

1-1-1998

# Perceptions of agricultural education programs by Iowa secondary school principals

Neasa Kalme  
*Iowa State University*

Follow this and additional works at: <https://lib.dr.iastate.edu/rtd>

Part of the [Agriculture Commons](#), and the [Education Commons](#)

## Recommended Citation

Kalme, Neasa, "Perceptions of agricultural education programs by Iowa secondary school principals" (1998). *Retrospective Theses and Dissertations*. 17856.  
<https://lib.dr.iastate.edu/rtd/17856>

This Thesis is brought to you for free and open access by the Iowa State University Capstones, Theses and Dissertations at Iowa State University Digital Repository. It has been accepted for inclusion in Retrospective Theses and Dissertations by an authorized administrator of Iowa State University Digital Repository. For more information, please contact [digirep@iastate.edu](mailto:digirep@iastate.edu).

Perceptions of agricultural education programs

by Iowa secondary school principals

by

Neasa Kalme

A thesis submitted to the graduate faculty

in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Agricultural Education

Major Professor: Dr. James E. Dyer

Iowa State University

Ames, Iowa

1998

Copyright © Neasa Kalme, 1998. All rights reserved.

Graduate College  
Iowa State University

This is to certify that the Master's thesis of  
Neasa Kalme  
Has met the thesis requirements of Iowa State University

Signatures have been redacted for privacy

## TABLE OF CONTENTS

LIST OF FIGURES.....	v
LIST OF TABLES .....	vi
ABSTRACT.....	vii
CHAPTER I. INTRODUCTION .....	1
History of Principals.....	1
Role of the Principal.....	2
Statement of the Problem .....	4
Rationale.....	6
Purpose of the Study/Research Questions.....	7
Significance of the Study .....	8
Definition of Terms.....	8
Assumptions of the Study .....	9
Limitations .....	9
CHAPTER II. REVIEW OF LITERATURE.....	10
Overview .....	10
Function/Role of the Principal Concerning Agricultural Education.....	10
Perceptions Toward Vocational/Agricultural Education .....	11
Relationship of Principals' Perceptions Toward Vocational/Agricultural Education and Selected Demographic Variables .....	16
Gender .....	16
Age .....	16
Years of Experience .....	16
Teaching Area .....	17
Number of Vocational Programs Taught at School .....	18
Principals' Participation in Agricultural Education Courses .....	18
School Size.....	18
Other Demographic Variables.....	18
CHAPTER III. METHODOLOGY.....	19
Research Design.....	19
Population and Sample.....	19
Development of the Instrument.....	20
Validity.....	21
Reliability .....	21
Instrument Administration .....	22
Data Analysis .....	22
CHAPTER IV. FINDINGS.....	23
Response Rate .....	23

Demographic Characteristics of the Principals .....	24
Demographic Characteristics of the School .....	27
Principals' Perceptions of Agricultural Education.....	27
Principals' Perceptions of High School Agricultural Education Programs .....	29
Principals' Knowledge or Familiarity Level of Agricultural Education Programs ....	33
Principals' Support of Agricultural Education Programs .....	37
<b>CHAPTER V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS.....</b>	<b>39</b>
Statement of the Problem .....	39
Purpose .....	40
Methodology .....	41
Summary of Demographic Characteristics .....	43
Summary Demographic Characteristics of the School .....	45
Summary of Findings .....	46
Principal's Perceptions of High School Agricultural Education Programs ....	46
Principals' Knowledge or Familiarity Level of Agricultural Education Programs.....	47
Principals' Support of Agricultural Education Programs .....	48
Conclusions .....	48
Discussion and Implications of Findings .....	50
Recommendations .....	53
<b>APPENDIX A. INSTRUMENT OF THE STUDY .....</b>	<b>55</b>
<b>APPENDIX B. INSTRUMENT REVIEW PANEL .....</b>	<b>61</b>
<b>APPENDIX C. PILOT LETTER TO PRINCIPALS .....</b>	<b>63</b>
<b>APPENDIX D. INITIAL LETTER TO PRINCIPALS .....</b>	<b>65</b>
<b>APPENDIX E. FOLLOW-UP POSTCARD TO PRINCIPALS .....</b>	<b>67</b>
<b>APPENDIX F. SECOND LETTER TO PRINCIPALS.....</b>	<b>69</b>
<b>APPENDIX G. FINAL LETTER AND CERTIFICATE OF COMPLETION TO         PRINCIPALS .....</b>	<b>71</b>
<b>REFERENCES.....</b>	<b>74</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>80</b>
<b>BIOGRAPHICAL SKETCH.....</b>	<b>82</b>

**LIST OF FIGURES**

Figure 1. Representation of FFA Districts .....	23
Figure 2. Age of Principals .....	24
Figure 3. Principals' Administrator and Teaching Experience .....	24
Figure 4. Quality of Work Experience in Agriculture .....	25
Figure 5. Quality of Principals' High School Agriculture Education Classes .....	26
Figure 6. Geographic Location.....	26

**LIST OF TABLES**

Table 1. Agricultural Education Courses Offered.....	28
Table 2. Grand Means of Instrument Constructs .....	28
Table 3. Principals' Perceptions of High School Agricultural Education Programs (Construct I) .....	30
Table 4. Principals' Knowledge Level or Familiarity Level of Agricultural Education Programs (Construct III) .....	34
Table 5. Principals' Level of Support for Agricultural Education Programs (Construct II)..	38

## ABSTRACT

The primary purpose of this study was to determine principals' perceptions of secondary agricultural education programs in Iowa high schools. The secondary purpose was to determine relationships of principals' perceptions of agricultural education programs and various demographic variables

The population of the study included all principals in Iowa high schools that had agricultural education programs during the 1997-1998 academic school year ( $N=237$ ) as identified by the Iowa Department of Education (1997). A stratified random sample consisting of 147 principals was selected. The researcher-developed questionnaire was determined to be valid by a panel of expert judges. Field test reliabilities ranged from .63, to .89.

Four mailings over eight weeks yielded a 91.2% response rate. Quantitative data were analyzed with SPSS using descriptive statistics and measures of central tendency. The alpha level was set a priori at .05.

Overall, principals expressed favorable perceptions of those programs. Principals perceive students enjoy agricultural education courses. Principals believed agricultural education courses reinforcing learning in academic courses.

The overall knowledge or familiarity level of agricultural education programs by principals is generally positive. Principals believe agricultural education teachers are high quality teachers, but do not believe that they are more effective than most other teachers are.

Principals generally tend to support agricultural education programs. Principals disagreed with the statement that agricultural education courses provide little for students' intellectual development.



In conclusion, Iowa high school principals are supportive of agricultural education programs. Not only did they believe that the agricultural education programs were important to their community, but also believe any high school student can benefit from agricultural programs.

Recommendations from this study are to further research should be conducted to determine if principals' perceptions have a relationship with their practices. This study was limited only to Iowa principals. A national scope could prove beneficial for the profession. Along the same lines, this study was limited to schools that housed agricultural education programs. Furthermore, principals need to provide training sessions to the teachers so that they will know how to integrate other subject materials into their classroom.

## CHAPTER I. INTRODUCTION

Many people are employed in agricultural occupations in the world today. The American Farm Bureau (1996) reported the nation's largest employer is the field of agriculture, with more than 21 million people involved in the process of getting food and fiber to the people. Norris and Townsend (1987) noted that there will constantly be a need for well-educated, highly motivated individuals in agriculture. This need provides a wide variety of job opportunities for future graduates of high schools, community colleges, and/or universities.

If future graduates of high schools are needed to fill the job opportunities in the field of agriculture, it is critical to examine a key person in the process of schooling, the high school principal. With the field of agricultural education changing rapidly, students will see a change in curriculum from the vocational aspect to the scientific and technical aspects. High school students can not get through school without dealing with the principal in one way shape or form. The principal affects student decisions, community members' perceptions, and classes offered. Furthermore, Bailey and Jenkins (1996) state in the Seven Significant Positions in Education: "High schools are usually high profile places in the educational organization, and high school principals are usually people whose opinions are sought after and often listened to" (p. 67).

### History of Principals

In a time when populations of towns were rather small, less than 100 families, public secondary schools evolved from Massachusetts's Law 1647 (Wood, Nicholson, & Findley 1979). The Law stated that any town having one hundred families or more must provide a secondary school. The term principal wasn't used at that time, but the overall management

duties carried on by principals were addressed. The early colonists created the position of head teacher. This position entailed duties such as management and administration. As the school and communities grew in size, the responsibilities became more demanding for the head teacher. Therefore, an administrative position was formed and the word we have come to know today as “superintendent” was created in 1837 in Buffalo, New York (Wood, Nicholson, & Findley). Furthermore, the need for fewer responsibilities and a need for further administration relieved the head teacher of responsibilities and created the word as we now know it today “principal” (Wood, Nicholson, & Findley).

### Role of the Principal

The role of the principal varies on a daily basis. Lipham, Rankin, and Hoen (1985) noted some of the duties that can be performed. These duties included: determining the goals of the school, organizing the school, providing educational leadership, improving educational decision making, implementing educational change, improving the instructional program, working effectively with staff, working effectively with students, managing the school’s resources, enhancing school-community relations, and improving performance in the principalship. Under each of the areas listed, there are several smaller points that should be taken into consideration when looking at the role of the principal, but they are too miniscule to explain.

Principals act as liaisons between many people: students and teachers, teachers and superintendents or school boards, union and non-union workers (National FFA Partner Building Team, 1993). The principal is usually the person who makes the final decision and provides approval of activities that occur in and around school. Principals’ ideas, thoughts, actions, etc., can either hinder or influence any program in the school.

Principals think their primary goal is improving the conditions under which the school is organized for effective teaching and learning. They also think they must provide the optimum teaching and learning environment for both the faculty and students (National FFA Partner Building Team 1993). Since this is one of their goals, the quality of a program should be a major concern. The United States Department of Education (1996) reported that principals believe that three of the most important goals of education are academic excellence, occupational/vocational skills, and promotion of human relation skills. These principals were less likely to include the goal of personal growth, especially in public schools.

Whereas principals may choose the goals they want to accomplish, curriculum is often dictated to them. For example, principals in Iowa school districts must follow the Iowa Vocational Standards that were enacted July 1, 1992. The Iowa Department of Education (1993) outlines the standards and states that four of the six vocational service areas must be offered and taught in a minimum of three sequential units. The six service areas in vocational education are agricultural education, business/office education, health occupations education, family and consumer sciences education, industrial education, and marketing education. The Iowa Department of Education standards require instruction in high schools to be competency based, articulated, and reinforce basic academic skills. With such direction, principals may feel some animosity toward those programs that represent a loss of the academic freedom to build curricula based upon the needs of the local district, without limitations such as those imposed by the vocational legislation.

### Statement of the Problem

The National Research Council (1988) reported agricultural education has had a long history in American education. Enrollments in different programs have experienced a roller coaster ride. As such, agricultural education programs around the nation have cycled, but the numbers of students in the programs have recovered to the levels of the high enrollments of the 1970s. The National FFA Organization (1986) reported enrollment in secondary agricultural education programs peaked in 1977 when 697,500 students were enrolled in agricultural education across the nation.

