruit</u>							
Peaches	22	20.00	114 acres	< 1	50	3.50	1.33
Apples	17	15.46	25 acres	< 1	5	2.70	1.31
Watermelon	13	11.82	116 acres	< 1	60	3.07	1.26
Cantaloupe	10	9.09	45 acres	< 1	20	3.50	1.27
Strawberries	8	7.27	8 acres	< 1	6	3.75	1.04
Blackberries	5	4.55	2 acres	< 1	2	4.00	1.00
Grapes	5	4.55	1 acre	< 1	1	3.80	1.10
Plums	4	3.64	2 acres	< 1	2	4.50	1.00
Apricots	3	2.72	4 acres	< 1	3	1.00	.00
Blueberries	2	1.82	1 acre	< 1	1	3.50	2.12
Cherries	2	1.82	0 acres	< 1	< 1	4.00	0.00
	91						

TABLE IV (Continued)

Enterprise	Frequency Distribution			Minimum Value	Maximum Value	Profit Rating	
	n (110)	%	Scope			Mean	Standard Deviation
<u>Other Plants</u>							
Pecans	36	32.73	18,195 acres	< 1	15,000	3.22	1.38
Nursery Plants	6	5.46	425 acres	1	400	3.33	1.63
Plains Bluestem	5	4.55	429 acres	21	150	4.00	0.71
Christmas Trees	3	2.72	17 acres	3	10	2.00	1.00
Range Grass Seed	2	1.82	18 acres	2	18	4.00	
Sunflowers	1	.91	100 acres	100	100	3.00	.00
Herbs	1	.91	2 acres	2	2	3.00	.00
Walnut Trees	1	.91	1 acre	1	1	4.00	.00
Pine Trees	1	.91	168 acres	168	168	4.00	.00
Indian Corn	1	.91	1 acre	1	1	3.00	.00
Mung Beans	1	.91	30 acres	30	30	3.00	.00
Greenhouse	1	.91	1 acre	1	1	3.00	.00
Flowers	1	.91	0 acres	< 1	< 1	5.00	.00
	<u>62</u>						
<u>Animals</u>							
Angora Goats	3	2.72	767 head	72	395	3.33	1.16
Race Horses	2	1.82	24 head	14	10	3.00	.00
Sheep	1	.91	26 head	26	26	3.00	.00
Dogs	1	.91	24 head	24	24	5.00	.00
Tilaipa	1	.91	7,000 head	7,000	7,000	5.00	.00
Lions & Tigers	1	.91	20 head	20	20	1.00	.00
Turkeys	1	.91	36,000 head	36,000	36,000	4.00	.00
Catfish	1	.91	1 acre	1	1	2.00	.00
	<u>11</u>						
<u>Other Enterp</u>							
Hunt Lease	2	1.82	3,300 acres	300	3,000	3.00	1.41
Farm Market	2	1.82				1.50	2.12
Boarding Horses	1	.91				4.00	.00
Manf. Equip.	1	.91				1.00	.00
	<u>6</u>						
110 Alternative Adopters							

less than one percent. The fruit section was led with peaches (20.00%), apples (15.46%), watermelons (11.82%), and cantaloupe (9.09%). Blueberries and cherries were the least used alternative fruit with two producers each.

In the "other plants" section, pecans (32.73%) were the most identified alternative with 36 adopters having a total of 18,195 acres in production. Other plants that were identified were nursery plants (5.46%), plains bluestem grass (4.55%) and Christmas trees (2.72%). In the animal section Angora goats, race horses, sheep, dogs, tilapia, lions tigers, turkeys and catfish were the alternatives identified. The last section of other enterprises included hunting leases and farm markets with two producers in each.

Objective Three: To determine the perceived profitability of those alternative agricultural enterprises in which Oklahoma farmers are engaged.

The frequency distribution of the profitability of the identified alternative agricultural enterprises, as perceived by respondents, were presented in Table V. A mean of 4.50 to 5.00 was rated as extremely profitable, 3.50 to 4.49 as highly profitable, 2.50 to 3.49 as moderately profitable, 1.50 to 2.49 as slightly profitable and 1.49 or below as not profitable. In the vegetable section, beets were at the top of the list based on a mean of 5.00 although this was the opinion of only one respondent. Blackeyed peas were next with a mean of 3.83, followed by squash at 3.67 and onions at 3.60. Peppers, cauliflower and spinach each had a mean of 3.50. Several vegetables (cabbage, potatoes, tomatoes, broccoli, cucumbers, carrots, pumpkins, green beans, sweet corn, sweet

TABLE V

DISTRIBUTION OF PROFITABILITY OF IDENTIFIED
ALTERNATIVE AGRICULTURAL ENTERPRISES

Enterprise	Frequency Distribution										Mean	S.D.	
	Extremely		Highly		Moderately		Slight		Not				
	(5)	(4)	(3)	(2)	(1)	(1)	(1)	(1)					
n	%	n	%	n	%	n	%	n	%	n	%		
<u>Vegetables</u>													
Beets	1	100.0										5.00	
Blackeyed Peas	2	33.3	1	16.7	3	50.0						3.83	0.98
Squash	3	33.3	1	11.1	4	44.4	1	11.1				3.67	1.12
Onions	1	20.0	2	40.0	1	20.0	1	20.0				3.60	1.14
Peppers			2	50.0	2	50.0						3.50	0.57
Cauliflower			2	50.0	2	50.0						3.50	0.58
Spinach			1	50.0	1	50.0						3.50	0.70
Cabbage			3	60.0	1	20.0	1	20.0				3.40	0.89
Potatoes	1	20.0	1	20.0	2	40.0	1	20.0				3.40	1.14
Tomatoes	5	20.8	6	25.0	6	25.0	5	20.8	2	8.3		3.29	1.27
Broccoli			2	28.6	4	57.1	1	14.3				3.14	0.69
Cucumbers	1	12.5	1	12.5	4	50.0	2	25.0				3.13	0.99
Carrots					1	100.0						3.00	
Pumpkins			1	33.3	1	33.3	1	33.3				3.00	1.00
Green Beans	1	14.3	1	14.3	3	42.9	1	14.3	1	14.3		3.00	1.29
Sweet Corn	1	10.0	3	30.0	3	30.0	1	10.0	2	20.0		3.00	1.33
Sweet Potatoes			1	50.0	1	50.0						3.00	1.41
Tritacle					1	100.0							
Asparagus	1	25.0			1	25.0	1	25.0	1	25.0		2.75	1.71
Okra	2	16.7	1	8.3	3	25.0	3	25.0	3	25.0		2.67	1.44
Peas & Cowpeas					3	60.0			2	40.0		2.20	1.10
Turnips							1	100.0				2.00	
<u>Fruit</u>													
Plums	3	75.0			1	25.0						4.50	1.00
Cherries			2	100.0								4.00	0.00
Blackberries	2	40.0	1	20.0	2	40.0						4.00	1.00
Grapes	2	40.0			3	60.0						3.80	1.10
Strawberries	2	25.0	3	37.5	2	25.0	1	12.5				3.75	1.04
Cantaloupe	2	20.0	4	40.0	2	20.0	1	10.0	1	10.0		3.50	1.27
Peaches	7	31.8	4	18.2	6	27.3	3	13.6	2	9.1		3.50	1.33
Blueberries	1	50.0					1	50.0				3.50	2.12
Watermelon	2	15.4	3	23.1	3	23.1	4	30.8	1	7.7		3.07	1.26
Apples	3	17.6			6	35.3	5	29.4	3	17.6		2.70	1.31
Apricots									3	100.0		1.00	

TABLE V (Continued)

Enterprise	Frequency Distribution										Mean	S.D.	
	Extremely		Highly		Moderately		Slight		Not				
	(5)	(4)	(3)	(2)	(1)	(5)	(4)	(3)	(2)	(1)			
	n	%	n	%	n	%	n	%	n	%			
<u>Other Plants</u>													
Flowers	1	100.0										5.00	
Range Grass Seedl	50.0				1	50.0						4.00	
Plains Bluestem	1	20.0	3	60.0	1	20.0						4.00	0.71
Walnut Trees			1	100.0								4.00	
Pine Trees			1	100.0								4.00	
Nursery Plants	2	33.3	1	16.7	1	16.7	1	16.7	1	16.7	3.33	1.63	
Pecans	8	22.2	7	19.4	13	36.1	1	2.8	7	19.4	3.22	1.38	
Indian Corn					1	100.0						3.00	
Mung Beans					1	100.0						3.00	
Sunflowers					1	100.0						3.00	
Herbs					1	100.0						3.00	
Greenhouse					1	100.0						3.00	
Christmas Trees					1	33.3	1	33.3	1	33.3	2.00	1.00	
<u>Animals</u>													
Dogs	1	100.0										5.00	
Tilaipa	1	100.0										5.00	
Turkeys			1	100.0								4.00	
Angora Goats			2	66.7			1	33.3				3.33	1.16
Race Horses					1	100.0						3.00	
Sheep					1	100.0						3.00	
Catfish							1	100.0				2.00	
Lions & Tigers									1	100.0		1.00	
<u>Other Enterprises</u>													
Boarding Horses			1	100.0								4.00	
Hunt Lease			1	50.0			1	50.0				3.00	1.41
Farm Market					1	50.0			1	50.0	1.50	2.12	
Manf. Equip.			1	100.0							1.00	0.00	

110 Alternative Adopters

potatoes, asparagus and okra) fell in between 3.40 and 2.67 which would place them as moderately profitable. In the fruit section, plums were identified as extremely profitable with a mean of 4.50. The respondents identified cherries, blackberries, grapes, strawberries, cantaloupes, peaches and blueberries as highly profitable with means between 4.00 and 3.50. Watermelons and apples were rated as moderately profitable with means of 3.07 and 2.70, respectively. All three apricot producers agreed that it was not profitable.

Flowers were rated as extremely profitable with a mean of 5.00 followed by a mean of 4.00 for plains bluestem grass, walnut trees and pine trees in the "other plants" section. All the rest of the identified enterprises were in the moderately profitable category for "other plants" except Christmas trees, which were rated as slightly profitable with a mean of 2.00. In the animal section, dogs and tilapia, a new type of fish, were perceived as extremely profitable. Turkeys with only one respondent raising 36,000 head was highly profitable. Angora goats, sheep and race horses were perceived as being moderately profitable with a mean of 3.33. On the other hand, catfish had a rating of slightly profitable with a mean of 2.00. In "other enterprises," boarding horses were perceived as highly profitable. Hunting leases were rated as moderately profitable with farmers market and manufacturing equipment as not profitable.

Objective Four: To determine the factors that encourage and/or discourage Oklahoma farmers and ranchers to try alternative agricultural enterprises.