The overall problem addressed by this study is the fluctuating enrollments in high school agricultural education programs in Iowa. A need existed to determine the cause of these fluctuations in enrollment. In Iowa, enrollments shifted from 17,293 to 9,161 students from 1976 and 1990, respectively (Andreasen, Breja, & Dyer 1997), this is an enrollment loss of over 47%. The 1990 enrollment figures for agricultural education courses are the lowest Iowa agricultural education had experienced since before the 1970s. The 1997-1998 academic school year enrollment in Iowa agricultural education programs stands at 14,554 (Iowa Department of Education 1998). Part of the overall decline in numbers can be accounted for by program loss from 1979 to 1997. The number of programs fluctuated slightly from 245 and 255 programs in 1976 and 1990, respectively (Andreasen, Breja, & Dyer). In the 1997-1998 school year, agricultural education programs in Iowa fluctuated to 237 (Iowa Department of Education, Directory 1997). However, this decline was largely due to high school consolidations. This study will attempt to determine if the high school principal has any influence on the enrollments of agricultural education programs in Iowa.

Relationship with principals might be part of the reason for this decline. Camp

(1997) reported that for many years American classrooms have faced an ongoing shortage of qualified agricultural education teachers. Brown (1997) added there has been a demand for agricultural education teachers in the 1990s, and that in 1993 there were not enough newly qualified agricultural education teachers to fill open positions. Furthermore, Dyer (1998) reported that 38 states had a shortage of teachers and only one state had a surplus in 1996-1997. The shortage of teachers might be a factor causing the decline, but why are agricultural education teachers leaving their positions? If there are not enough first year teachers in agricultural education, will a position be filled if the experienced teacher moves to a different school? Do principals support agricultural education teachers, or is this the cause of agricultural education teachers leaving their positions? Teachers need support from principals in building a quality agricultural education program in high schools. If the principal doesn't support a program then that program will not likely have the opportunity to be a quality program.

The base of literature showed how principals perceived agricultural education in the 1970s and 1980s, but have those perceptions changed as agricultural education curriculum has changed? The purpose of this research was to assess high school principals' perceptions of current agricultural education programs in Iowa. This study focused on principals' perceptions of agricultural education programs, courses, and teacher quality.

Several studies have looked at perceptions and attitudes of administrators toward "vocational" education (Barnett, 1984/1985; Benson, 1982; Burns, 1985/1986; Canfield, 1981; Divita, 1968; Dowell, 1980; Gray, 1979; Hajiaghazadeh, 1980/1981; Heineman, 1975; Klewer, 1982; Mathews, 1987; Marrs, 1983; McGhee, 1974/1975; Miller, 1981; Price, 1990; Pryor, 1984, Renton School District, 1976, 1979; Schildgen, 1987). There are several groups

included in administrators' perceptions ranging from principals, superintendents, guidance counselors, school board members, and educational directors.

Barnett (1984/1985), Divita (1968), Dowell (1980), Gray (1979), Hajiaghazadeh (1980/1981), Marrs (1983), Miller (1981), Price (1990), and Pryor (1984) reported that principals generally viewed vocational education as positive and/or favorable. However, there have been several educational reforms since these studies were published.

The National Research Council (1988) noted principals should be included with a group of other school officials in efforts to reform vocational agriculture. Vocational agriculture has reformed itself in that many programs and states have removed the "vocational" label for a more positive "agri-science" influence. However, just by changing the name from vocational agriculture to agricultural education may not be enough to either raise or lower principals' perceptions of agricultural education. Have principals' perceptions changed with the change in the label of "vocational" agriculture to agricultural education?

#### Rationale

The National Research Council (1988) broadly defines agriculture as too important a topic to be taught only to the relatively small percentage of students considering careers in agriculture and pursuing vocational agriculture studies.

Fishbein and Ajzen (1975) provided the theoretical framework for this study. Their work determined that a person's intentions to participate in activities could be predicted based upon knowledge, observation, and/or other information about some topic, field, or issue. The model suggests that by analyzing a person's beliefs, attitudes, or perceptions, one can determine attitudes of the person towards a particular topic. Greenwald's work in 1989 supports this theory, reporting that an individual tends to evaluate subjects or situations

positively when they hold a positive attitude toward that subject or situation. As applied to this study, if a principal has an interest in agriculture education, is knowledgeable of agricultural education, has a positive image of agricultural education, and/or is actively involved in agricultural education programs, then his/her beliefs about an agricultural education program and willingness to participate in agricultural education programs will be positive. Consequently, if the interests, knowledge, image, and activity are negative, then the beliefs will also be negative.

#### Purpose of the Study/Research Questions

The primary purpose of this study was to determine principals' perceptions of secondary agricultural education programs in Iowa high schools. The secondary purpose was to determine relationships of principals' perceptions of agricultural education programs and various demographic variables such as gender, age, and school size. Other demographic variables consist of whether or not principals participated in agricultural education courses while in high school; principals' children are enrolled in agricultural education courses; and principals' past work experience in the field of agriculture. More specifically, the purpose of the study was to answer the following research questions:

1. What are Iowa secondary school principals' perceptions of high school agricultural education programs?
2. What knowledge or familiarity level do principals have of agricultural education programs?
3. To what level do principals support agricultural education programs?
4. What is the relationship between selected demographic variables?

(a) Principals' perceptions of high school agricultural education programs.



- (b) The knowledge or familiarity level principals have toward agricultural education programs.
- (c) The support level principals have toward agricultural education programs.

### Significance of the Study

The outcome of this study will provide agricultural education teachers with a better understanding of how principals perceive agricultural education programs, courses, and the teacher. Furthermore, in reviewing the results of the study, teachers will know how principals' perceive agricultural education programs, classes, and the quality of instruction offered to the students. Teachers will also know how principals' perceive the integration of other subject matter into the agricultural education curriculum, along with how the principal perceives agricultural education curriculum integration into the other subjects.

### Definition of Terms

Agricultural Education Teacher – teachers at the secondary level (central schools and city schools) who teach curriculum related to the vast field of agriculture.

FFA – National FFA Organization, an integral part of any agricultural education program, formerly known as the Future Farmers of America.

High/Secondary School – encompasses students in grades 9-12.

Perception – understanding of a concept, a belief.

Principal – the head of a high school, building level administrator.

Vocational Education – preparing students for a specific job or trade, focusing on the technical aspects rather than the scientific.

### Assumptions of the Study

1. Principals will be familiar enough with agricultural education programs to have developed perceptions.
2. Principals will be honest and professional in their responses of their perceptions in the questionnaire.

### Limitations

Only principals with agricultural education programs in Iowa, as listed by the Directory of Secondary and Post-secondary Agricultural Departments 1997-1998 and Directory of Secondary Departments by District, provided by the Department of Education were included in the study. Principals in schools with no high school agricultural education program may hold different perceptions, in either a more positive or negative manner, than the sample. Therefore, the results of this study are not necessarily applicable to all Iowa principals or to those in other states.

## CHAPTER II. REVIEW OF LITERATURE

Chapter I described the principalship and principals' perceptions toward vocational education. The purpose of this study was to determine principals' perceptions toward agricultural education in Iowa high schools.

In this chapter, the conceptual and theoretical framework of the study is discussed. The research and literature base is related to principals' perceptions toward agricultural education programs, classes, and teachers. The affects of demographic variables on principals' perceptions of agricultural education programs are also discussed.

### Overview

Principals in today's schools make decisions that affect many people including teachers, students, community members, etc. The National FFA Partner Building Team (1993) reported that principals believe they can not be fair to all. Furthermore, Webster (1994) reported that principals know their responsibilities in and around school and take their jobs seriously. They view themselves as the final arbitrator of the decision making process. As such, principals make decisions that affect agricultural education programs in many ways.

### Function/Role of the Principal Concerning Agricultural Education

The National Research Council (1988) reported the leadership challenges and responsibilities of agricultural education include: developing the curriculum, revising the focus and content of FFA programs and activities, educating teachers, assuring adequate resources, and creating a more flexible and adaptive budgetary and legislative framework. From the review of literature, there is very little about the role of the principal in regards to agricultural education programs. The focus of the materials in the literature review tended to refer to supervisors of agricultural education rather than principals.

A study conducted by Jah (1994) sought to identify the role or functions of principals with agricultural education programs. Jah sought to determine the role of principals as perceived by three groups: incumbents, agricultural leaders, and teachers. The study identified 60 job functions rated on a Likert-type scale. A significant difference was reported among males and female of all three categories of respondents toward policy development and personal management. Jah reported this difference could have been caused by the experiences of the females.

Significant differences were also reported among age and group for curriculum development and implementation. The factors: support generation, staff and curriculum involvement, principals conflict of resolution, and principals leadership development reported no significant differences according to gender, group, level of schooling, or age. Among the seven identifiers, faculty performance was reported to be the least important.

Whereas Jah (1994) reported data on the seven factors of principals' roles, McGill (1991) reported that principals must be able to maintain a close knit organization and resolve inter-member conflict to be able to be an effective leader. According to McGill, the principal also has to make clear what is expected of teachers and place a high value on the productive environment.

#### Perceptions Toward Vocational/Agricultural Education

Several studies look at perceptions and attitudes of administrators toward vocational education and/or agricultural education (Barnett, 1984/1985; Benson, 1982; Burns, 1985/1986; Canfield, 1981; Divita, 1968; Dowell, 1980; Dyer, 1994; English, 1992; Gray, 1979; Hajiaghazadeh, 1980/1981; Heineman, 1975; Hoskey, 1989; Klewer, 1982; Marrs,

1983; Matthews, 1987; Matulis, 1989; McGhee, 1974; Miller, 1981; Price, 1990; Pryor, 1984, Renton School District, 1976, 1979; Schilden, 1987; Woodard & Herren, 1994).

It was reported by Bainter (1974/1975), Barnett (1984/1985), Brooks (1982), Canfield (1981), Divita (1968), Dowell (1980), Dyer (1994), Eley (1975/1976), English (1992), Gray (1979), Hajiaghazadeh (1980/1981), Marrs (1983), Matthews (1987), Matulis (1989), Miller (1981), Pace (1981), Price (1990), Pryor (1984), Ricadela (1981), Shepard (1977), Simpson (1975), Spillman (1983), Sponaugle (1972/1973), and Woodard and Herren (1994) that generally positive attitudes toward vocational education were held by administrators, including: superintendents, principals, guidance counselors, school board members, and teachers.

When dealing with issues regarding agricultural education, however, Rosati (1984) reported that principals and superintendents could be treated as one group. Principals were also involved in studies conducted by Bender (1996/1997), Gott (1980), Huh (1991), Jewell (1989, 1995), Jones and Walls (1994), and Martin, Nwozuzu, and Gleason (1984). In addition to the support listed above, Jewell (1995) studied principals and reported that principals are generally positive toward agricultural education.

Martin, Nwozuzu, and Gleason (1984) reported that principals' support vocational agriculture programs, but the results showed that communication linkages were not well established between vocational agriculture teachers and school principals in the state.

However, principals and superintendents in the state of Washington generally did not hold favorable attitudes toward vocational education (Renton School District, 1976).

Respondents in this study did not believe that vocational education should be expanded in the high school.

Brimm and Cooper (1974) reported that principals believe that vocational agriculture contributes to the national economy and is a valuable part of the secondary school curriculum. Principals in studies conducted by Rositi (1984), Jewell (1995), and Price (1990) reported the primary purpose of vocational agriculture is to prepare the students for employment. Rositi reported that 95.1% of the principals thought employment was the primary purpose.

Furthermore, Rositi (1984) reported that principals believed the purpose of agricultural education was to prepare students for advanced study at the baccalaureate level. Schumann and Webb (1974) reported that principals believe students that planned on getting a baccalaureate degree in agriculture should be encouraged to enroll in vocational agriculture. Moreover, Huh (1991) reported that principals believed vocational education should be a part of the total education of all students. Schumann and Webb reported that principals felt students should be allowed to enroll into vocational agriculture classes without regard to their occupational plans. Furthermore, Jewell (1995) reported that principals disagreed with agricultural education courses being moved from high schools to community colleges.

However, Jewell (1989) reported principals believed that programs should be general in nature and provide specific background knowledge in agriculture. Furthermore, Price (1990) reported that administrators believed they should have an in-depth knowledge and understanding of vocational education.

Gott (1980) reported that principals in Missouri believed the following competencies to be most important in the field of vocational education: to develop and maintain student discipline, provide for the safety needs of the students, use the shop equipment correctly and

safely, and to recognize and enforce the safety rules and state regulations about the use of the shop equipment.

Furthermore, Huh (1991) reported that principals were undecided on whether lower academic achievers are more likely to enroll in vocational courses and if socio-economically disadvantaged students usually select vocational courses. However, according to Price (1990) and Jewell (1995) principals agreed with the statement that vocational education is appropriate for college bound students. Furthermore, Jewell (1989) reported principals' opinions concerning the purpose of vocational agriculture programs. Of these concerns "train for farming" decreased from 7.7% in 1978-1979 to 3.9% in 1985-1986. "Train for employment in agriculture" also decreased from 56.4% in 1978-1979 to 44.2% in 1985-1986. Another decrease was "train for employment in any occupation." It decreased from 11.5% in 1978-1979 to 9.6% in 1985-1986. However, the belief of principals was that the purpose of vocational agriculture was to "provide a general knowledge of agriculture" increased from 21.8% in 1978-1979 to 36.5% in 1985-1986.

Jewell (1989) reported principals' attitudes toward vocational agriculture programs. In 1978-1979, 53.8% of principals believed vocational agriculture programs were an essential part of education compared to 30.8% in 1985-1986. Meanwhile, in 1978-1979, 38.5% of principals believed vocational agriculture programs were significant for persons concerned with agriculture as compared to 55.8% in 1985-1986. Furthermore, in 1978-1979, 7.7% of the principals were indifferent to vocational agriculture programs being an essential part of education as compared to 13.4% in 1985-1986. Huh (1991) reported principals were undecided if vocational curricula should be broad in nature rather than specific, whereas

Schumann and Webb (1974) reported that principals felt a general understanding to the field of agriculture should be emphasized rather than specific occupations in agricultural areas.

Jewell (1995) and Price (1990) found that principals disagreed with the following statements: agricultural education courses are not important components of high school curricula, agricultural education is no longer needed in public schools, agricultural instruction does not support or enhance goals of secondary education, and benefits of agricultural education are no longer important. Furthermore, principals in the Rosati (1984) study felt that many FFA activities were inappropriate for in-class instructional time.

Along with the support from principals, Brimm and Cooper (1974) reported principals disagreed with limiting admission into vocational agriculture to students with low academic ability. In addition, Schumann and Webb (1974) reported principals strongly disagreed that the agriculture teacher should have primary responsibility for determining who should be permitted to enroll in the vocational agriculture program. However, Rosati (1984) reported that principals believed the clientele for agricultural education was rural 98.2%, urban 85.9%, and suburban 85.9%.

Huh (1991) reported that principals believe vocational teachers are as dedicated to their work as academic teachers. Furthermore, Rosati (1984) also surveyed the principals to see what title should be used to describe agricultural education programs and principals tended to choose “agricultural education” or “agriculture/agribusiness education” over “vocational agriculture.” Foster, Bell, and Erskine (1995) reported that Nebraska principals were the most inclined to change curriculum when compared with teachers and superintendents. Brimm and Cooper (1974) reported that administrators who possess positive views of vocational programs tend to have stronger programs in their schools.



Relationship of Principals' Perceptions Toward Vocational/Agricultural Education and  
Selected Demographic Variables

### Gender

Few studies regarding attitudes of principals toward vocational education according to gender have been conducted. Dowell (1980) was unable to determine if attitudes toward vocational education were affected by the gender of the principal. Jones and Walls (1994) reported that gender created significant differences in perceptions of principals regarding the integration of vocational education into the academic curriculum. If the principals were white males their perceptions of incorporating vocational education into the academic curriculum were reported to be more negative when compared to white females.

### Age

Barnett (1984/1985), Benson (1982), Canfield (1981), and Heineman (1975) reported the attitudes and knowledge of principals toward vocational education had no significant relationship with age. In addition, Jones and Walls (1994) reported age as having no significant influence on perceptions of principals regarding the integration of vocational education into the academic curriculum. However, positive relationships were reported (Dowell, 1980) among attitudes of principals toward vocational education and age. In particular, the differences occurred among principals in the age categories of 41-50 and 51-over.

### Years of Experience

Barnett (1984/1985), Benson (1982), Dowell (1980), and Matthews (1987) reported no significant relationship between number of years experience as a high school principal and attitudes toward vocational education. Benson and Matthews reported that individuals

who were principals for a greater number of years tended to have more positive attitudes toward vocational education. However, Marrs (1983) surmised that it was impossible to determine if the years of experience had any effect on the perceptions toward vocational education.

Jones and Walls (1994) reported no significant differences between total years of teaching and administrative experience in perceptions of principals regarding the integration of vocational education into the academic curriculum. Likewise, no significant relationships were reported by McGhee (1974/1975) between the number of years in their current position and attitudes of superintendents, principals, county vocational directors, and guidance counselors. Neither were principals' attitudes toward vocational education related to the number of years he/she had taught in the classroom (Burns 1985/1986, Dowell 1980, and Matthews 1987).

#### Teaching Area

Barnett (1984/1985) and Burns (1985/1986) reported no significant relationships between principals' attitudes toward vocational education and the subject matter of their previous teaching assignments. Likewise, Dowell (1980), Heineman (1975), and Matthews (1987) reported no significant relationships between principals' attitudes and knowledge toward vocational education and principals' instructional area specialty.

By contrast, when looking only at vocational education, Barnett (1985/1986) reported that principals who had taught vocational education subjects tended to have more positive attitudes toward vocational education. Likewise, McGhee (1974/1975) reported principals certified in vocational agriculture tended to hold more favorable attitudes toward vocational education than those without this certification.

### Number of Vocational Programs Taught at School

Heineman (1975) reported that the number of vocational programs in schools had an influence on principals' attitudes toward vocational education. However, the number of programs had no influence their knowledge of vocational education.

### Principals' Participation in Agricultural Education Courses

Barnett (1984/1985) and Heineman (1975) reported that principals' attitudes and knowledge were not affected by their own participation (or lack thereof) in vocational education programs. McGhee (1974/1975) reported a significant positive relationship between past enrollment of guidance counselors, county vocational directors, principals, and superintendents in secondary vocational agriculture and their attitudes toward vocational agriculture.

### School Size

The high school size where principals worked had no significant relationship on the attitudes held by the principals toward vocational education as reported by Barnett (1984/1985), Canfield (1981), and Matthews (1987).

### Other Demographic Variables

The research base was looking at information pertaining to attitudes of principals as influenced by their children's participation in agricultural education courses, principals' work experience in the field of agriculture, and geographic background of the principal, but there was no data found in those areas.

### CHAPTER III. METHODOLOGY

Chapter I described the principalship and principals' perceptions toward vocational education. The purpose of this study was to determine principals' perceptions toward agricultural education in Iowa high schools.

Chapter II provided the conceptual and theoretical framework for the study. Research and literature related to the perceptions of principals toward agricultural education programs, classes, and teachers were discussed, along with how demographic variables of principals affect principals' perceptions toward agricultural education programs.

In this chapter, methods used to address the objectives of the study are discussed. Specifically, the research design, population and sample, development of the instrument, validity, reliability, instrument administration, and data analysis are addressed.

#### Research Design

A descriptive survey design was used in this applied research project. The questionnaire was designed to determine principals' perceptions of agricultural education programs, courses, and teacher quality.

#### Population and Sample

The population of the study included all principals in Iowa high schools that had agricultural education programs during the 1997-1998 academic school year ( $N=237$ ), as identified by the State of Iowa Department of Education. A stratified random sample was selected from the population using computer generated random numbers. The strata consisted of the six different FFA districts in Iowa. The total sample size was determined using Krejcie and Morgan's (1970) formula:

$$\chi^2 NP (1 - P)$$

$$S = \frac{\chi^2 NP (1 - P)}{d^2 (N - 1) + \chi^2 P (1 - P)}$$

where,

S = required sample size,

$\chi^2$  = the table value of chi-square for one degree of freedom at the  
desired confidence level,

N = the population size,

P = the population proportion (assumed to be .50, this would provide  
the maximum sample size),

d = the degree of accuracy expressed as a proportion (.05 for this study).

The sample size for this study was calculated as follows:

$$S = \frac{(3.841) (237) (.50) (1 - .50)}{(.05)^2 (237 - 1) + (3.841) (.50) (1 - .50)} = 147$$

From this formula it was determined that 147 principals would be needed to obtain a 5% degree of accuracy at a 95% confidence level. Of those 147 principals, 26 were selected from the Northeast FFA district, 25 came from each of the North Central, Northwest, and Southeast FFA districts, and 23 from each of the South Central and Southwest FFA Districts.

### Development of the Instrument

The questionnaire was a four-section instrument (Appendix A) developed by the researcher based on a review of literature from prior studies using Illinois guidance counselors (Dyer, 1994; Matulis, 1989). Section I measured the construct "Principals' Perceptions Toward Agricultural Education Programs" and was comprised of 17 statements. Section II measured the construct "Principals' Perceptions Toward Agricultural Education

Courses” and was comprised of four statements. Section III was comprised of 14 statements concerning principals’ perceptions toward the construct “Quality and Perception of the Agricultural Education Teachers.” In these three sections, participants were asked to indicate the degree to which they agreed or disagreed with each statement. The degree of agreement was determined using a Likert-type scale that consisted of the following options: (1) Strongly Disagree, (2) Disagree, (3) Uncertain, (4) Agree, and (5) Strongly Agree.

Section IV of the instrument was comprised of 12 demographic questions relating to principals, the school in which they worked, and/or agricultural education programs. The demographic section of the questionnaire was constructed of close-ended items.

#### Validity

Expert judges consisted of faculty and staff in the Agricultural Education and Studies Department at Iowa State University (Appendix B). The expert judges determined the face, content, and construct validity of the instrument. Based on the recommendations of that panel of judges, revisions were made to the instrument. A pilot letter (Appendix C) and pilot instrument were mailed to 27 principals randomly selected from the target population who were not participants in the study.

#### Reliability

Reliability estimates were calculated on Sections I through III of the questionnaire to establish the internal consistency of each of these sections. Cronbach’s alpha was used to determine the reliability. Reliability ratings for Constructs I, II, and III were .63, .83, and .89 respectively.

### Instrument Administration

An envelope consisting of a cover letter (Appendix D); a numbered questionnaire; and a self-addressed, stamped envelope were mailed to participants of the study on December 8, 1997. A follow-up postcard (Appendix E) was mailed approximately three weeks later. A second letter (Appendix F) accompanied with a second complete packet of material was mailed to non-respondents approximately five weeks after the first mailing. A reminder letter and a certificate of completion (Appendix G) were sent out seven weeks after the first mailing. A total of 134 respondents completed the questionnaire for a response rate of 91.2%. Data was tabulated eight weeks after the initial mailing. Non-response error was determined by comparing early and late respondents as outlined by Miller and Smith (1983). No categorical differences were found between the early and late respondents. Therefore, the results were generalized to the total sample.