In Table VI, the factors that encouraged alternative agricultural enterprise adopters appear in order of responses. The genuine desire to produce the commodity (40.91%) was the most often used response for adoption of alternative agricultural enterprises. High potential for profit was the encouraging factor according to 27.27 percent of the adopters, while encouragement from financial lenders was the factor given by only .91 percent of the adopters. Low profit from traditional enterprises (11.82%) and encouragement from friends and relatives (12.73%) was the response from some adopters. Desire to reduce workload was noted by 2.73 percent of the adopters.

Table VII deals with those factors that might encourage the non-adopters to adopt alternative agricultural enterprises. The most used factor was increased profit with 67.77 percent of the non-adopters agreeing. "Available markets" and "less labor intensive" were encouraging factors for 9.16 percent of the non-adopters. Twenty-one non-adopters responded that the encouraging factor might be "trying new ideas." Diversification was the answer of 5.13 percent of the non-adopters, followed by six responses of "less risk." Only three non-adopters felt that a way to employ family labor was a valid factor of encouragement for adopting alternative agricultural enterprises.

The discouraging factors for adoption are presented in Table VIII as responded to by the alternative adopters. Start-up costs were discouraging factors for 20.91 percent of the adopters with markets trailing with 17.27 percent. Labor and lack of information

TABLE VI

DISTRIBUTION OF FACTORS ENCOURAGING
ADOPTION OF ALTERNATIVE AGRICULTURAL ENTERPRISES

Factors	Frequency Distribution	
	n (110)	%
Genuine desire to produce commodity	45	40.91
High potential for profit	30	27.27
Encouragement from friends & relatives	14	12.73
Low profit from traditional enterprises	13	11.82
Desire to reduce workload	3	2.73
Encouragement from financial lender	1	.91
110 Alternative Adopters		

TABLE VII

DISTRIBUTION OF FACTORS THAT MIGHT ENCOURAGE TRADITIONAL
FARMERS TO ADOPT ALTERNATIVE AGRICULTURAL ENTERPRISES

Factors	Frequency Distribution	
	n (273)	%
Increased profit	185	67.77
Available market	25	9.16
Less labor intensive	25	9.16
Like trying new ideas	21	7.69
Diversification	14	5.13
Less risk	6	2.20
Way to employ family labor	3	1.10
273 Alternative Non-Adopters		

were identified as discouraging factors by 7.27 percent of the adopters. Credit was a factor given by only 1.82 percent of adopters as a discouraging factor.

When the non-adopters were asked what factors might discourage them from trying alternative agricultural enterprises, cost was cited 38.83 percent of the time by the respondents as shown in Table IX. Of the 273 non-adopters, 16.85 percent identified age, labor (13.19%), market (12.82%), risk (12.09%) and lack of production information (10.62%) as things that might discourage them from trying alternative agricultural enterprises. Location was considered a factor for discouragement from 8.79 percent of the group.

Objective Five: To determine what alternative agricultural enterprises were perceived by Oklahoma farmers and ranchers as being the most promising for farmers in their area.

Adopters were the only ones who were asked to respond to the question of what alternative agricultural enterprises they perceived as the most promising for farmers and ranchers their area. The responses are presented in Table X of the adopters' perceptions of those alternative agricultural enterprises that have the most potential for farmers in their area. Exactly 50 percent of the adopters listed fruits as having high potential as alternative agricultural enterprises in their area. Vegetables were identified by 30.91 percent, while 26.36 percent felt that "other enterprises" held promising potential. Animal alternatives received 12.73 percent of the responses and 10.91 percent of the adopters felt

TABLE VIII
 DISTRIBUTION OF FACTORS DISCOURAGING ADOPTION
 OF ALTERNATIVE AGRICULTURAL ENTERPRISES

Factors	Frequency Distribution	
	n (110)	%
Start up costs	23	20.91
Markets	19	17.27
Labor	8	7.27
Lack of information	8	7.27
Credit	2	1.82
110 Alternative Adopters		

TABLE IX
 DISTRIBUTION OF FACTORS THAT MIGHT DISCOURAGE
 TRADITIONAL FARMERS FROM ADOPTING ALTERNATIVE
 AGRICULTURAL ENTERPRISES

Factors	Frequency Distribution	
	n (273)	%
Cost	106	38.83
Age	46	16.85
Labor	36	13.19
Market	35	12.82
Risk	33	12.09
Lack of production information	29	10.62
Location	24	8.79
273 Alternative Non-Adopters		

other crops held potential in their area. The adopters were able to respond to any or none of the areas depending on their perceptions.

Objective Six: To identify those sources of information that were used most often for decision-making by Oklahoma farmers who were involved in alternative agricultural enterprises.

Table XI presents, in numbers and percentages, the number of adopters who used each information source. Cooperative Extension fact sheets, newsletters or other publications and other farmers were sources used by 78.18 percent of the adopters for information. Monthly or weekly farm publications, state or area Extension specialists, manufacturer representatives, county ASCS or SCS personnel, farm or grower organizations, daily or weekly newspapers and television were used by between 40 and 75 percent of adopters in the stratified random sample as information sources. The factors that were used less often for information sources for adopters were radio at 28.18 percent, buyer or processor representatives at 27.27 percent, professional consultants at 26.36 percent, vocational agriculture instructors at 20.00 percent, Cooperative Extension videoconferences at 18.18 percent and Young Farmer Organization with 15.46 percent. The least used information source by adopters was the vo-tech farm management program with 7.27 percent.

The adopters were asked to rate the effectiveness of these information sources on a scale of five to one, with five being highest or extremely effective. The other ratings were highly effective as four, moderately effective as three, slightly effective as two and not effective as one. The responses for information sources according to rating of effectiveness were identified. Mean

TABLE X
 DISTRIBUTION OF MOST PROMISING POTENTIAL
 ALTERNATIVE AGRICULTURAL ENTERPRISES
 AS IDENTIFIED BY ADOPTERS

Factors	Frequency Distribution	
	n (110)	%
Fruits	55	50.00
Vegetables	34	30.91
Other Enterprises	29	26.36
Animals	14	12.73
Other Crops	12	10.91

110 Alternative Adopters

TABLE XI
 DISTRIBUTION OF INFORMATION SOURCES FOR ALTERNATIVE
 AGRICULTURAL ENTERPRISE DECISION MAKING

Information Source	Frequency Distribution	
	n (110)	%
Cooperative Fact Sheets, etc.	86	78.18
Other Farmers	86	78.18
County Extension agents	81	73.64
Monthly or Weekly Farm Publications	73	66.36
State or Area Extension Specialists	56	50.91
Manufacturer or Supplier Representatives	55	50.00
County ASCS or SCS Personnel	54	49.09
Farm or Grower Organizations	54	49.09
Daily or Weekly Newspapers	46	41.82
Television	45	40.91
Radio	31	28.18
Buyer or Processor Representatives	30	27.27
Professional Consultants	29	26.36
Vocational Agriculture Instructors	22	20.00
Coop. Extension Video conferences	20	18.18
Young Farmers Organization	17	15.46
Vo-Tech Farm Management Program	8	7.27

110 Alternative Adopters

ratings were calculated to show the group average rating and then ranked. Standard deviations were calculated for each response for ratings of each information source. Data shown in Table XII pertain to effectiveness of information sources ranked according to the mean scores. Mean scores ranged from a high of 4.24 to a low of 2.67, and standard deviations varied from a low of 0.74 to a high of 1.37. The three highly effective information sources were cooperative Extension fact sheets, newsletters or publications with a mean of 4.24, state or area Extension specialists with a mean of 4.14, and county Extension agents with a mean of 4.03. The three lowest ranked information sources were television at 3.16, radio at 3.00 and monthly or weekly newspapers at 2.67, which would all fit in the moderately effective category. Of the remaining information sources, five were found in the moderately effective and six in the highly effective rating.

In Table XIII the distribution of information sources used by adopters for selected phases of their operation was shown. Other farmers show up as a source for information in all areas, with higher use in overall decision-making (20), production practices (23) and harvesting (23). Professional consultants were used by 39 adopters for legal or tax decisions. County Extension agents, state or area Extension specialists and cooperative Extension fact sheets etc. were well represented in all eight phases of information as useful to the alternative agricultural enterprise adopters. Radio, newspapers and vocational agriculture instructors were seldom used as the most useful information source for the selected phases. Cooperative extension videoconferences were not identified by the

TABLE XII

DISTRIBUTION OF EFFECTIVENESS OF INFORMATION SOURCES AS RATED BY
OKLAHOMA FARMERS AND RANCHERS OPERATING ALTERNATIVE
AGRICULTURAL ENTERPRISES

Factors	Frequency Distribution										Mean	Standard Deviation
	Extremely		Highly		Moderately		Slightly		Not			
	n	%	n	%	n	%	n	%	n	%		
Cooperative Fact Sheets, etc.	39	45.3	34	39.5	8	9.3	5	5.8	0	0	4.24	0.85
State or Area Extension Specialists.	27	48.2	17	30.4	8	14.3	1	1.8	3	5.4	4.14	1.08
County Extension agents.	32	39.5	27	33.3	17	21.0	2	2.5	3	3.7	4.03	1.02
County ASCS or SCS Personnel.	22	40.7	16	29.6	9	16.7	5	9.3	2	3.7	3.94	1.14
Professional Consultants.	8	27.6	13	44.8	5	17.2	2	6.9	1	3.4	3.86	1.02
Farm or Grower Organizations.	19	35.2	16	29.6	11	20.4	8	14.8	0	0	3.85	1.07
Other Farmers.	24	28.2	28	32.9	22	25.9	9	10.6	2	2.4	3.74	1.06
Vocational Agriculture Instructors.	7	31.8	5	22.7	7	31.8	2	9.1	1	4.5	3.68	1.17
Young Farmers Organization.	3	17.6	7	41.2	4	23.5	2	11.8	1	5.9	3.53	1.13
Monthly or Weekly Farm Publications.	14	19.2	24	32.9	23	31.5	7	9.6	5	6.8	3.48	1.12
Vo-Tech Farm Management Program.	0	0	4	50.0	3	37.5	1	12.5	0	0	3.38	0.74
Manufacturer or Supplier Rep.	8	14.5	12	21.8	24	43.6	10	18.2	1	1.8	3.29	0.99
Buyer or Processor Representatives.	5	16.7	7	23.3	9	30.0	8	26.7	1	3.3	3.23	1.14
Coop. Extension Videoconferences.	2	10.0	8	40.0	4	20.0	4	20.0	2	10.0	3.20	1.20
Television.	8	17.8	12	26.7	10	22.2	9	20.0	6	13.3	3.16	1.37
Radio.	4	12.9	7	22.6	9	29.0	7	22.6	4	12.9	3.00	1.23
Daily or Weekly Newspapers.	4	8.7	6	13.0	12	26.1	19	41.3	5	10.9	2.67	1.12

110 Alternative Adopters

TABLE XIII

FREQUENCY DISTRIBUTIONS OF INFORMATION SOURCES USED BY OKLAHOMA
FARMERS AND RANCHERS IN SELECTED PHASES OF THEIR
ALTERNATIVE AGRICULTURAL ENTERPRISES

Factors	Frequency Distribution							
	Overall	Financial	Legal or Tax	Seed or Raw	Specialized	Production	Harvesting	Marketing
	Decision-Making or Planning	Management	Decisions	Material	Purch. equipment	practices		
	n	n	n	n	n	n	n	n
Monthly or Weekly Farm Publications.	12	2	3	5	14	11	4	9
Daily or Weekly Newspapers.						1		1
Radio.						1		
Television.	2			1	1	4	2	3
Cooperative Fact Sheets, etc.	23	10	5	10	4	25	13	8
Coop. Extension Videoconferences.								
Young Farmers Organization.	3			1	3	2		1
Farm or Grower Organizations.	11	3	3	3	3	7	9	12
Vo-Tech Farm Management Program.	1	3	2					
County Extension agents.	15	2	2	6	4	13	4	10
State or Area Extension Specialists.	12	3		10	1	13	9	8
Vocational Agriculture Instructors.				1				
County ASCS or SCS Personnel.	5			3	1	3	3	4
Other Farmers.	20	1	3	14	16	23	23	13
Manufacturer or Supplier Rep.	4			27	19	7	9	5
Buyer or Processor Representatives.	2	1		4	1	3	3	5
Professional Consultants.	4	16	39	4				4

110 Alternative Adopters

adopters as being used as information sources for any phase of their alternative agricultural enterprises.

Objective Seven: To determine if demographic factors influence the adoption of alternative agricultural enterprises.

The distribution of adopters and non-adopters was shown among farmers and ranchers grouped according to age in Table XIV. The largest two levels represented were ages 40 to 49 (26.0%) and 50 to 59 (25.2%), representing 51% of the combined sample. Ages 20 to 29 were represented by 2.5 percent, with the 80 and over level having 1.4 percent for the lowest numbers.

The responses are found in Table XV for each age level as it relates to the farming classification of full-time, part-time, and sundown farmers. Full-time farmers (179) represent the largest number of producers, with the sundown farmers (110) having the next largest number. The part-time farmers were spread evenly through the middle age levels, while the sundown farmers had more respondents from 40 to 79 years of age.

In Table XVI, the number of respondents who are non-adopters or adopters according to their level of education is presented. The largest response was for one to four years of high school with non-adopters (111) and adopters (40) representing 39.9 percent of the respondents. In the three to four years of college level 64 of the non-adopters and 34 of the adopters were represented with a total percentage of 25.8.

Table XVII gives a breakdown of the highest level of education achieved for full-time, part-time and sundown farmers. Full-time farmers and ranchers had the most responses for one to four years of

TABLE XIV

DISTRIBUTION BY AGE AND ADOPTION

Age Level	Frequency Distribution					
	Non-Adopters		Adopters		Total	
	N	%	N	%	N	%
Non Respondents					9	2.1
20 to 29	8	2.0	2	.5	10	2.5
30 to 39	46	12.1	25	6.5	71	18.6
40 to 49	73	19.2	26	6.8	99	26.0
50 to 59	67	17.6	29	7.6	96	25.2
60 to 69	42	11.0	17	4.4	59	15.4
70 to 79	24	6.3	10	2.5	34	8.8
80 or older	4	1.1	1	.3	5	1.4
Total Responses	273	69.3	110	28.6	383	100.0

383 Alternative Adopters & Non-Adopters

TABLE XV

DISTRIBUTION BY AGE AND CLASSIFICATION

Age Level	Frequency Distribution							
	Full Time		Part Time		Sun-down		Total	
	N	%	N	%	N	%	N	%
Non Respondents							9	2.1
20 to 29	6	1.7	3	.7	2	.5	11	2.9
30 to 39	30	7.8	19	5.0	7	1.8	56	14.6
40 to 49	49	12.8	18	4.7	13	3.4	80	20.9
50 to 59	45	11.9	18	4.7	33	8.6	96	25.2
60 to 69	28	7.3	18	4.7	32	8.4	78	20.4
70 to 79	20	5.3	7	1.8	22	5.7	49	12.8
80 or older	1	.3	2	.5	1	.3	4	1.1
Total Responses	179	47.1	85	22.1	110	28.7	383	100.0

383 Alternative Adopters & Non-Adopters

TABLE XVI

HIGHEST LEVEL OF EDUCATION COMPLETED
BY ADOPTION

Level of Education	Frequency Distribution					
	Non-Adopters		Adopters		Total	
	N	%	N	%	N	%
Non Respondents					9	2.1
0 to 8 Years	10	3.6	4	1.1	14	3.7
1 to 4 Years of High School	111	29.4	40	10.9	151	39.9
1 to 2 Years of College	43	11.2	10	2.6	53	13.8
3 to 4 Years of College	64	16.9	34	8.9	98	25.8
5 to 6 Years of College	27	7.1	13	3.4	40	10.5
7 to 8 Years of College	9	2.1	9	2.1	18	4.2
Total Responses	264	71.4	110	28.6	383	100.0

383 Alternative Adopters & Non-adopters

TABLE XVII

HIGHEST LEVEL OF EDUCATION COMPLETED
BY CLASSIFICATION

Level of Education	Frequency Distribution							
	Full Time		Part Time		Sundown		Total	
	N	%	N	%	N	%	N	%
Non Respondents							9	2.1
0 to 8 Years	7	1.8	2	.5	5	1.4	14	3.7
1 to 4 Years of High School	88	22.9	24	6.3	39	10.2	151	39.4
1 to 2 Years of College	19	5.0	18	4.7	16	4.2	53	13.9
3 to 4 Years of College	46	12.1	26	6.8	26	6.8	98	25.7
5 to 6 Years of College	16	4.2	10	2.6	14	3.7	40	10.5
7 to 8 Years of College	3	.7	5	1.4	10	2.6	18	4.7
Total Responses	179	46.7	85	22.3	110	28.9	383	100.0

383 Alternative Adopters & Non-adopters

high school (88) with the least number among the seven to eight years of college (3) level. Both part-time and sundown farmers had the least respondents in the zero to eight years education level. The greatest response for seven to eight years of college was in the sundown (10) category.

Table XVIII illustrates the size of operation for non-adopters and adopters. The non-adopters' largest numbers of responses were in 1,000 to 5,000 acres (19.6%) and 201 to 500 acres (15.4%). The adopters were found in the largest number in 0 to 50 acres size (8.1%) and had the only two responses for more than 10,000 acres. Table XIX shows the size of operation for full-time, part-time and sundown farmers and ranchers. Sundowners had the largest response to the first three acreage categories. The full-time farmers were the only ones who responded to the operation size of 5,000 acres and above with six responses.

Section II

Population Background

The alternative agriculture group consisted of those persons who could be identified as being actively involved in alternative agricultural enterprises. All farmers who were identified by Oklahoma county Extension agents as being involved in alternative agricultural enterprises were surveyed even if they were not part of the random sample. In fact, all farmers and ranchers who were identified from several sources as being involved in alternative agricultural enterprises were surveyed. These sources included

TABLE XVIII
DISTRIBUTION BY NUMBER OF ACRES
IN OPERATION BY ADOPTION

Total Acreage	Frequency Distribution					
	Non-Adopters		Adopters		Total	
	N	%	N	%	N	%
0 to 50	36	9.4	31	8.1	67	17.5
51 to 100	13	3.4	8	2.0	21	5.4
101 to 200	39	10.2	14	3.7	53	13.9
201 to 500	59	15.4	26	6.8	85	22.2
501 to 1,000	48	12.5	14	3.7	62	16.2
1,001 to 5,000	75	19.6	14	3.7	89	23.3
5,001 to 10,000	3	.7	1	.3	4	1.0
More than 10,000			2	.5	2	.5
Total Responses	273	71.2	110	28.8	383	100.0

383 Alternative Adopters & Non-adopters

TABLE XIX
DISTRIBUTION BY NUMBER OF ACRES IN OPERATION
ACCORDING TO CLASSIFICATION

Total Acreage	Frequency Distribution						Total	
	Full Time		Part Time		Sundown			
	N	%	N	%	N	%	N	%
Non Respondents							9	2.1
0 to 50	8	2.0	22	5.7	28	7.3	58	15.0
51 to 100	6	1.7	6	1.7	9	2.1	21	5.5
101 to 200	14	3.7	16	4.2	23	6.1	53	14.0
201 to 500	35	9.1	23	6.1	27	7.1	85	22.3
501 to 1,000	41	10.7	8	2.0	13	3.4	62	16.1
1,001 to 5,000	69	18.2	10	2.6	10	2.6	89	23.4
5,001 to 10,000	4	1.1					4	1.1
More than 10,000	2	.5					2	.5
Total Responses	179	47.0	85	22.3	110	28.6	383	100.0

383 Alternative Adopters & Non-adopters

membership lists of the Penn Square Farmers Market Association, the Oklahoma Christmas Tree Growers Association, the Alternative Agriculture Enterprise Videoconferences, the Oklahoma Angora Goat Producers, the Governor's Conference on Alternative Agricultural Enterprises, the Catfish Farmers of Oklahoma, the Oklahoma Vegetable Association, the Oklahoma Fruit Growers Association, farmers market associations and other referrals and miscellaneous sources that identified alternative agricultural enterprises.

Objective One: To determine Oklahoma farmers' and ranchers' interest and/or involvement in alternative agricultural enterprises. All 696 identified farmers and ranchers in this group were included because they were involved in alternative agricultural enterprises. Involvement in alternative agricultural enterprises was the first requirement after being able to contact the person by telephone.

Objective Two: To identify alternative agricultural enterprises that were presently being tried by Oklahoma farmers and ranchers, the number trying, and the scope of the alternatives.

In Table XX, the enterprises, number of adopters involved, total scope, with minimum and maximum value are presented. In the vegetable section tomatoes lead with 132 respondents involved followed by sweet corn second with 91 adopters involved. Growing green beans was the enterprise that had the most total acreage with 1,091 acres and the most for the maximum value or 550 acres for one producer. The vegetable that was identified as the least used was brussel sprouts with one adopter growing one acre.