### Data Analysis

Quantitative data were analyzed using descriptive statistics and measures of central tendency. The Windows version of the Statistical Package for the Social Sciences (SPSS) version 7.0 was used to analyze and interpret data. Statements left blank were coded as missing data. It was determined a priori to test for significance at the .05 alpha level. Specific statistics used to analyze and interpret data included means, standard deviations, frequencies, percentages, and analysis of variance (ANOVA). Post hoc analyses were conducted using Tukey's HSD analysis.

## CHAPTER IV. FINDINGS

Chapter I described the principalship and principals' perceptions toward vocational education. The purpose of this study was to determine principals' perceptions toward agricultural education in Iowa high schools. Chapter II provided the conceptual and theoretical framework for the study. Research and literature related to the perceptions of principals toward agricultural education programs, classes, and teachers were discussed, along with how demographic variables of principals affect agricultural education. Chapter III described the methods used to address the objectives of the study. Specifically, the research design, population and sample, development of the instrument, validity, reliability, instrument administration, and data analyses were addressed.

This chapter presents the findings obtained from the study. The specific questions addressed in the results of the study pertain to principals' perceptions toward agricultural education in Iowa high schools.

### Response Rate

Of the 147 principals who were sent a questionnaire, 134 (91.2%) of the sample responded. A comparison of early and late respondents revealed no differences, therefore data were generalized to the total sample. The respondents representatively came from the six FFA districts in Iowa (Figure 1).

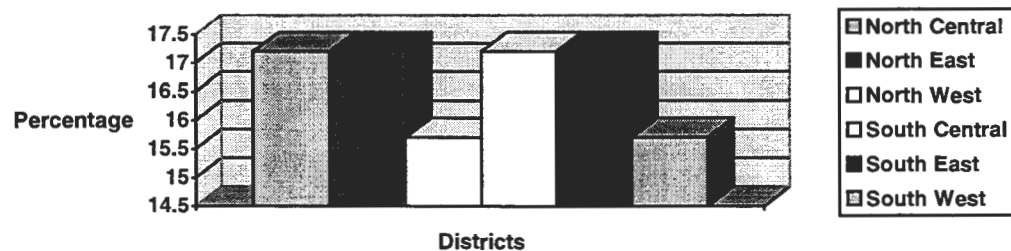


Figure 1. Representation of FFA Districts



### Demographic Characteristics of the Principals

Of those principals responding to the questionnaire, 95.4% were male. Furthermore, principals were asked to indicate their age within given ranges. A majority (52.2%) of the respondents were 46 to 55 years old (Figure 2).

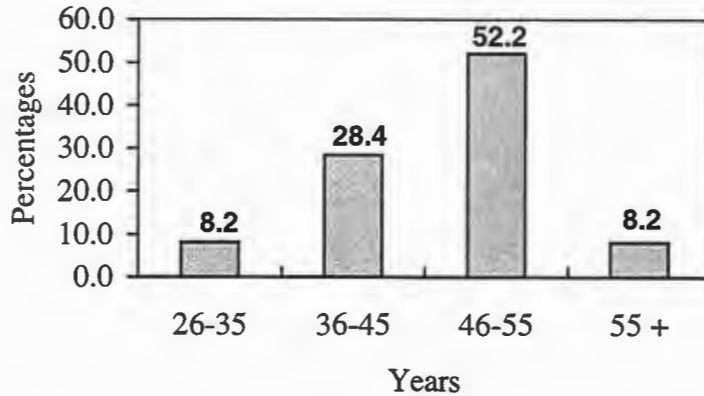


Figure 2. Age of Principals

Figure 3 presents principals' administration and teaching experience. The mean number of years of service as a principal was 11.85. The largest group (47.7%) had been employed as a principal for only 1 to 10 years. Another 33.9% of the principals occupied the position for 11 to 20 years.

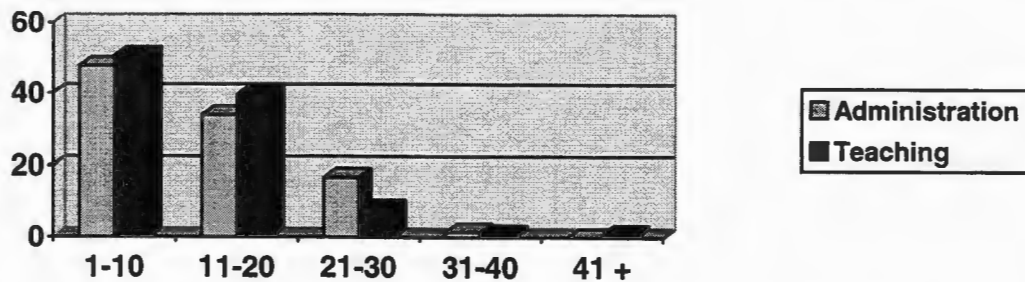


Figure 3. Principals' Administration and Teaching Experience

The mean number of years a principal had taught before moving into administration was 11.69. The largest group of principals (50.5%) taught between 1 to 10 years, 39.6% had taught between 11 to 20 years, 8.1% had taught between 21 to 30 years, whereas, between 31 to 40 years less than 1% of the principals were represented.

Eighty-two principals reported work experience in the field of agriculture. Among the experiences, 32.9% of the principals described their work experience as “excellent,” whereas 54.9% reported a “good” experience (Figure 4). Furthermore, 9.8% reported a “fair” work experience and 2.4% reported a “poor” work experience. A *t*-test revealed no significant difference between perceptions toward agricultural education programs if the principals had previous work experience in agriculture from those perceptions expressed by those who had no prior experiences in agriculture.

Twelve principals reported having had a child enrolled in agricultural education classes. Principals rated the classes as either good (41.7%) or excellent (41.7%) in quality. A *t*-test revealed no significant difference between perceptions toward agricultural education programs if principals’ children were enrolled in agricultural education courses from those principals’ perceptions who had no children enrolled.

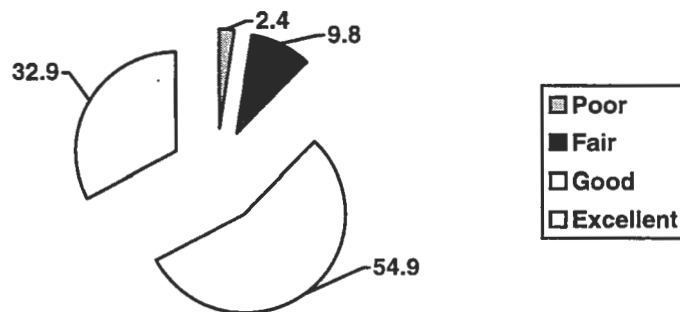


Figure 4. Quality of Work Experience in Agriculture

Thirteen principals reported having had agricultural education classes in high school (Figure 5). The quality of agricultural education classes was reported “fair” as 30.8%, 46.2% reported it as “good,” and 23.0% reported the quality to be “excellent.” A *t*-test revealed no significant difference between perceptions toward agricultural education programs if the principal had previous classes in agricultural education from perceptions expressed by those who had never taken agricultural education classes.

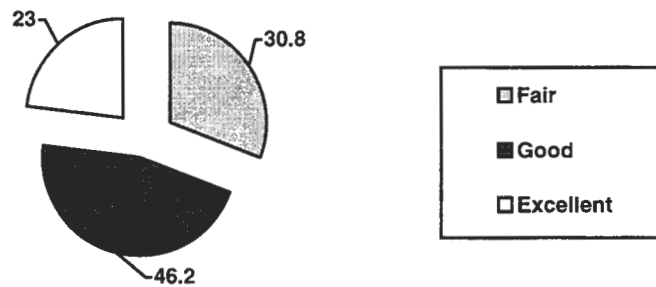


Figure 5. Quality of Principals' High School Agriculture Education Classes

Figure 6 presents a comparison of the size of the community from which the principal came with the size of the community in which the school is located. The majority of the principals in the study (63.4%) came from communities with student populations of less than 4,999. Principals responding from community populations between 5,000 and 24,999 consisted of 26.0% of the sample, whereas 10.6% of the sample came from community populations above 25,000.

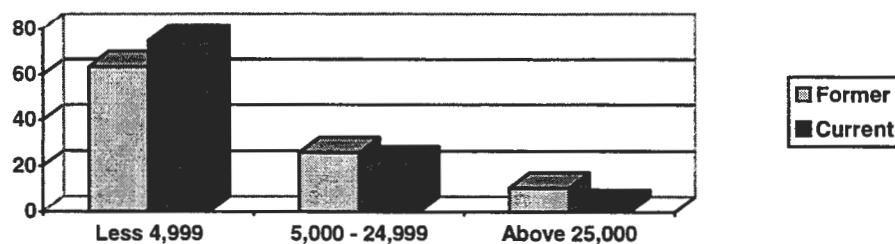


Figure 6. Geographic Location

The majority of principals (74.8%) reported their communities were located in areas with populations below 4,999. Slightly over 22% reported their schools were located in areas with populations ranging from 5,000 to 24,999, whereas 3.1% of the schools were reported to be in areas with populations above 25,000.

#### Demographic Characteristics of the School

Principals reported that 75.6% of the agricultural education programs in Iowa schools are programs consisting of full time teachers. The remaining programs (2.4%) employed teachers either 1½ time, ¾ time, or were 2 teacher departments.

The mean number of students in high schools where principals worked was 353, with a range of 85 to 1,700 students. In schools where there was an agricultural education program, principals reported mean enrollments in agricultural education classes of 64 students, with a range of 8 to 180 students.

Principals reported the types of agricultural education classes offered at their high schools to be agricultural business (91.5%), agricultural production (84.6%), animal science (84.6%), introduction to agriculture (73.8%), mechanics (63.1%), horticulture/floriculture/landscaping (62.3%), and welding (61.5%). Courses classified as “other” consisted of electricity, leadership, introduction to agriculture in the middle school, meteorology, business communications, food science, agricultural construction, agricultural communications, and independent study (Table 1).

#### Principals' Perceptions of Agricultural Education

Overall, high school principals in Iowa expressed favorable perceptions of agricultural education. Table 2 shows grand means for each of the constructs, I – “Principals’

Table 1. Frequency and Percentage of Topics Offered in Agricultural Education Courses

Courses	Offered		Not Offered	
	f	%	f	%
Agricultural Business	119	91.5	11	8.5
Introduction to Agriculture	96	73.8	34	26.2
Mechanics	82	63.1	48	36.9
Welding	80	61.5	50	38.5
Agricultural Production	110	84.6	20	15.4
Agricultural Computers	27	20.8	103	79.2
Agronomy	48	36.9	82	63.1
Animal Science	110	84.6	20	15.4
Aquaculture	24	18.5	106	81.5
Environmental Science/Natural Resources	59	45.4	71	54.6
Agricultural Products and Processing	54	41.5	76	58.5
Horticulture/Floriculture/Landscaping	81	62.3	49	37.7
Other	8	6.2	122	93.8

Perceptions Toward Agricultural Education Programs,” II – “Principals’ Perceptions Toward Agricultural Education Courses,” and III – “Quality and Perception of the Agricultural Education Teachers.” No significant differences were found in *t*-tests for any of the constructs.