TABLE XX

DISTRIBUTION OF TYPES OF ALTERNATIVE AGRICULTURAL ENTERPRISES
IN OPERATION BY OKLAHOMA FARMERS AND RANCHERS

Enterprise	Frequency Distribution			Minimum Value	Maximum Value	Profit Rating	
	N (696)	%	Scope			Mean	Standard Deviation
<u>Vegetables</u>							
Tomatoes	132	18.97	199 acres	< 1	40	3.15	1.16
Sweet Corn	91	13.08	671 acres	< 1	100	3.03	1.04
Squash	74	10.63	327 acres	< 1	65	3.18	1.03
Okra	72	10.35	111 acres	< 1	15	3.15	1.03
Green Beans	55	7.90	1091 acres	< 1	550	3.13	1.04
Cucumbers	55	7.90	199 acres	< 1	85	3.00	1.05
Peppers	53	7.61	248 acres	< 1	200	3.23	1.10
Blackeye Peas	48	6.90	866 acres	< 1	300	3.21	0.99
Broccoli	33	4.74	224 acres	< 1	85	3.12	1.05
Asparagus	32	4.60	252 acres	< 1	70	3.31	1.18
Peas & Cowpeas	32	4.60	569 acres	< 1	200	3.00	0.92
Potatoes	32	4.60	325 acres	< 1	300	2.78	1.10
Pumpkins	30	4.31	328 acres	< 1	40	2.87	1.11
Turnips	27	3.88	327 acres	< 1	50	3.33	0.78
Cabbage	26	3.74	215 acres	< 1	85	3.23	1.07
Sweet Potatoes	23	3.31	77 acres	< 1	33	3.30	1.26
Onions	21	3.02	41 acres	< 1	20	3.05	1.07
Spinach	19	2.72	466 acres	< 1	130	3.58	0.90
Cauliflower	17	2.44	38 acres	< 1	15	3.06	1.14
Lettuce	8	1.15	11 acres	< 1	5	3.13	0.64
Beets	5	.72	3 acres	< 1	1	3.80	1.30
Eggplant	4	.58	5 acres	< 1	2	3.00	1.50
Greens	4	.58	6 acres	< 1	1	2.80	1.50
Garlic	3	.43	3 acres	1	1	3.00	1.20
Radishes	3	.43	10 acres	1	8	3.67	0.58
Carrots	3	.43	1 acres	< 1	1	3.33	1.53
Mushrooms	2	.29	4 acres	< 1	4	5.00	.00
Popcorn	1	.14	5 acres	5	5	4.00	.00
Brussel Sprouts	1	.14	1 acres	1	1	4.00	.00
	906						
<u>Animals</u>							
Angora Goats	59	8.48	27,554 head	1	4,000	3.83	0.89
Catfish	34	4.89	5,492 acres	< 1	5,000	3.15	1.16
Sheep	26	3.74	6,285 head	10	1,100	3.65	
Ostrich	15	2.16	530 head	2	200	4.40	1.12
Bees	7	1.01	315 hives	3	150	3.71	
Emu	5	.72	39 head	4	17	4.60	
Llama	4	.58	50 head	2	35	4.00	2.00
Dogs	3	.43	113 head	15	40	4.50	
Dairy Goats	3	.43	148 head	8	100	3.00	
Rabbits	3	.43	3,680 head	8	3,000	3.00	
Rhea	2	.29	29 head	12	17	4.50	
Tilaipa	2	.29	9,000 head	2,000	7,000	4.00	
Horses	2	.29	24 head	10	14	3.33	
Crawfish	2	.29	200,000 head		200,000	2.00	
Bass	2	.29	30,040 head	40	30,000	1.50	
Pigeons	2	.29	32 head	8	24	1.50	
Pheasants	2	.29	162 head	12	150	1.00	
Quail	2	.29	29 head	9	20	1.00	
Parakeets	2	.29	370 head	170	200	3.00	1.41
Trout	1	.14	2,500 head	2,500	2,500	5.00	
Alligators	1	.14	82 head	82	82	5.00	
Stocker Lambs	1	.14	800 head	800	800	4.00	
Turkeys	1	.14	36,000 head	36,000	36,000	4.00	
Guinea Pigs	1	.14	15 head	15	15	3.00	
Minnows	1	.14	10,000 head	10,000	10,000	3.00	
Lions & Tigers	1	.14	20 head	20	20	1.00	
Perch	1	.14	100 head	100	100	1.00	
	185						

TABLE XX (Continued)

Enterprise	Frequency Distribution			Minimum Value	Maximum Value	Profit Rating	
	N (696)	%	Scope			Mean	Standard Deviation
<u>Fruit</u>							
Peaches	100	14.36	1751 acres	< 1	275	3.07	1.29
Watermelon	93	13.36	3307 acres	< 1	500	3.33	0.99
Cantaloupe	87	12.50	678 acres	< 1	85	3.37	0.99
Apples	73	10.49	1176 acres	< 1	300	2.69	1.21
Strawberries	58	8.33	130 acres	< 1	18	3.54	1.11
Blackberries	43	6.18	124 acres	< 1	35	3.33	1.15
Grapes	28	4.03	79 acres	< 1	40	2.93	1.18
Blueberries	22	3.16	70 acres	< 1	20	3.18	1.05
Plums	17	2.44	12 acres	< 1	2	3.18	1.19
Cherries	13	1.87	4 acres	< 1	1	2.38	1.39
Nectarines	9	1.29	50 acres	< 1	20	2.55	1.13
Pears	9	1.29	8 acres	< 1	1	2.00	1.50
Apricots	9	1.29	12 acres	< 1	2	1.89	.98
Raspberries	3	.43	2 acres	< 1	1	3.00	1.00
Boysenberries	2	.29	2 acres	1	1	3.00	.00
Kiwi	1	.14	1 acre	1	1	1.00	.00
	567						
<u>Other Plants</u>							
Pecans	116	16.66	6155 acres	< 1	550	2.96	1.28
Christmas Trees	53	7.61	501 acres	1	171	2.72	1.28
Plains Bluestem	33	4.74	5807 acres	7	800	4.19	0.78
Nursery Plants	26	3.74	1459 acres	< 1	400	3.64	1.38
Herbs	23	3.31	19 acres	< 1	5	3.09	1.35
Sod	12	1.72	1205 acres	40	250	2.92	1.24
Flowers	11	1.58	6 acres	< 1	2	3.55	1.21
Greenhouse	10	1.44	3 acres			3.00	0.47
Pine Trees	7	1.01	939 acres	1	400	4.17	
Sunflowers	5	.72	251 acres	4	100	2.40	1.34
Mungbeans	4	.58	375 acres	25	200	3.00	
Range Grass Seed	3	.43	53 acres	2	35	4.33	
Walnut Trees	2	.29	1 acres	1	1	2.00	1.14
Cannas	1	.14	140 acres			4.00	0.00
Sesame	1	.14	10 acres	10	10	5.00	
Canola	1	.14	18 acres	18	18	4.00	
Pearl Millet	1	.14	60 acres	60	60	4.00	
Guar	1	.14	800 acres	800	800	4.00	
Indian Corn	1	.14	1 acre	1	1	3.00	
Gourds	1	.14	1 acres	1	2	2.00	0.00
	312						
<u>Other Enterp</u>							
Farm Market	10	1.44				3.60	
Manf. Equip.	7	1.01				3.80	
Firewood	5	.72				4.00	
Hunt Lease	5	.72	131,000 acres	< 1	5,000	3.50	
Pecan Harvest & Storage	2	.29				3.33	
Feed Production	1	.14				5.00	
Plant Breeding	1	.14				4.00	
Fertilizer Prod.	1	.14				4.00	
Boarding Horses	1	.14				4.00	
Wheat Weaving	1	.14	< 1 acre	< 1	< 1	3.00	
Guest Ranch	1	.14	2,500 acres	2,500	2,500	3.00	
Meat Processing	1	.14				3.00	
	36						

696 Alternative Adopters

The fruit section had two enterprises with more than 90 participants and one with fewer than nine adopters involved. Peaches led with 100 adopters involved, followed by watermelons having 93 adopters growing a total of 3,307 acres, with 500 acres as the size of the largest field. Nectarines were being grown by only nine adopters. The other plants section was topped by pecans with 116 adopters involved on 6,155 acres. Plains bluestem, while having only 32 adopters involved, was being produced on 5,007 acres, with 800 acres being the largest and seven acres as the smallest operation. Gourds with one adopter and one acre were at the bottom for identified enterprises.

In the animal section, Angora goats led the way with 59 adopters raising 27,554 head, ranging from one to 4,000 head per alternative adopter. Catfish was second in having 34 adopters involved, but at the top of the list for numbers with 5,492 surface acres with approximately 3,500 catfish per acre. Parakeets were identified by two producers with a total of 370 birds. Other types of animals were identified, such as ostriches, llamas, and alligators. In the "other enterprises" section several adopters were involved in farmers markets, manufacturing of equipment and hunting leases.

Objective Three: To determine the perceived profitability of those alternative agricultural enterprises in which Oklahoma farmers are engaged.

Profitability, according to perceptions of adopters for alternative agricultural enterprises, was tabulated in Table XXI, and the enterprises were ranked according to mean scores. The top