Table 2. Grand Means of Instrument Constructs

Construct	Grand Mean*
I – Principals’ Perceptions Toward Agricultural Education Programs	3.82
II – Principals’ Perceptions Toward Agricultural Education Courses	3.73
III – Quality and Perception of the Agricultural Education Teachers	3.70

\*The grand mean was determined after reverse coding of negative statements.

### Principals' Perceptions of High School Agricultural Education Programs

Table 3 shows principals' perceptions of high school agricultural education programs. Overall, principals expressed favorable perceptions of those programs. Principals believed agricultural education programs to be beneficial for both high achievers ( $\underline{M} = 4.21$ ) and low achievers ( $\underline{M} = 4.11$ ). Principals in this study agreed with the statement that high school students are mature enough to benefit from agricultural education courses ( $\underline{M} = 4.48$ ).

Principals agreed that college bound students should take agricultural education courses ( $\underline{M} = 3.67$ ). However, principals were uncertain as to whether students that take agricultural education courses tend to be less academically able ( $\underline{M} = 2.77$ ). These responses imply that principals in the study believed any type of student can benefit from agricultural programs.

Principals in this study were uncertain if increased graduation requirements prevented students from enrolling in agricultural education courses ( $\underline{M} = 2.50$ ). Eighty-five percent of the principals either disagreed or strongly disagreed with this statement.

Principals in the study were generally positive in the attitudes toward agriculture. They believed that the image of agriculture is improving ( $\underline{M} = 3.67$ ). They also agreed that there are numerous opportunities for employment in the field of agriculture ( $\underline{M} = 4.39$ ).

Principals believed students enrolled in agricultural education courses seem to enjoy these courses ( $\underline{M} = 4.23$ ), but principals were uncertain that students are becoming more interested in enrolling in agricultural education courses ( $\underline{M} = 3.27$ ). Furthermore, principals were generally positive in their response to statements regarding skill development needed for employment in business and industry ( $\underline{M} = 4.18$ ), agricultural education courses encourage students to apply knowledge and skills to real-life problems ( $\underline{M} = 4.16$ ), and

Table 3. Principals' Perceptions of High School Agricultural Education Programs (Construct I)

Item Number	Item Statement	Frequency Percentage					M	SD
		SD	D	U	A	SA		
4.	High school students are mature enough to benefit from agricultural education courses.	$\frac{0}{0}$	$\frac{1}{0.8}$	$\frac{3}{2.3}$	$\frac{60}{45.1}$	$\frac{69}{51.9}$	4.48	.59
3.	There are numerous opportunities for employment in the field of agriculture.	$\frac{0}{0}$	$\frac{3}{2.3}$	$\frac{9}{6.8}$	$\frac{54}{40.6}$	$\frac{67}{50.4}$	4.39	.72
17.	Students enrolled in agricultural education courses seem to enjoy these courses.	$\frac{1}{0.8}$	$\frac{1}{0.8}$	$\frac{6}{4.5}$	$\frac{83}{62.4}$	$\frac{42}{31.6}$	4.23	.64
1.	High school agriculture courses are beneficial for high achievers.	$\frac{2}{1.5}$	$\frac{2}{1.5}$	$\frac{12}{9.0}$	$\frac{67}{50.4}$	$\frac{50}{37.6}$	4.21	.79
10.	Agricultural education courses develop skills needed for employment in business and industry.	$\frac{0}{0}$	$\frac{5}{3.8}$	$\frac{8}{6.0}$	$\frac{78}{58.6}$	$\frac{42}{31.3}$	4.18	.71
16.	Agricultural education courses encourage students to apply knowledge and skills to real-life problems.	$\frac{0}{0}$	$\frac{2}{1.5}$	$\frac{9}{6.8}$	$\frac{88}{66.2}$	$\frac{34}{25.6}$	4.16	.60
11.	High school agriculture courses are beneficial for low achievers.	$\frac{0}{0}$	$\frac{2}{1.5}$	$\frac{11}{8.3}$	$\frac{91}{68.4}$	$\frac{29}{21.8}$	4.11	.59

Table 3. (continued)

Item Number	Item Statement	Frequency Percentage					M	SD
		SD	D	U	A	SA		
13.	The agricultural education program in my school is a positive force in my community.	4 3.0	11 8.3	14 10.5	55 41.4	49 36.8	4.01	1.04
15.	Students are becoming more interested in enrolling in agricultural education courses.	2 1.5	24 18.0	48 36.1	54 40.6	5 3.8	3.27	.85
9.	Agricultural education courses reinforce learning in academic courses.	1 0.8	5 3.8	25 18.8	84 63.2	18 13.5	3.85	.72
5.	College bound students should take agricultural education courses.	4 3.0	12 9.0	32 24.1	61 45.9	24 18.0	3.67	.97
7.	The image of agriculture is improving.	1 0.8	7 5.3	39 29.3	74 55.6	12 9.0	3.67	.75
12.	The facilities and equipment used in agricultural education courses are adequate and up-to-date.	5 3.8	47 35.3	29 21.8	49 36.8	3 2.3	2.98	.98
14.	Agricultural education courses are easier than other courses offered in our school.	3 2.3	62 46.6	29 21.8	35 26.1	4 3.0	2.81	.95



Table 3. (continued)

Item Number	Item Statement	Frequency Percentage					M	SD
		SD	D	U	A	SA		
8.	Students who take agricultural education courses tend to be less academically able.	$\frac{12}{9.0}$	$\frac{52}{39.1}$	$\frac{29}{21.8}$	$\frac{34}{25.6}$	$\frac{6}{4.5}$	2.77	1.07
6.	Because of increased graduation requirements, there is little time for students to enroll in agricultural education courses.	$\frac{24}{18.0}$	$\frac{61}{45.9}$	$\frac{13}{9.8}$	$\frac{27}{20.3}$	$\frac{8}{6.0}$	2.50	1.18
2.	Agriculture education focuses too heavily on the development of specific job skills.	$\frac{10}{7.5}$	$\frac{73}{54.9}$	$\frac{40}{30.1}$	$\frac{9}{6.8}$	$\frac{1}{0.8}$	2.38	.76
Grand Mean*						3.82		

Note. SD = Strongly Disagree ( $\underline{M}$  = 0-1.49), D = Disagree ( $\underline{M}$  = 1.50-2.49), U = Uncertain ( $\underline{M}$  = 2.50-3.49), A = Agree ( $\underline{M}$  = 3.50-4.49), SA = Strongly Agree ( $\underline{M}$  = 4.50-5.0).

\*The grand mean was determined after reverse coding of negative statements.

agricultural education courses reinforcing learning in academic courses ( $\underline{M} = 3.85$ ).

However, principals were uncertain as to whether or not agricultural education facilities and equipment are up-to-date ( $\underline{M} = 2.98$ ).

#### Principals' Knowledge or Familiarity Level of Agricultural Education Programs

The overall knowledge or familiarity level of agricultural education programs by principals is generally positive (Table 4). Principals seemed to know agricultural education teachers take in-service courses, seminars, and other non-credit experiences beyond those required by the school ( $\underline{M} = 3.79$ ). Principals reported that agricultural education teachers had positive professional relationships with other teachers ( $\underline{M} = 4.14$ ), administrators ( $\underline{M} = 4.06$ ), and guidance counselors ( $\underline{M} = 3.82$ ). Principals believed agricultural education teachers are high quality teachers ( $\underline{M} = 4.04$ ), but did not believe that they are more effective than most other teachers are ( $\underline{M} = 2.48$ ).

Agricultural education teachers were rated positively by principals in involving community members to work with classes ( $\underline{M} = 4.01$ ) and on advisory committees ( $\underline{M} = 3.89$ ). However, principals tended to be uncertain about statements regarding the integration of either academic ( $\underline{M} = 2.82$ ) or agricultural education topics into other courses ( $\underline{M} = 3.30$ ).

Principals believed teachers are keeping agricultural education programs current to meet employment needs ( $\underline{M} = 3.95$ ). Principals agreed or strongly agreed that the agricultural education teacher: keeps the program current to meet higher educational needs ( $\underline{M} = 3.86$ ) and does a good job of publicizing the benefits of the agricultural education program ( $\underline{M} = 3.71$ ). In addition, principals agree that agricultural education teachers encourage college bound students to enroll in their courses.

Table 4. Principals' Knowledge Level or Familiarity Level of Agricultural Education Programs (Construct III)

Item Number	Item Statement	Frequency					M	SD
		SD	D	U	A	SA		
22.	Agricultural education teachers have positive professional relationships with other teachers.	2 1.5	4 3.0	6 4.5	83 62.4	38 28.6	4.14	.76
25.	Agricultural education teachers have positive professional relationships with administrators.	3 2.3	1 0.8	11 8.3	88 66.2	30 22.6	4.06	.74
35.	The agricultural education teacher in my school is a high quality teacher.	3 2.3	10 7.7	15 11.5	53 40.8	49 37.7	4.04	1.01
29.	Agricultural education teachers utilize many community members/resources in their class topics.	1 0.8	9 6.8	11 8.3	79 59.4	33 24.8	4.01	.82
30.	The agricultural education teacher keeps the agricultural education program current to meet employment.	2 1.5	5 3.8	17 12.8	82 61.7	27 20.3	3.95	.79
31.	The agricultural education teacher involves an advisory committee in determining objectives of agricultural education programs.	1 0.8	17 13.0	7 5.3	76 58.0	30 22.9	3.89	.93

Table 4. (continued)

Item Number	Item Statement	Frequency Percentage					M	SD
		SD	D	U	A	SA		
32.	The agricultural education teacher keeps the agricultural education program current to meet higher educational needs	$\frac{1}{0.8}$	$\frac{9}{6.9}$	$\frac{18}{13.7}$	$\frac{82}{62.6}$	$\frac{21}{16.0}$	3.86	.79
27.	Agricultural education teachers have positive professional relationships with guidance counselors.	$\frac{1}{0.8}$	$\frac{7}{5.3}$	$\frac{22}{16.5}$	$\frac{88}{66.2}$	$\frac{15}{11.3}$	3.82	.73
34.	The agricultural education teacher takes in-service courses, seminars, and other non-credit experiences beyond those required by our school.	$\frac{1}{0.8}$	$\frac{15}{11.5}$	$\frac{20}{15.3}$	$\frac{69}{52.7}$	$\frac{26}{19.8}$	3.79	.92
33.	The agricultural education teacher is doing a good job of publicizing the benefits of their program.	$\frac{5}{3.8}$	$\frac{19}{14.5}$	$\frac{16}{12.2}$	$\frac{60}{45.8}$	$\frac{31}{23.7}$	3.71	1.10
26.	Agricultural education teachers collaborate with other teachers to integrate other subjects into agricultural education courses.	$\frac{3}{2.3}$	$\frac{30}{22.6}$	$\frac{28}{21.1}$	$\frac{68}{51.1}$	$\frac{4}{3.0}$	3.30	.93
28.	Other teachers collaborate with agriculture teachers to integrate agricultural subjects into their courses.	$\frac{5}{3.8}$	$\frac{51}{38.3}$	$\frac{41}{30.8}$	$\frac{35}{26.3}$	$\frac{1}{0.8}$	2.82	.89

Table 4. (continued)

Item Number	Item Statement	Frequency Percentage					M	SD
		SD	D	U	A	SA		
24.	Agricultural education teachers are more effective in their teaching than most other teachers.	$\frac{8}{6.1}$	$\frac{65}{49.2}$	$\frac{49}{37.1}$	$\frac{8}{6.1}$	$\frac{2}{1.5}$	2.48	.77
23.	Agricultural education teachers do not encourage college bound students to enroll in agricultural education courses.	$\frac{33}{24.8}$	$\frac{79}{59.4}$	$\frac{8}{6.0}$	$\frac{12}{9.0}$	$\frac{1}{0.8}$	2.02	.86
Grand Mean*						3.70		

Note. SD = Strongly Disagree ( $\bar{M} = 0-1.49$ ), D = Disagree ( $\bar{M} = 1.50-2.49$ ), U = Uncertain ( $\bar{M} = 2.50-3.49$ ), A = Agree ( $\bar{M} = 3.50-4.49$ ), SA = Strongly Agree ( $\bar{M} = 4.50-5.0$ ).

\*The grand mean was determined after reverse coding of negative statements.

### Principals' Support of Agricultural Education Programs

Overall, principals generally showed support agricultural education programs (Table 5). Principals were undecided, however, if other elective courses are more valuable to college bound students than are agricultural education courses. Although 38.4% (51) of the principals strongly disagreed or disagreed with the statement, 33.1% (44) were undecided. Another 28.6% (38) agreed or strongly agreed with the statement. Principals disagreed with the statement that agricultural education courses provide little for students' intellectual development ( $M = 1.87$ ).

Principals (75.9%) strongly disagreed or disagreed that agricultural education courses should be offered in technical schools/centers rather than in high schools. Principals strongly disagreed or disagreed (74.4%) with the statement that high school agricultural education courses should be offered primarily in rural areas.

Table 5. Principals' Level of Support for Agricultural Education Programs (Construct II)

Item Number	Item Statement	Frequency Percentage					M	SD
		SD	D	U	A	SA		
18.	Other elective courses are more valuable to college bound students than are agricultural education.	<u>5</u> 3.8	<u>46</u> 34.6	<u>44</u> 33.1	<u>29</u> 21.8	<u>9</u> 6.8	2.93	.99
19.	Agricultural education courses provide little for students' intellectual development.	<u>37</u> 27.8	<u>83</u> 62.4	<u>7</u> 5.3	<u>5</u> 3.8	<u>1</u> 0.8	1.87	.73
20.	High school agricultural education courses should be offered primarily in rural areas.	<u>24</u> 18.0	<u>75</u> 56.4	<u>21</u> 15.8	<u>13</u> 9.8	<u>0</u> 0	2.17	.84
21.	Agricultural education courses should be offered in technical schools/centers rather than in high school.	<u>26</u> 19.5	<u>75</u> 56.4	<u>23</u> 17.3	<u>9</u> 6.8	<u>0</u> 0	2.11	.79
Grand Mean						3.73		

Note. SD = Strongly Disagree ( $\bar{M} = 0-1.49$ ), D = Disagree ( $\bar{M} = 1.50-2.49$ ), U = Uncertain ( $\bar{M} = 2.50-3.49$ ), A = Agree ( $\bar{M} = 3.50-4.49$ ), SA = Strongly Agree ( $\bar{M} = 4.50-5.0$ ).

\*The grand mean was determined after reverse coding of negative statements.

## CHAPTER V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Chapter I described the principalship and principals' perceptions toward vocational education. The purpose of this study was to determine principals' perceptions toward agricultural education in Iowa high schools.

Chapter II discussed the conceptual and theoretical framework of the study. The research and literature base is related to principals' perceptions toward agricultural education programs, classes, and teachers. The effects of demographic variables on principals' perceptions of agricultural education programs were also discussed.

Chapter III described the methods used to address the objectives of the study. Specifically, the research design, population and sample, development of the instrument, validity, reliability, instrument administration, and data analyses were addressed.

Chapter IV presented the findings obtained from the study. The specific questions addressed in the results of the study pertain to the principals' perceptions toward agricultural education programs in Iowa high schools.

This chapter presents the conclusions and recommendations, based on the research questions and corresponding results of the study. Also, the problem, purpose, procedures, and findings of the study are summarized.

### Statement of the Problem

Enrollment in agricultural education programs around the nation has completed a full cycle. The number of students in agricultural education programs has nearly recovered to the peak enrollment levels of the late 1970s. However, a need existed to determine the contributing factors to the decline and recovery of student enrollment numbers. The base of literature showed principals in the 1970s and 1980s perceived agricultural education as



generally positive, yet very “vocational.” However, the research base does not address current principals’ perceptions. Have those perceptions changed as the agricultural education curriculum has changed?

The purpose of this research was to assess high school principals’ perceptions of current agricultural education programs. This study specifically focused on principals’ perceptions of agricultural education programs, courses, and teacher quality.

Several studies have looked at principals’ perceptions of vocational agricultural programs and have found principals to be generally positive towards agricultural education. The National Research Council (1988) noted that principals should be included in efforts to reform vocational agriculture. The field has reformed itself in that many programs and states have removed the “vocational” label for a more positive “agri-science” influence. However, just by changing the name from vocational agriculture to agricultural education may not be enough to either raise or lower principals’ perceptions of agricultural education. Have principals’ perceptions changed with the change in the labels placed on agricultural education?

#### Purpose

The primary purpose of this study was to determine principals’ perceptions of secondary agricultural education programs in the state of Iowa. The secondary purpose was to determine relationships of principals’ perceptions of agricultural education programs and various demographic variables. More specifically, the purpose of the study was to answer the following research questions:

1. What are Iowa secondary school principals’ perceptions of high school agricultural education programs?

2. What knowledge or familiarity level do principals have of agricultural education programs?
3. To what level do principals support agricultural education programs?
4. What was the relationship between selected demographic variables?
  - a. Principals' perceptions of high school agricultural education programs.
  - b. The knowledge or familiarity level principals have toward agricultural education programs.
  - c. The support level principals have toward agricultural education programs.

#### Methodology

A descriptive survey design was used in this applied research project. The questionnaire was designed to determine principals' perceptions of agricultural education programs, courses, and teacher quality. The population of the study included all principals in Iowa high schools that had agricultural education programs during the 1997-1998 academic school year ( $N=237$ ), as identified by the State of Iowa Department of Education. A stratified random sample was selected from the population using computer generated random numbers. The strata consisted of the six different FFA districts in Iowa. The total sample size was determined using Krejcie and Morgan's (1970) formula. From this formula it was determined that 147 principals would be needed to obtain a 5% degree of accuracy at a 95% confidence level.

The study instrument consisted of a four-section questionnaire (Appendix A) developed by the researcher based on a review of literature from prior studies using Illinois guidance counselors (Dyer, 1994; Matulis, 1989). Section I measured the construct "Principals' Perceptions Toward Agricultural Education Programs" and was comprised of 17

statements. Section II measured the construct “Principals’ Perceptions Toward Agricultural Education Courses” and was comprised of four statements. Section III was comprised of 14 statements concerning principals’ perceptions toward the construct “Quality and Perception of the Agricultural Education Teachers.” In these three sections, participants were asked to indicate the degree to which they agreed or disagreed with each statement. The degree of agreement was determined using a Likert-type scale that consisted of the following options: (1) Strongly Disagree, (2) Disagree, (3) Uncertain, (4) Agree, and (5) Strongly Agree.

Section IV of the instrument was comprised of 12 demographic questions relating to principals, the school in which they worked, and/or agricultural education programs. The demographic section of the questionnaire was constructed of close-ended items.

Expert judges consisted of faculty and staff in the Agricultural Education and Studies Department at Iowa State University (Appendix B). The expert judges determined the face, content, and construct validity of the instrument. Based on the recommendations of that panel of judges, revisions were made to the instrument. A pilot letter (Appendix C) and a pilot instrument were mailed to 27 principals randomly selected from the target population who were not participants in the study.

Reliability estimates were calculated on sections I through III of the questionnaire to establish the internal consistency of each of these sections. Cronbach’s alpha was used to determine the reliability. Reliability ratings for Constructs I, II, and III were .63, .83, and .89 respectively.

An envelope consisting of a cover letter (Appendix D); a numbered questionnaire; and a self-addressed, stamped envelope were mailed to participants of the study on December 8, 1997. A follow-up postcard (Appendix E) was mailed approximately three weeks later. A

second letter (Appendix F) accompanied with a second complete packet of material was mailed to non-respondents approximately five weeks after the first mailing. A reminder letter accompanied by a certificate of completion (Appendix G) was sent out seven weeks after the first mailing. A total of 134 respondents completed the questionnaire for a response rate of 91.16%. Data were tabulated eight weeks after the initial mailing. Miller and Smith (1983) reported that late respondents tend to respond as non-respondents. Therefore, no pursuit of the non-respondents was made after the final mailing. Non-response error was determined by comparing early and late respondents as outlined by Miller and Smith. No categorical differences were found between these categories of respondents. Therefore, the results were generalized to the total sample.

Quantitative data were analyzed using descriptive statistics and measures of central tendency. The Windows version of the Statistical Package for the Social Sciences (SPSS) was used to analyze and interpret data. Statements left blank were coded as missing data. It was determined a priori to test for significance at the .05 alpha level. Specific statistics used to analyze and interpret data included means, standard deviations, frequencies, percentages, and analysis of variance (ANOVA). Post hoc analyses were conducted using Tukey's HSD analysis.

#### Summary of Demographic Characteristics

Of those principals responding to the questionnaire, 95.4% were male. Furthermore, principals were asked to indicate their age within given ranges. A majority (52.2%) of the respondents were 46 to 55 years old.

The mean number of years of service as a principal was 11.85. The largest group (81.6%) had been employed as a principal between 1 to 20 years. This distribution was

expected since nearly all principals first serve as teachers prior to accepting administrative appointments. The mean number of years a principal had taught before moving into administration was 11.69. The majority of principals (90.1%) had taught between 1 to 20 years, whereas, less than 10% of the principals had between 21 to 40 years of teaching experience.

Among the 82 principals who reported work experience in the field of agriculture 87.8% reported either “excellent” or “good” experiences. A *t*-test revealed no significant difference between perceptions toward agricultural education programs if the principals had previous work experience in the field of agriculture from those perceptions expressed by those who had no prior experiences in the field of agriculture.

Twelve principals reported that one of their children had been enrolled in agricultural education classes. Among those principals, 83.4% believed the classes were of “good” or “excellent” quality. A *t*-test revealed no significant difference between perceptions toward agricultural education programs if principals’ children had been enrolled in agricultural education courses from those perceptions who had no children enrolled.

Thirteen principals reported having had agricultural education classes in high school. When asked about the quality of those agricultural education classes, 30.8% reported the quality being “fair,” whereas 69.2% reported the quality as “good” and “excellent.” A *t*-test revealed no significant difference between perceptions toward agricultural education programs if the principal had previous classes in agricultural education from perceptions expressed by those who had never taken agricultural education classes.

The majority of the principals in the study (63.4%) came from schools with a community population of less than 4,999. Furthermore, the majority of principals (74.8%)

reported their school community was located in areas with populations below 4,999. Only 10.6% of the sample came from community populations above 25,000 and 3.1% of the schools were located in a population above 25,000. This distribution may be explained by the predominately small communities in Iowa.