TABLE XXI

DISTRIBUTION OF PROFITABILITY OF IDENTIFIED
ALTERNATIVE AGRICULTURAL ENTERPRISES

Enterprise	Frequency Distribution										Mean	S.D.	
	Extremely (5)		Highly (4)		Moderately (3)		Slight (2)		Not (1)				
	n	%	n	%	n	%	n	%	n	%			
<u>Vegetables</u>													
Mushrooms	2	100.0										5.00	
Popcorn			1	100.0								4.00	
Brussel Sprouts			1	100.0								4.00	
Beets	2	40.0	1	20.0	1	20.0	1	20.0				3.80	1.30
Radishes			2	66.7	1	33.3						3.67	0.58
Spinach	2	10.5	9	47.4	7	36.8			1	5.3		3.58	0.90
Carrots	1	33.3			1	33.3	1	33.3				3.33	1.53
Turnips	1	3.7	10	37.0	14	51.9	1	3.7	1	3.7		3.33	0.78
Asparagus	3	9.4	15	46.9	7	21.9	3	9.4	4	12.5		3.31	1.18
Sweet Potatoes	4	17.4	7	30.4	7	30.4	2	8.7	3	13.0		3.30	1.26
Peppers	4	7.5	21	39.6	17	32.1	5	9.4	6	11.3		3.23	1.10
Cabbage	2	7.7	10	38.5	8	30.8	4	15.4	2	7.7		3.23	1.07
Blackeyed Peas	4	8.3	13	27.1	24	50.0	3	6.3	4	8.3		3.21	0.99
Squash	7	9.5	20	27.0	31	41.9	11	14.9	5	6.8		3.18	1.03
Tomatoes	17	12.9	35	26.5	45	34.1	21	15.9	14	10.6		3.15	1.16
Okra	7	9.7	18	25.0	31	43.1	11	15.3	5	6.9		3.15	1.03
Lettuce			2	25.0	5	62.5	1	12.5				3.13	0.64
Green Beans	4	7.3	16	29.1	23	41.8	7	12.7	5	9.1		3.13	1.04
Broccoli	1	3.0	13	39.4	12	36.4	3	9.1	4	12.1		3.12	1.05
Cauliflower			8	47.1	5	29.4	1	5.9	3	17.6		3.06	1.14
Onions	1	4.8	7	33.3	7	33.3	4	19.0	2	9.5		3.05	1.07
Sweet Corn	3	3.3	32	35.2	30	33.0	17	18.7	9	9.9		3.03	1.04
Peas & Cowpeas			9	28.1	18	56.3	1	3.1	4	12.5		3.00	0.92
Garlic					2	66.6	1	33.3				3.00	1.20
Eggplants			1	25.0	2	50.0			1	25.0		3.00	1.50
Triticale					1	100.0						3.00	
Cucumbers	4	7.3	11	20.0	28	50.0	5	9.1	7	12.7		3.00	1.05
Pumpkins			11	36.7	9	30.0	5	16.7	5	16.7		2.87	1.11
Greens			1	25.0	2	50.0	1	25.0				2.80	1.50
Potatoes	2	6.3	5	15.6	14	43.8	6	18.8	5	15.6		2.78	1.10
<u>Other Plants</u>													
Sesame Seeds	1	100.0										5.00	
Range Grass			2	66.3					1	33.3		4.33	
Plains Bluestem	13	40.6	12	37.5	7	21.9						4.19	0.78
Pine Trees	4	57.1	1	14.3			1	14.3	1	14.3		4.17	
Pearl Millet			1	100.0								4.00	
Cannas			1	100.0								4.00	
Canola			1	100.0								4.00	
Guar			1	100.0								4.00	
Nursery plants	9	36.0	6	24.0	5	20.0	2	8.0	3	12.0		3.64	1.38
Flowers	3	27.3	2	18.2	5	45.5			1	9.1		3.55	1.21
Herbs	5	21.7	2	8.7	10	43.5	2	8.7	4	17.4		3.09	1.35
Indian Corn					1	100.0						3.00	
Mungbeans			2	50.0	1	25.0			1	25.0		3.00	
Greenhouse	1	3.6	6	21.4	8	28.6	3	10.7	10	35.7		3.00	0.47
Pecans	14	12.1	26	22.4	40	34.5	14	12.1	22	19.0		2.96	1.28
Sod	1	8.3	3	25.0	4	33.3	2	16.7	2	16.7		2.92	1.24
Christmas Trees	3	5.7	9	17.0	23	43.4	6	11.3	12	22.6		2.72	1.17
Sunflowers			1	20.0	2	40.0			2	40.0		2.40	1.34
Gourds							1	100.0				2.00	
Walnut trees					1	50.0			1	50.0		2.00	

TABLE XXI (Continued)

Enterprise	Frequency Distribution										Mean	S.D.
	Extremely (5)		Highly (4)		Moderately (3)		Slight (2)		Not (1)			
	n	%	n	%	n	%	n	%	n	%		
<u>Fruit</u>												
Strawberries	12	20.7	19	32.8	19	32.8	4	6.9	4	6.9	3.54	1.11
Cantaloupe	5	5.7	43	49.4	24	27.6	9	10.3	6	6.9	3.37	0.99
Blackberries	7	16.3	12	27.9	16	37.2	4	9.3	4	9.3	3.33	1.15
Watermelon	7	7.5	40	43.0	28	30.1	13	14.0	5	5.4	3.33	0.99
Blueberries	2	9.1	7	31.8	7	31.8	5	22.7	1	4.5	3.18	1.05
Plums	3	17.6	2	11.8	9	52.9	1	5.9	2	11.8	3.18	1.19
Peaches	14	14.0	27	27.0	27	27.0	17	17.0	15	15.0	3.07	1.29
Boysenberries					2	100.0					3.00	
Raspberries			1	33.3	1	33.3	1	33.3			3.00	1.00
Grapes	3	10.7	5	17.9	11	39.3	5	17.9	4	14.3	2.93	1.18
Apples	5	6.8	12	16.4	28	38.4	12	16.4	16	21.9	2.69	1.21
Nectarines			2	22.2	3	33.3	2	22.2	2	22.2	2.55	1.13
Cherries			4	30.8	3	23.1			6	46.2	2.38	1.39
Pears			1	11.1	3	33.3	1	11.1	4	44.5	2.00	1.50
Apricots					3	33.3	1	11.1	5	55.6	1.89	.98
Kiwis									1	100.0	1.00	
<u>Animals</u>												
Trout	1	100.0									5.00	
Alligators	1	100.0									5.00	
Emu	4	80.0	1	20.0							4.60	
Dogs	2	66.6	1	33.3							4.50	
Rhea	1	50.0	1	50.0							4.50	
Ostriches	10	66.7	3	20.0	1	6.7			1	6.7	4.40	1.12
Llamas	3	75.0							1	25.0	4.00	2.00
Stocker Lambs			1	100.0							4.00	
Turkeys			1	100.0							4.00	
Tilaipa	1	50.0			1	50.0					4.00	
Angora Goats	12	20.3	30	50.8	14	23.7	1	1.7	2	3.4	3.83	0.89
Bees			4	42.8	4	42.8					3.71	
Sheep	2	7.7	15	57.7	7	26.9	2	7.7			3.65	
Horses			1	50.0	1	50.0					3.33	
Catfish	4	11.8	10	29.4	10	29.4	7	20.6	3	8.8	3.15	1.16
Dairy Goats			2	66.6					1	33.3	3.00	
Rabbits			2	66.6					1	33.3	3.00	
Minnows					1	100.0					3.00	
Guinea Pigs					1	100.0					3.00	
Parakeets			1	50.0			1	50.0			3.00	1.41
Crawfish							2	100.0			2.00	
Bass							1	50.0	1	50.0	1.50	
Pigeons							1	50.0	1	50.0	1.50	
Pheasants							1	50.0	1	50.0	1.00	
Quail									2	100.0	1.00	
Lions & Tigers									1	100.0	1.00	
Perch									1	100.0	1.00	
<u>Other Enterprises</u>												
Feed Production	1	100.0									5.00	
Plant Breeding			1	100.0							4.00	
Fertilizer Prod.			1	100.0							4.00	
Boarding Horses			1	100.0							4.00	
Firewood	1	20.0	3	60.0	1	20.0					4.00	
Manf. Equip.	1	14.2	3	42.9	3	42.9					3.71	0.76
Hunt Lease	1	25.0	1	25.0	1	25.0	1	25.0			3.50	1.29
Pecan Harvest			1	50.0	1	50.0					3.33	
Farm Market			5	62.5	2	25.0			1	12.5	3.25	1.39
Wheat Weaving					1	100.0					3.00	
Guest Ranch					1	100.0					3.00	
Meat Processing					1	100.0					3.00	

enterprises for profitability ranked with means of 5.00 were mushrooms, sesame seeds, trout, alligators and feed production as extremely profitable. Vegetables as a group had five enterprises that fell into the highly profitable category, with all the rest being classified as moderately profitable. The fruit section placed strawberries as the highest rated enterprise with a mean of 3.54, while kiwis (1.00) were rated as not profitable. The animal section had a wide range of means from 5.00 to 1.00. The only enterprises identified as being not profitable were kiwis, pheasants, lions and tigers, quail and perch from the fruit and animal sections.

Objective Four: To determine the factors that encourage and/or discourage Oklahoma farmers and ranchers to try alternative agricultural enterprises.

Table XXII shows that 271 (38.94%) of the adopters believed that high potential for profit was the number one identified factor for encouragement to adopt an alternative agricultural enterprise. The genuine desire to produce the commodity was high with 233 (33.48%) identifying that encouraging factor. Encouragement from friends and relatives (18.39%) and low profit from traditional enterprises (17.96) were factors of concern to many. Low profit from traditional enterprises was an encouraging factor to 17.96 percent of the agricultural adopters. Encouragement from financial lenders was seen as encouraging by three (.43%) of the alternative adopters.

A look at the discouraging factors, Table XXIII, reveals that markets with 135 (19.40%) and labor with 133 (19.11%) were the two

TABLE XXII

DISTRIBUTION OF FACTORS ENCOURAGING ADOPTION OF
ALTERNATIVE AGRICULTURAL ENTERPRISES

Factors	Frequency Distribution	
	N (696)	%
High potential for profit	271	38.94
Genuine desire to produce commodity	233	33.48
Encouragement from friends & relatives	128	18.39
Low profit from trad. enterprises	125	17.96
Less risk than previous enterprise	12	1.72
Desire to reduce workload	11	1.56
Health concerns	8	1.15
Encouragement from financial lender	3	.43
696 Alternative Adopters		

TABLE XXIII

DISTRIBUTION OF FACTORS DISCOURAGING ADOPTION OF
ALTERNATIVE AGRICULTURAL ENTERPRISES

Factors	Frequency Distribution	
	N (696)	%
Markets	135	19.40
Labor	133	19.11
Start up costs	84	12.07
Lack of information	50	7.18
Credit	12	1.17
696 Alternative Adopters		

most identified factors. Credit was listed by 12 adopters as a discouraging factor.

Objective Five: To determine what alternative agricultural enterprises were perceived by Oklahoma farmers and ranchers as being the most promising for farmers in their area.

The most promising potential alternative agricultural enterprises are reported in Table XXIV. Alternative adopters felt that fruits (26.58%), vegetables (26.58%) and other enterprises (26.15%) had the best potential for farmers in their area.

Objective Six: To identify those sources of information that were used most often for decision-making by Oklahoma farmers who were involved in alternative agricultural enterprises.

In identifying those information sources that alternative adopters use, Table XXV, shows the numbers of producers that identified each information source. The top three information sources used by alternative adopters were other farmers (82.47%), cooperative Extension fact sheets, newsletters or publications (73.42%) and county Extension agents (73.42%). Young Farmers Organization (6.75%) and vo-tech farm management programs' (5.89%) were the least used information sources.