#### Summary Demographic Characteristics of the School

Principals reported that 75.6% of the agricultural education programs in Iowa schools are full time programs, whereas 22.1% of the programs are half time. The remaining programs (2.4%) are a combination of one full time and one part time teacher, one  $\frac{3}{4}$  time teacher, and 2 full time teachers. The large percentage of part-time and one-teacher departments may be a result of the small school sizes in Iowa.

The mean number of students in high schools where principals worked was 353. The range consisted of 85 to 1,700 students. In schools where there was an agricultural education program, principals reported mean enrollments in agricultural education classes of 64 students. The range consisted of 8 to 180 students.

Principals reported the types of agricultural education classes offered at their high school. The most frequently offered were agricultural business (91.5%), agricultural production (84.6%), animal science (84.6%), introduction to agriculture (73.8%), mechanics (63.1%), horticulture/floriculture/landscaping (62.3%), and welding (61.5%). Courses classified as "other" consisted of electricity, leadership, introduction to agriculture in the middle school, meteorology, business communications, food science, agricultural construction, agricultural communications, and independent study.

### Summary of Findings

#### Principals' Perceptions of High School Agricultural Education Programs

Overall, principals expressed favorable perceptions of high school agricultural education programs. Principals believed agricultural education programs to be beneficial for both high achievers ( $\underline{M} = 4.21$ ) and low achievers ( $\underline{M} = 4.11$ ). Principals in this study agreed with the statement that high school students are mature enough to benefit from agricultural education courses ( $\underline{M} = 4.48$ ). Furthermore, principals agreed that college bound students should take agricultural education courses ( $\underline{M} = 3.67$ ). However, principals were uncertain as to whether students that take agricultural education courses tend to be less academically able ( $\underline{M} = 2.77$ ). These responses imply that principals in the study believe any type of student can benefit from agricultural programs. Furthermore, principals in the study believed that the image of agriculture is improving ( $\underline{M} = 3.67$ ). They also agree that there are numerous opportunities for employment in the field of agriculture ( $\underline{M} = 4.39$ ).

Principals believed students enrolled in agricultural education courses seem to enjoy these courses ( $\underline{M} = 4.23$ ). However, principals were uncertain that students are becoming more interested in enrolling in agricultural education courses ( $\underline{M} = 3.27$ ). Furthermore, principals were generally positive in their response to statements regarding skill development needed for employment in business and industry ( $\underline{M} = 4.18$ ), agricultural education courses encourage students to apply knowledge and skills to real-life problems ( $\underline{M} = 4.16$ ), and that teachers are keeping agricultural education current to meet employment needs ( $\underline{M} = 3.95$ ). They also agree that agricultural education courses reinforce learning in academic courses ( $\underline{M} = 3.85$ ). However, principals were uncertain as to whether or not agricultural education facilities and equipment are up-to-date ( $\underline{M} = 2.98$ ). Generally these respondents fell into two

groups: those that either, agreed and strongly agreed (39.1%), or those that disagreed and strongly disagree (39.1%).

#### Principals' Knowledge or Familiarity Level of Agricultural Education Programs

The overall knowledge or familiarity level of agricultural education programs by principals is generally high. Principals seem to know agricultural education teachers take in-service courses, seminars, and other non-credit experiences beyond those required by the school. Principals reported that agricultural education teachers had a higher degree of positive professional relationships with other teachers ( $\underline{M} = 4.14$ ) and administrators ( $\underline{M} = 4.06$ ) than they did with guidance counselors ( $\underline{M} = 3.82$ ). Principals believed agricultural education teachers are high quality teachers ( $\underline{M} = 4.04$ ), but did not believe that they are more effective than most other teachers ( $\underline{M} = 2.48$ ).

Agricultural education teachers were rated positively by principals in involving community members to work with classes ( $\underline{M} = 4.01$ ) and on advisory committees ( $\underline{M} = 3.89$ ). However, principals tended to be uncertain about statements regarding the integration of either academic ( $\underline{M} = 2.82$ ) or agricultural education topics into other courses ( $\underline{M} = 3.30$ ).

Principals agreed that agricultural education teachers: keep their programs current to meet higher educational needs ( $\underline{M} = 3.86$ ) and do a good job of publicizing the benefits of the agricultural education program ( $\underline{M} = 3.71$ ). In addition, principals disagreed with the statement that agricultural education teachers do not encourage college bound students to enroll in their courses ( $\underline{M} = 2.02$ ).



### Principals' Support of Agricultural Education Programs

Overall, principals generally tended to support agricultural education programs. Principals were undecided, however, if other elective courses are more valuable to college bound students than are agricultural education courses. Although 38.4% ( $n = 51$ ) of the principals either disagreed or strongly disagreed with the statement, 28.6% ( $n = 38$ ) either agreed or strongly agreed. Another 33.1% ( $n = 44$ ) were undecided about the statement. Principals disagreed with the statement that agricultural education courses provide little for students' intellectual development ( $M = 1.87$ ).

Nearly 76% of the principals either strongly disagreed or disagreed that agricultural education courses should be offered in technical schools/centers rather than in high school ( $M = 2.11$ ). Likewise, 74.4% of the principals either strongly disagreed or disagreed with the statement that high school agricultural education courses should be offered primarily in rural areas ( $M = 2.17$ ).

### Conclusions

1. Principals have apparently not been a factor in enrollment fluctuations in agricultural education programs. This study found that principals' perceptions have not changed from those reported in earlier studies.
2. Iowa high school principals are generally supportive of agricultural education programs. Not only do they believe that the agricultural education programs are important to their community, but they believe the agricultural education teacher does a good job of publicizing the benefits of the agricultural education program.
3. Principals in Iowa believe any high school student can benefit from agricultural programs, no matter what their academic ability may be. Moreover, a majority of

principals (75.9%) disagreed that agricultural education courses should be offered in technical schools/centers rather than in high school. A majority of principals (74.4%) also disagreed with the statement that high school agricultural education courses should be offered primarily in rural areas.

4. Principals in Iowa continue to view agricultural education as vocational in nature. Principals believe the current focus of agricultural education programs is toward the development of job skills, although there appears to be movement toward general rather than specific skills.
5. Principals believe that agricultural education programs in Iowa are still very “traditional.” Courses such as agricultural production, animal science, and welding were reported by a majority of principals as being taught in their programs. Agricultural business and horticulture were the only two “non-traditional” courses reported by a majority of the principals.
6. Principals perceive that students enjoy agricultural education classes. However, principals were undecided if other elective courses are more valuable to college bound students than are agricultural education courses.
7. The professional relationship among teachers, guidance counselors, principals, and agricultural education teachers is good. Agricultural education teachers should continue to foster this relationship through collaborative activities, course integration, and continued involvement in the total school program.
8. Whereas principals are supportive, in that they also believe agricultural education teachers to be high quality teachers. They were uncertain about statements regarding the integration of either academic or agricultural education topics into other courses.

Agricultural education teachers need to do more to educate principals about the need for course articulation.

9. Principals in Iowa are knowledgeable of agricultural education programs. Principals generally agree that the agricultural education teacher: keeps the program current to meet higher educational needs; takes in-service courses, seminars, and other non-credit experiences beyond the school requirements; and agricultural education teachers encourage college bound students to enroll in their courses. This knowledge may account, at least in part, to the support offered to the agricultural education teachers.
10. Principals in Iowa believe that the image of agriculture is improving. Along with the improvements of the image, principals believe there are many opportunities in agriculture. This finding may be correlated to the farm economy, however.

#### Discussion and Implications of Findings

Agricultural education and principals have played important roles in American high schools for many years. This study confirms the perceptions and support principals have toward agricultural education programs, as previous studies have documented. Previous research in the 1970s and 1980s showed the positive principals' perceptions toward vocational agriculture. These positive perceptions appear to continue. Reforms made in vocational education have apparently been well-received by principals, although they have been reluctant to initiate change.

In addition to determining perceptions toward agricultural education, new data gained from this study also point toward more involvement in the program by the principals. Iowa principals' familiarity levels and/or knowledge of agricultural education programs are generally high. Principals believe that any student can benefit from the agricultural

education program, no matter what their skill or ability level. However, when asked about students with college plans, principals were uncertain if the agricultural education courses were more valuable than other electives. This uncertainty may inhibit a student's selection of courses.

Principals believed that agricultural education belongs in high schools. Principals in the study felt that technical schools or centers are not the appropriate place for agricultural education programs to be housed. This attitude contradicts the vocational philosophy of the past. However, it may be fostered by the fact that principals believe that high school students were mature enough to participate in agricultural education programs and that the skills generally taught in agricultural education programs are general in nature and provide for the development of job skills.

Principals believed that agricultural education programs are current with the educational needs of the students and those of higher education, although programs are still viewed to be traditional in content. Furthermore, the agricultural education teacher was seen by the principal as a high quality teacher. However, principals may see all the teachers in their school to be of high quality.

Principals appear to be involved in agricultural education program activities. This may account for the high levels of understanding of the duties of the agricultural education teachers. If a principal isn't involved in activities and events of the agricultural education program, then he/she may not have enough insight to determine if the teacher is of high quality. However, the agricultural education teacher shares some responsibilities in inviting the principal to attend activities, events, and classes to become better informed by hands on activities and participation.

Principals believe that agricultural education teachers are not more effective than the other teachers. Is it because principals perceive the classes and program to be applied science, with hands on activities and involvement in the community, school, etc.? Perhaps the principal sees all the teachers in the school to be effective, which is beyond the scope of this study.

Principals in Iowa believe that agricultural education teachers have good relationships with principals, teachers, and guidance counselors. However, not all the principals agreed. Agricultural education teachers should work harder to develop even stronger relationships with principals, teachers, and guidance counselors. All of these people play a pertinent role in the agricultural education program and can help or hinder the program.

Principals in Iowa are uncertain if integration of subject matter from agricultural education classes to academic classes, or vice versa, is taking place. Is this because principals have never been trained on integration, integration isn't being used in the high school classrooms, the subject matter is not fully understood to be integrated, or is this because school personnel do not know how to integrate other subjects into their classes? If either of the cases are true, then there needs to be training sessions for the personnel on integration of subject matter from one class to another. Integration of subject matter outside of any teacher's field is a difficult task to accomplish if the teacher has had no training on integration. With this training school personnel will be able to integrate other subject materials into their class materials to help reinforce what the students are learning or have learned in other classes.

The vocational education label has been changed to agricultural education, but with the name change has the curriculum changed? Principals in Iowa still see agricultural

education programs as vocational. Courses such as agricultural production, animal science, agricultural mechanics, and welding are part of the “vocational” curriculum. A vast majority of the principals in this study believe agricultural education to be centered around these courses. Very few principals associated agricultural education with courses such as aquaculture (18.5%) and agricultural computers (20.8%). Has just the name changed, or has the curriculum changed with the name?

### Recommendations

1. Further research should be conducted to determine if principals’ perceptions have a relationship with their practices.
2. This study was limited only to Iowa principals. A national scope could prove beneficial for the profession. Along the same lines, this study was limited to schools that housed agricultural education programs. Might it be possible that principals without agricultural education programs may have important data to add to the study?
3. Principals in Iowa believed that agricultural education is for every student. A needs assessment should be done involving the students, parents, teachers, principals, and the agricultural industry to determine if the program is serving the needs of the students.
4. Principals need to provide training sessions to the teachers so that they will know how to integrate other subject materials into their classroom.
5. A need exists to determine if the curriculum in agricultural education has changed since the name change. The study needs to determine what type of change has occurred in agricultural education curriculum since the name change or has the curriculum changed to reflect the name change?