In Table XXVI, the effectiveness of the information sources as rated by the alternative adopters showed the number for each of the five ranks of effectiveness and arranged by the mean score. The highest rating of any information source was for state or area Extension Specialists (4.23) or considered highly effective. Other highly effective information sources were listed as cooperative Extension fact sheets, newsletters or publications (4.00), farm or

TABLE XXIV

DISTRIBUTION OF MOST PROMISING POTENTIAL
ALTERNATIVE AGRICULTURAL ENTERPRISES

Factors	Frequency Distribution	
	N (696)	%
Fruits	185	26.58
Vegetables	185	26.58
Other Enterprises	182	26.15
Animals	113	16.24
Other Crops	58	8.33
696 Alternative Adopters		

TABLE XXV

DISTRIBUTION OF ALTERNATIVE AGRICULTURAL ENTERPRISE
DECISION MAKING INFORMATION SOURCES

Factors	Frequency Distribution	
	N (696)	%
Other Farmers	574	82.47
Cooperative Fact Sheets, etc.	511	73.42
County Extension agents	511	73.42
State or Area Extension Specialists	425	61.06
Monthly or Weekly Farm Publications	424	60.92
Farm or Grower Organizations	366	52.59
Manufacturer or Supplier Representatives	289	41.52
Daily or Weekly Newspapers	219	31.47
County ASCS or SCS Personnel	216	31.03
Buyer or Processor Representatives	185	26.58
Television	165	23.71
Professional Consultants	146	20.98
Radio	124	17.82
Vocational Agriculture Instructors	84	12.07
Coop. Extension Video conferences	82	11.78
Young Farmers Organization	47	6.75
Vo-Tech Farm Management Program	41	5.89
696 Alternative Adopters		

TABLE XXVI

DISTRIBUTION OF INFORMATION SOURCES FOR ALTERNATIVE
AGRICULTURAL ENTERPRISE DECISION MAKING

Factors	Frequency Distribution										Mean	Standard Deviation
	Extremely		Highly		Moderately		Slightly		Not			
	N	%	N	%	N	%	N	%	N	%		
State or Area Extension Specialists.	197	46.4	148	34.8	63	14.8	13	3.1	4	0.9	4.23	0.88
Cooperative Fact Sheets, etc.	176	34.4	144	34.0	104	20.4	25	4.9	8	1.6	4.00	0.94
Farm or Grower Organizations.	119	32.5	146	39.9	70	19.1	22	6.0	9	2.5	3.94	0.99
Other Farmers.	174	30.5	216	37.8	150	26.3	23	4.0	8	1.4	3.92	0.92
Professional Consultants.	54	37.2	45	31.0	30	20.7	11	7.6	5	3.4	3.91	1.09
County Extension agents.	149	29.2	186	36.4	137	26.8	31	6.1	8	1.6	3.86	0.96
County ASCS or SCS Personnel.	66	30.6	68	31.5	47	21.8	20	9.3	15	6.9	3.69	1.20
Vocational Agriculture Instructors.	25	29.8	24	28.6	20	23.8	9	10.7	6	7.1	3.63	1.22
Vo-Tech Farm Management Program.	10	23.8	15	35.7	10	23.8	4	9.5	3	7.1	3.60	1.17
Buyer or Processor Representatives.	37	19.9	56	30.1	57	30.6	28	15.1	8	4.3	3.48	1.17
Coop. Extension Video conferences.	21	25.6	19	23.2	22	26.8	12	14.6	8	9.8	3.40	1.28
Monthly or Weekly Farm Publications.	57	13.4	144	34.0	158	37.3	43	10.1	22	5.2	3.40	1.01
Manufacturer or Supplier Rep.	40	13.9	89	31.0	108	37.6	42	14.6	8	2.8	3.39	0.99
Television.	20	12.1	38	23.0	47	28.5	34	20.6	26	15.8	2.95	1.25
Young Farmers Organization.	6	12.5	12	25.0	11	22.9	9	18.8	10	20.8	2.90	1.34
Radio.	14	11.3	21	16.9	36	29.0	26	21.0	27	21.8	2.75	1.28
Daily or Weekly Newspapers.	11	5.0	31	14.2	70	32.0	85	38.3	22	10.0	2.65	1.01

696 Alternative Adopters

grower organizations (3.94) and other farmers (3.92). Even the lowest rated information source, daily or weekly newspapers (2.65), rated as moderately effective according to alternative adopters.

Table XXVII gives a breakdown of the number of alternative adopters' information sources that were used in each of the eight phases of the alternative agricultural enterprises. Overall decision-making or planning had the highest number in other farmers (162), followed by cooperative Extension fact sheets, newsletters or publications (103). Financial management and legal or tax decisions were led by professional consultants as the information source that was most useful. Other farmers as an information source secured the largest number of alternative adopters identifying them as the most useful phases for seed or raw materials, specialized equipment, production practices, harvesting and marketing. Cooperative Extension videoconferences were not mentioned as the most useful source of information in any phase.

Objective Seven: To determine if demographic factors influence the adoption of alternative agricultural enterprises.

Demographics were looked at from three positions, with the first being age level, then level of education, and third was total acreage. Each of these positions is evaluated according to full-time, part-time, and sundown farmers and ranchers. In Table XXVIII, the distribution of farmers and ranchers by age and classification is presented. Full-time adopters were found more often in the 40 to 49 (86) and the 50 to 59 (88) age level. This same trend was followed in both the part-time and the sundown

TABLE XXVII

FREQUENCY DISTRIBUTIONS OF INFORMATION SOURCES USED BY OKLAHOMA
FARMERS AND RANCHERS IN SELECTED PHASES OF THEIR
ALTERNATIVE AGRICULTURAL ENTERPRISES

Factors	Frequency Distribution							
	Overall	Legal or Tax		Seed or Raw	Specialized	Production		Marketing
	Decision-Making or Planning	Management	Decisions	Material Purch.	equipment	practices	Harvesting	
n	n	n	n	n	n	n	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 Fact Sheets, etc.	103	33	23	46	15	115	44	23
Coop. 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
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
County 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 Rep.	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

TABLE XXVIII

DISTRIBUTION BY AGE AND CLASSIFICATION

Age Level	Frequency Distribution							
	Full Time		Part Time		Sun-down		Total	
	N	%	N	%	N	%	N	%
Non Respondents							12	1.7
20 to 29	11	1.6	5	.7	3	.4	19	2.7
30 to 39	65	9.4	37	5.3	33	4.7	135	19.4
40 to 49	96	13.8	49	7.0	49	7.0	194	27.8
50 to 59	88	12.6	48	6.9	40	5.8	176	25.3
60 to 69	49	7.0	40	5.8	20	2.9	109	15.7
70 to 79	19	2.6	16	2.4	8	1.2	43	6.2
80 or older	3	.4	2	.4	3	.4	8	1.2
Total Responses	331	47.5	197	28.3	156	22.4	696	100.0

696 Alternative Adopters & Non-Adopters

farmers. The sundown group had the least response for the age level of 20 to 29 with only three respondents in that age range.

The area that showed the most respondents for education level was one to four years of high school (Table XXIX) for each classification. Then three to four years of college followed for all three areas of classification. At the level of seven to eight years of college the results were sundown (17), part-time (15) and full-time (8).

In Table XXX, the number and percentage of respondents, according to the number of acres and classification, are presented. Of all the respondents, almost one-third operated on 50 acres or less with part-time farmers having the greatest number in this area. Full-time farmers (110) were operating between 1,001 to 5,000 acres.

TABLE XXIX

HIGHEST LEVEL OF EDUCATION COMPLETED
BY CLASSIFICATION

Level of Education	Frequency Distribution							
	Full Time		Part Time		Sundown		Total	
	N	%	N	%	N	%	N	%
Non Respondents							8	1.2
0 to 8 Years	9	1.2	6	.8	5	.7	20	2.7
1 to 4 Years of High School	118	17.0	66	9.5	47	6.7	231	33.2
1 to 2 Years of College	55	7.9	34	4.9	20	2.9	109	15.7
3 to 4 Years of College	114	16.4	53	7.6	45	6.5	212	30.5
5 to 6 Years of College	31	4.4	23	3.3	22	3.2	76	10.9
7 to 8 Years of College	8	1.2	15	2.2	17	2.4	40	5.8
Total Responses	335	48.1	197	28.3	156	22.4	696	100.0
696 Alternative Adopters & Non-adopters								

TABLE XXX

DISTRIBUTION BY NUMBER OF ACRES IN OPERATION
ACCORDING TO CLASSIFICATION

Total Acreage	Frequency Distribution								
	Full Time		Part Time		Sundown		Total		
	N	%	N	%	N	%	N	%	
Non Respondents								9	1.2
0 to 50	49	7.0	96	13.9	73	10.4	218	31.3	
51 to 100	25	3.8	19	2.6	17	2.4	61	8.8	
101 to 200	30	4.1	23	3.3	25	3.8	78	11.2	
201 to 500	54	7.8	32	4.7	21	2.9	107	15.4	
501 to 1,000	58	8.4	11	1.6	12	1.7	81	11.7	
1,001 to 5,000	110	15.8	14	2.0	8	1.2	132	19.0	
5,001 to 10,000	5	.7					5	.7	
More than 10,000	4	.5	1				5	.7	
Total Responses	335	48.1	196	28.3	156	22.4	696	100.0	

696 Alternative Adopters & Non-adopters

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this chapter was to present a summary of the study which was conducted to determine the perceptions and opinions of the farmers and ranchers of Oklahoma concerning the alternative agricultural enterprises being used in Oklahoma, information sources needed, adoption practices used and potential for other farmers to be involved.

Purpose

The purpose was to survey Oklahoma farmers and ranchers about their perceptions and opinions of alternative agricultural enterprises.

Objectives of the Study

The following specific objectives were developed in order to accomplish the purpose of this study:

1. To determine Oklahoma farmers' and ranchers' interest and/or involvement in alternative agricultural enterprises.
2. To identify alternative agricultural enterprises that were presently being tried by Oklahoma farmers and ranchers, the number trying and the scope of the alternatives.

3. To determine the perceived profitability of those alternative agricultural enterprises in which Oklahoma farmers are engaged.

4. To determine the factors that encourage and/or discourage Oklahoma farmers and ranchers to try alternative agricultural enterprises.

5. To determine what alternative agricultural enterprises were perceived by Oklahoma farmers and ranchers as being the most promising for farmers in their area.

6. To identify those sources of information that were used most often for decision-making by Oklahoma farmers who were involved in alternative agricultural enterprises.

7. To determine if demographic factors influence the adoption of alternative agricultural enterprises.

Design of the Study

To satisfy the purpose of this study, it was divided into two sections with the first section identifying a stratified proportional random sample of Oklahoma farmers and ranchers. The second section related to the statewide population of alternative agricultural enterprise adopters who could be identified and contacted.

For the first section, a stratified proportional random sampling technique was used to sample the population of farmers and ranchers in Oklahoma. The stratification was based on the four districts the Cooperative Extension Service divides the state into for administrative purposes. The population was identified from the

Oklahoma Census of Agriculture (1982) for each of these districts, and proportions were calculated for each district. Four counties from each district were randomly selected. Lists of the farmers and ranchers were secured from county agricultural Extension agents and randomly selected to the proportion that had been calculated. Three hundred and eighty three individuals were needed for this sample to have a 95 percent confidence level, which would indicate the sample was representative of the general population of Oklahoma farmers and ranchers.

The second section included all those alternative agricultural enterprise adopters who could be identified in the state from extension lists and other sources.

A telephone survey-interview was used to collect data for this study. The questionnaire was divided into three sections for use in calling both groups at the same time and for collecting the data needed for both parts of the study. The telephone survey was conducted from August of 1988, through February of 1989.

Major Findings of the Study

Section One (Random sample group)

Interest or Involvement in Alternative Agricultural Enterprises: There were 28.7 percent of the random sample group identified as having tried an alternative agricultural enterprise, and 28.5 percent indicated interest in trying an alternative agricultural enterprise, for a combined interest of 57.2 percent. "Definitely not interested" was the most often checked response with 40.7 percent.

Identify alternative agricultural enterprises and specify

scope: There were 29 vegetables identified, with a scope ranging from less than one acre to 201 acres in production. The top three vegetable enterprises with numbers of farmers producing (126) were tomatoes (24), okra (12), and sweet corn (10). Peaches (22) with 114 acres were at the top of the list in fruit production followed by apples (17) and watermelon with 13 responses. The other plants section was led by 36 pecan producers with 18,195 acres. Nursery plants (6) and plains bluestem (5) were also high acreage alternatives with 425 and 429 acres respectively. In the animal section angora goats (3) with 767 head and race horses (2) with 24 head. All other animal enterprises identified were by only one adopter. The size of operation varied with Catfish having one surface acre (about 3,500 head), sheep (26 head), dogs (24 head), tilapia a foreign fish (7,000 head), 20 head of lions and tigers and 36,000 head of turkeys. Other enterprises included hunting leases and farm markets.

Determine perceived profitability of identified alternatives:

The highest ranked enterprises, beets and flowers, were rated with a 5.00 mean score or as extremely profitable. Plums (4.50) were rated as extremely profitable, also. Blackeyed peas (3.83), squash (3.67), onions (3.60), cherries (4.00), blackberries (4.00), grapes (3.80), strawberries (3.75), and plains bluestem (4.00) were all rated as highly profitable. All other identified enterprises were rated as moderately profitable with between 2.50 and 3.50 means except peas (2.20), turnips (2.00), christmas trees (2.00), catfish (2.00), farm marketing (1.50), and manufacturing equipment (1.00).

Factors that encourage and/or discourage alternative adoption:

Genuine desire to produce the commodity (40.91%) and high potential for profit (27.27%) were the highest ranked encouraging factors for the 110 adopters. The non-adopters (273) from the random group felt that increased profit was the major factor that might encourage their involvement in alternative agricultural enterprises, while the discouraging factors involved were cost (38.8%) and age (16.8%).

The 110 adopters identified start up costs (20.91%) and markets (17.27%) as the major discouraging factors. The factors for the non-adopters (273) that might discourage from adopting were cost (38.83%) and age (16.83%).

Enterprises identified as most potential for other farmers:

The adopters were asked to identify the most promising potential alternative agricultural enterprise for their area. The number one response was fruits (50.0%) followed by vegetables (30.91%) as the most promising alternative for their area.

Identify sources of information for decision making by

adopters: Information sources that were identified by over 60 percent of adopters were cooperative fact sheets, news letters or publications (78.18%), other farmers (78.18%), county cooperative Extension agents (73.64%), and monthly or weekly farm publications. The vo-tech Farm Management Program was identified by only 7.27 percent of the adopters as an information source. As these information sources were ranked according to mean scores, the top ranked was cooperative fact sheets (4.24), state or county extension

specialists (4.14), and county cooperative Extension agents (4.03) all falling in the highly effective category.

Adopters were also asked to name the most useful source of information for each of eight phases of their alternative enterprise. Cooperative fact sheets had more responses in overall decision-making (23) and production practices (25). Professional consultants topped the list in financial management (16) and legal or tax decisions (39). Manufacturer or supplier representatives were the main source of information in seed or raw material (27) and specialized equipment (19). Other farmers were voted the best source of information in harvesting (23) and marketing (13).

The influence of demographic factors on alternative adoption:

When looking at the relationship between age and adoption, the 40 to 49 year old level was identified as the group with the most people, showing 19.1 percent for the non-adopters and 6.8 percent for the adopters. The next most populated group was the 50 to 59 year old level with 17.5 percent for non-adopters and 7.6 percent for the adopters. When looking at the distribution by age with classification as full time (46.7%), part time (22.2%), and sundown (28.7%) farmers, it was found that 49 producers age 40 to 49 were full time farmers. Nineteen part time farmers were 30 to 39 years old. Thirty three sundown farmers were 50 to 59 years old.

The greatest level of education was represented by the group with one to four years of High School (40.1%) with 29 percent of the farmers and ranchers found in the non-adopters. This was followed by the group of three to four years of college (25.5%) with 8.9 percent of the producers in the alternative adopters.

Level of education had the highest number of responses for one to four years of high school for full time (23.0%) and sundown (10.2%) farmers. While part time farmers rated highest in the three to four years of college level with 6.8 percent.

When looking at size of operation as compared to responses for adopters it was found that the total acreage between zero and 50 acres had the greatest number for adopters (31) of any size acreage but the non-adopters (36) had a larger number. Non-adopters (75) were found to be more numerous in the 1,001 to 5,000 acre size which also made this the largest total selection for size with 23.2 percent. Sixty nine full time farmers were in operations of 1,001 to 5,000 acres while part time and sundown both had ten each in this size range. Part time farmers were represented by 23 farms or ranches 210 to 500 acres making that the largest acreage group. Sundown (28) farmers were involved in the up to 50 acre size operation more than any other group.

Section II (Alternative Agriculture Group)

Interest or involvement in alternative agricultural enterprises: The requirement in order to be part of this group was to be involved in alternative agricultural enterprises. Alternative agricultural enterprise adopters were identified in all parts of the state for a total of 696 farmers and ranchers.

Identify alternative agricultural enterprises and specify scope: There were 906 responses for vegetables, 567 for fruit, 312 for other plants, 185 for animals, and 36 for other enterprises from

the 696 alternative adopters. The enterprise with the most responses in each area were tomatoes (132 producers), peaches (100), pecans (116), angora goats (59), and farm markets (10). The size of the enterprises ranged from less than one acre to 5,000 acres and, from one head to 200,000 head.

Determine perceived profitability of identified alternatives:

Alternative agricultural enterprise adopters rated mushrooms (5.00), sesame (5.00), trout (5.00), alligators (5.00), feed production (5.00), emu (4.60), and dogs (4.50) as extremely profitable. However, the numbers of producers involved were low in these enterprises. Enterprises rated highly profitable by larger numbers of producers were plains bluestem grass, spinach, lettuce, popcorn, beets, radishes, brussel sprouts, strawberries, nursery plants, flowers, pine trees, range grass seed, canola, pearl millet, guar, cannas, angora goats, sheep, bees, ostriches, llama, tilaipa, stocker lambs, turkeys, farmers markets, firewood, plant breeding, fertilizer production, boarding horses, manufacturing equipment, and hunting leases.

Factors that encourage and/or discourage alternative adoption:

The alternative agriculture group perceived high potential for profit as the number one encouraging factor with 38.9 percent response. They rated desire to produce the commodity as a close second with 33.4 percent response. Markets and labor were listed as the most discouraging factors for alternative agriculture adopters.

Enterprises identified as most potential for other farmers:

The alternative agriculture group identified fruits (26.6%), vegetables (26.6%), and other enterprises (26.2%) as being the most promising alternative agricultural enterprise for other farmers and ranchers in their area.

Identify sources of information for decision making by

adopters: Other farmers (82.47%), cooperative fact sheets (73.42%), and county extension agents (73.42%) were the information sources most used by adopters. The highest rating for effectiveness of information sources on the mean scores was State or area specialists (4.23) followed by cooperative fact sheets (4.00) and farm or grower organizations (3.94), all considered highly effective. Other farmers and cooperative fact sheets were the most used sources for farmers and ranchers in the eight phases of management.

The influence of demographic factors on alternative adoption:

The greatest percentage of farmers and ranchers were between the age of 40 and 49 (26.4 percent) and 12.4 percent of these were full time farmers and ranchers. One to four years of high school was the most selected level of education for all three classifications of farmers and ranchers. Three or four years of college was a very close second with less than three percent separating the two levels.

The largest number of respondents for the classifications of part time (96) and sundown (73) were found operating less than 50 acres. The full time alternative adopters had the most responses for operating size between 1,001 and 5,000 acres. Only forty nine full time adopters were operating less than 50 acres.

Conclusions

The analysis of data, subsequent findings and observations of the researcher were the basis of the following conclusions.

Section I (Random Sample Group)

1. Even though the majority of producers were strictly traditional farmers and ranchers, nearly one third of the sample was involved in alternative agricultural enterprises. Less than half of the non-adopters indicated a definite lack of interest. These facts indicated a great deal of interest in alternative agricultural enterprises in Oklahoma.

2. A wide variety of alternative agricultural enterprises are presently in use, with the majority on a small scale. The average alternative adopter has two alternative enterprises. The most often found alternatives are tomatoes, okra, sweet corn, peaches, apples, watermelons, cantaloupes and pecans.

3. The most profitable alternatives are beets, flowers, plums and plains bluestem.

4. It was concluded that the love of producing the commodity and the possibility of high profit were the main reasons adopters tried alternative agricultural enterprises.

5. Start-up costs were the major obstacle to adopters in the process of trying alternative agricultural enterprises.

6. The adopters perceive the most promising potential alternative agricultural enterprise for other farmers and ranchers

to be some type of fruit, followed by some type of vegetable production.

7. The information sources used most often for decision making by adopters was cooperative Extension fact sheets, news letters or publications and other farmers, with equal emphasis.

8. Non-adopters were most often full-time farmers and ranchers between 40 and 59 years old with from one year of high school to four years of college. The non-adopters generally managed from 201 to 5,000 acres.

9. Sundown farmers and ranchers were most often non-adopters between 50 and 69 years old. Sundown producers most likely completed from one year of high school to four years of college but were more likely than other groups to have seven to eight years of college. Sun downers generally operated from 101 to 500 acres but were the most likely group to have operated less than 50 acres.

10. Part-time farmers and ranchers were most often non-adopters between 30 and 69 years old. Their level of education usually ranged between one year of high school to four years of college, and they generally managed between 101 to 500 acres of land.

11. Full-time farmers and ranchers were most often non-adopters between 40 and 59 years old. Full-time producers likely had one to four years of high school and managed between 501 and 5,000 acres of land.

Section II (Alternative Adopter Group)

1. The 696 alternative adopters identified a total of 2,006 enterprises in which they were involved, or an average of 2.8

enterprises per individual farmer or rancher, which meant there was a great amount of alternative adoption in Oklahoma and most people adopted two or more enterprises.

2. The alternative agricultural enterprise with the greatest involvement was vegetables.

3. Oklahoma farmers and ranchers were involved in large numbers in Angora goats and catfish production as alternative enterprises.

4. The enterprises that were perceived as extremely profitable often had low numbers of adopters involved.

5. Alternative adopters felt that high potential for profit was the most encouraging factor for becoming involved.

6. Discouraging factors that were most often listed by alternative adopters were markets and labor.

7. Alternative adopters perceived fruit and vegetable production as the most promising potential alternative enterprises for other farmers and ranchers in their area.

8. Other farmers were the most often used source of information about alternative agricultural enterprises.

9. It was concluded that alternative agricultural enterprise full time adopters were most likely between 40 and 59 years old, with education from one year of high school to four years of college. Full-time adopters likely managed 1,001 to 5,000 acres of land.

10. It was concluded that alternative agricultural enterprise part-time adopters were most likely between 40 and 59 years old, had

one to four years of high school and managed less than 50 acres of land.

11. Sundown alternative adopters' were most likely 40 to 49 years old, had from one year of high school to four years of college and managed less than 50 acres of land.

Recommendations

As a result of the conclusions drawn from the analysis and interpretation of the data, the following recommendations are made:

1. It is recommended that Oklahoma State University and the Oklahoma Cooperative Extension Service concentrate on providing current information that is applicable to Oklahoma alternative adopters, as it was apparent in the findings that farmers and ranchers are limited in availability of accurate and current information about alternative agricultural enterprises.

2. It is recommended that Oklahoma State University and the Oklahoma Cooperative Extension Service provide test plots scattered throughout the state utilizing the many identified enterprises (tomatoes, okra, sweet corn, peaches, apples, watermelons, cantaloupes, pecans, Angora goats, ostriches, llamas, catfish, hunting leases, farmer markets, etc.) and include the time-proven demonstration plots on individual farmers' operations as a means of supplying information and knowledge about alternative agricultural enterprises.

3. It is recommended that Oklahoma develop a plan to provide markets by attracting large companies in areas to handle some of the crops and animals that can be readily adapted to Oklahoma

conditions. Financial help will be needed for producers to change from traditional enterprises to alternative enterprises, but the economic benefits for the state of Oklahoma will be improved with more diversity in agricultural production.

Recommendations for Additional Research

The following recommendations are made by the author in regard to additional research. The recommendations are based on having conducted the survey and on the findings of the study. The recommendations are in two parts: (1) Methodology and (2) Additional Research.

Methodology

1. As more concentrated research is developed, a method of acquiring a more accurate, complete list of farmers and ranchers is needed. With the use of computers at county Extension offices it would be helpful to researchers to have available a current list with phone numbers from each county agricultural agent of agricultural producers.

2. Researchers need to make information they have compiled available to county Extension agents where it can best be utilized.

3. If a telephone survey is conducted, there needs to be intensive training for the callers both, on understanding what information is desired and the correct way to obtain that information.

4. Questions that might suggest personal income and other personal information should be avoided or used as the last questions.

Additional Research

1. It is recommended that further research be concentrated in those identified counties with high populations of alternative agricultural enterprises.

2. It is recommended that further research be conducted to identify markets and marketing needs of alternative agricultural enterprises in Oklahoma.

3. It is recommended that a follow-up procedure be conducted to identify any other alternative adopters in these areas surveyed.

4. Research should be conducted to provide information about clientele and potential clientele for the Oklahoma Cooperative Extension Service.

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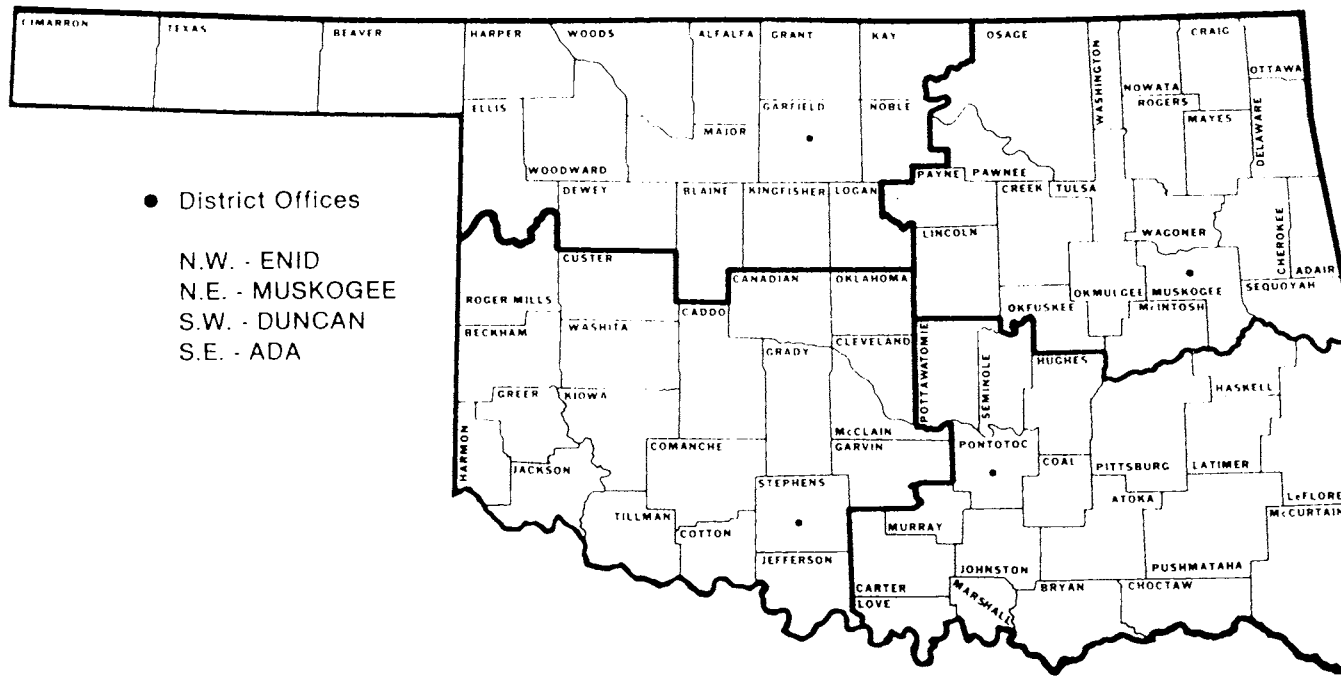
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APPENDIXES

APPENDIX A

DISTRICT MAPS

OKLAHOMA STATE UNIVERSITY COOPERATIVE EXTENSION SERVICE ADMINISTRATIVE DISTRICTS



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.

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APPENDIX C

CORRESPONDENCE



COOPERATIVE EXTENSION SERVICE

DIVISION OF AGRICULTURE • OKLAHOMA STATE UNIVERSITY

Office of the Dean and Director • 139 Agricultural Hall • (405) 744-5398
Stillwater, Oklahoma 74078

April 1, 1988

Jan Montgomery
Southeast District Extension Director
Box 1378, 1630 East Beverly
Ada, OK 74820

Dear Jan,

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.

County agricultural agents in your district are being contacted to provide lists of their agricultural producer clientele for survey by telephone. Agents in randomly chosen counties of Atoka, Carter, Choctaw, LeFlore, Latimer, Pittsburg, Pontotoc and Seminole are being asked to supply a list of producer clientele and to designate those producers who are operating some type of alternative agricultural enterprise. Agents in all other Southeast District counties are being asked to supply a list only of producers operating an 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.

Thank you and the Southeast District agents very much for cooperation in furnishing the needed information to allow the surveying. 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





DIVISION OF AGRICULTURE • OKLAHOMA STATE UNIVERSITY
Office of the Dean and Director • 139 Agricultural Hall • (405) 744-5398
Stillwater, Oklahoma 74078

April 1, 1988

Scott Price
Grant County Extension Director
Box 227, County Courthouse
Medford, OK 73759

Dear Scott,

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 all agricultural producers in your county and designating which producers 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 all of your county's producers--both those who are involved in an alternative agricultural enterprise and those who currently are producing only traditional commodities. Please place an asterisk by the names of those producers 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





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



Celebrating the Past Preparing for the Future

APPENDIX D

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
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
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
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

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.)

<u>Use</u>		<u>Information Source</u>	<u>Effectiveness</u>				
			<u>Extremely</u>	<u>Highly</u>	<u>Moderately</u>	<u>Slightly</u>	<u>Not</u>
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.)

<u>Phases >>></u>	<u>Overall</u>	<u>Financial</u>	<u>Legal or</u>	<u>Seed or Raw</u>	<u>Specialized</u>	<u>Production</u>	<u>Harvesting</u>	<u>Marketing</u>
<u>Information Sources</u>	<u>Decision-Making</u>	<u>Management</u>	<u>Tax Decisions</u>	<u>Material Purchases</u>	<u>Equipment</u>	<u>Practices</u>		
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 2 --N1--

11. Is it likely that you might try alternative agricultural enterprises in the future?

YES _____ NO _____

12. What factors might encourage you to try alternative agricultural enterprises?

- _____ 1. Increased profit
 - _____ 2. Available market
 - _____ 3. Diversification
 - _____ 4. Like trying new ideas
 - _____ 5. Less labor intensive
 - _____ 6. Less risk
 - _____ 7. Way to employ family labor
 - _____ 8. Other _____
- _____
- _____
- _____
- _____

13. What factors might discourage you from trying alternative agricultural enterprises?

- _____ 1. Cost
 - _____ 2. Labor
 - _____ 3. Market
 - _____ 4. Risk
 - _____ 5. Age
 - _____ 6. Location
 - _____ 7. Lack of production information
 - _____ 8. Other _____
- _____
- _____
- _____
- _____

14. What 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

Larry David Gallatin

Candidate for the Degree of

Doctor of Education

Thesis: FACTORS AFFECTING DECISIONS REGARDING ALTERNATIVE
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