6. Nearly 80% of all principals in Iowa are male (United States Department of Education, 1996). Therefore, random sampling will not produce a large enough sample of female principals to determine their attitudes. With the lack of a representative distribution of females in the sample, it is recommended that this study be duplicated, but using a qualitative design.

APPENDIX A  
INSTRUMENT OF THE STUDY



# Principals' Perceptions of Agricultural Education Programs



**Iowa State University  
Agricultural Education  
4 Curtiss Hall  
Ames, Iowa 50011**

Using the scale below, please indicate the degree to which you agree or disagree with these statements by circling the appropriate number as follows:

**1 = Strongly Disagree (SD)**

**2 = Disagree (D)**

**3 = Uncertain (U)**

**4 = Agree (A)**

**5 = Strongly Agree (SA)**

**Agriculture Education Programs:**

	SD	D	U	A	SA
1. High school agriculture courses are beneficial for high achievers.	1	2	3	4	5
2. Agriculture education focuses too heavily on the development of specific job skills.	1	2	3	4	5
3. There are numerous opportunities for employment in the field of agriculture.	1	2	3	4	5
4. High school students are mature enough to benefit from agricultural education courses.	1	2	3	4	5
5. College bound students should take agricultural education courses.	1	2	3	4	5
6. Because of increased graduation requirements, there is little time for students to enroll in agricultural education courses.	1	2	3	4	5
7. The image of agriculture is improving.	1	2	3	4	5
8. Students who take agricultural education courses tend to be less academically able.	1	2	3	4	5
9. Agricultural education courses reinforce learning in academic courses.	1	2	3	4	5
10. Agricultural education courses develop skills needed for employment in business and industry.	1	2	3	4	5
11. High school agriculture courses are beneficial for low achievers.	1	2	3	4	5
12. The facilities and equipment used in agricultural education courses are adequate and up-to-date.	1	2	3	4	5
13. The agricultural education program in my school is a positive force in my community.	1	2	3	4	5
14. Agricultural education courses are easier than other courses offered in our school.	1	2	3	4	5
15. Students are becoming more interested in enrolling in agricultural education courses.	1	2	3	4	5
16. Agricultural education courses encourage students to apply knowledge and skills to real-life problems.	1	2	3	4	5
17. Students enrolled in agricultural education courses seem to enjoy these courses.	1	2	3	4	5

**Agricultural Education Course**

18. Other elective courses are more valuable to college bound students than are agricultural education.	1	2	3	4	5
---	---	---	---	---	---

19. Agricultural education courses provide little for students' intellectual development. 1 2 3 4 5
20. High school agricultural education courses should be offered primarily in rural areas. 1 2 3 4 5
21. Agricultural education courses should be offered in technical schools/centers rather than in high school. 1 2 3 4 5

**Agricultural Education Teacher:**

**SD D U A SA**

22. Agricultural education teachers have positive professional relationships with other teachers. 1 2 3 4 5
23. Agricultural education teachers do not encourage college bound students to enroll in agricultural education courses. 1 2 3 4 5
24. Agricultural education teachers are more effective in their teaching than most other teachers. 1 2 3 4 5
25. Agricultural education teachers have positive professional relationships with administrators. 1 2 3 4 5
26. Agricultural education teachers collaborate with other teachers to integrate other subjects into agricultural education courses. 1 2 3 4 5
27. Agricultural education teachers have positive professional relationships with guidance counselors. 1 2 3 4 5
28. Other teachers collaborate with agriculture teachers to integrate agricultural subjects into their courses. 1 2 3 4 5
29. Agricultural education teachers utilize many community members/resources in their class topics. 1 2 3 4 5
30. The agricultural education teacher keeps the agricultural education program current to meet employment. 1 2 3 4 5
31. The agricultural education teacher involves an advisory committee in determining objectives of agricultural education programs. 1 2 3 4 5
32. The agricultural education teacher keeps the agricultural education program current to meet higher educational needs 1 2 3 4 5
33. The agricultural education teacher is doing a good job of publicizing the benefits of their program. 1 2 3 4 5
34. The agricultural education teacher takes in-service courses, seminars, and other non-credit experiences beyond those required by our school. 1 2 3 4 5
35. The agricultural education teacher in my school is a high quality teacher. 1 2 3 4 5

**Principal Characteristics:** Please fill in the following questions based on how they apply to you and your school.

36. What is your gender? (check one)

Male  
 Female

37. What is your age? (check one)

26 to 35  
 36 to 45  
 46 to 55  
 56 and over

38. The agricultural education program in your school is:

Full Time  
 Part Time

39. What is your geographic background? (check one)

Over 100,000 Population  
 50,000 - 99,999 Population  
 25,000 - 49,999 Population  
 5,000 - 24,999 Population  
 Less than 4,999 Population

40. What is the geographic background of your school? (check one)

Over 100,000 Population  
 50,000 - 99,999 Population  
 25,000 - 49,999 Population  
 5,000 - 24,999 Population  
 Less than 4,999 Population

41. How many years, including this year, have you:

been in Administration  
  Where Agricultural Education was offered?  
 Taught  
 Subject(s): \_\_\_\_\_  
 Other (describe)  
 \_\_\_\_\_

42. Do you have a son or daughter who has completed one or more high school agriculture courses?

Yes [what was the quality of the course(s)]  
  Poor  Fair  Good  Excellent  
 No

43. Did you complete one or more agricultural education courses as a high school student?

Yes [what was the quality of the course(s)]  
  Poor  Fair  Good  Excellent  
 No

44. Do you have any work experience in the field of agriculture?

\_\_\_\_\_ Yes

↳ Type of experience: \_\_\_\_\_ Poor \_\_\_\_\_ Fair \_\_\_\_\_ Good \_\_\_\_\_

Excellent

\_\_\_\_\_ No

45. What is the total number of students enrolled at your high school, grades 9-12?

\_\_\_\_\_ Students

46. What is the total number of students, grades 9-12 enrolled in agricultural education courses this school year?

\_\_\_\_\_ Students

47. Which types of courses are offered by agricultural education teachers in your school? (check all that apply)

\_\_\_\_\_ Agricultural Business

\_\_\_\_\_ Environmental Science/Natural Resources

\_\_\_\_\_ Agricultural Production

\_\_\_\_\_ Agricultural Products and Processing

\_\_\_\_\_ Agricultural Computers

\_\_\_\_\_ Horticulture/Floriculture/Landscaping

\_\_\_\_\_ Agronomy

\_\_\_\_\_ Introduction to Agriculture

\_\_\_\_\_ Animal Science

\_\_\_\_\_ Mechanics

\_\_\_\_\_ Aquaculture

\_\_\_\_\_ Welding

\_\_\_\_\_ Other

↳ Type of courses: \_\_\_\_\_

**Thank You!**

**Please Return to:**

**Neasa Kalme**

**Iowa State University**

**4 Brenton Center, Curtiss Hall**

**Ames, Iowa 50011**

**Code # \_\_\_\_\_**

APPENDIX B  
INSTRUMENT REVIEW PANEL

Randy Andreasen  
Doctoral Candidate  
Agricultural Education and Studies  
College of Agriculture  
Iowa State University

Dr. James Dyer  
Assistant Professor  
Agricultural Education and Studies  
College of Agriculture  
Iowa State University

Dr. Lynn Jones  
Associate professor  
Agricultural Education and Studies  
College of Agriculture  
Iowa State University

Dr. Wade Miller  
Professor  
Agricultural Education and Studies  
College of Agriculture  
Iowa State University

Dr. David Williams  
Professor  
Agricultural Education and Studies  
College of Agriculture  
Iowa State University

APPENDIX C  
PILOT LETTER TO PRINCIPALS



November 26, 1997

Dear Principal,

**Your help is needed!** As a principal, your views on the quality of educational programs are significant in helping programs to benefit your school and the students who attend.

You and 26 of your colleagues have been randomly selected to participate in this pilot study. It will attempt to determine the perceptions of principals regarding agricultural education programs and agricultural education courses in Iowa. The results of this study will be beneficial in determining changes in agricultural education programs and courses.

This survey will take you approximately 10 minutes, to complete. Please respond to the questions as you view them. I assure **YOU** that your responses will be confidential, questionnaires are coded for mailing purposes only.

I apologize for the length of the questionnaire, but this is a pilot study. With your input some of the questions will be eliminated, but you must answer all the questions in order for the statistical analysis to be performed.

Your immediate response is greatly appreciated. Please mail your completed questionnaire in the self-addressed, stamped envelope within the next 5 days.

Thank you for cooperating and using your valuable time to complete this survey. I look forward to receiving your results!

Sincerely,

Neasa Kalme  
Research Assistant  
4 Brenton Center, Curtiss Hall

Dr. Jim Dyer  
Assistant Professor  
217 Curtiss Hall

APPENDIX D  
INITIAL LETTER TO PRINCIPALS

December 8, 1997

Dear Principal,

**Your help is needed!** As a principal, your views on the quality of educational programs are significant in helping programs to benefit your school and the students who attend.

You and a few of your colleagues have been randomly selected to participate in this study. It will attempt to determine the perceptions of principals regarding agricultural education programs and agricultural education courses in Iowa. The results of this study will be beneficial in determining changes in agricultural education programs and courses.

This survey will take you approximately 10 minutes, to complete. Please respond to the questions as you view them. I assure you that *your responses will be confidential*, questionnaires are coded for mailing purposes only.

Your immediate response is greatly appreciated. Please mail your completed questionnaire in the self-addressed, stamped envelope within the next 5 days.

Thank you for cooperating and using your valuable time to complete this survey. I look forward to receiving your results!

Sincerely,

Neasa Kalme  
Research Assistant  
4 Brenton Center, Curtiss Hall

Dr. Jim Dyer  
Assistant Professor  
217 Curtiss Hall

APPENDIX E  
FOLLOW-UP POSTCARD TO PRINCIPALS

January 2, 1998

Dear Principal,

Before Christmas break, you were mailed a survey concerning your views on the quality of agricultural education programs. If you have already completed and returned the survey, thank you for your time and effort. If not, please do so as soon as possible. The surveys have been sent to a small random sample of principals in Iowa. Therefore, it is extremely important that your survey be returned as soon as possible for your views to be represented in the results. If you have misplaced your survey, or if you have any questions, please feel free to call (515) 294-1862.

Thank you for you support and cooperation.

Sincerely,

Neasa Kalme  
Research Assistant  
Professor  
4 Curtiss Hall

Dr. Jim Dyer  
Assistant

217 Curtiss Hall

APPENDIX F  
SECOND LETTER TO PRINCIPALS

January 15, 1998

Dear Principal,

About 5 weeks ago we mailed you a questionnaire concerning your views on the quality of agricultural educational programs. To date we have not received your completed questionnaire.

We are writing you again because your input is critical to the results of the study. Although the return rate has been encouraging thus far, it is important that you complete and return your questionnaire in order for the results to accurately represent the views of Iowa principals.

In case the original questionnaire has not reached you or has been misplaced, a replacement questionnaire has been enclosed. Again, we are providing a self-addressed stamped envelope for your convenience.

Please return the completed questionnaire as soon as possible. Thank you for cooperating and using your valuable time to complete this survey. If you have any questions, please feel free to call (515) 294-1862.

Sincerely,

Neasa Kalme  
Research Assistant  
4 Brenton Center, Curtiss Hall

Dr. Jim Dyer  
Assistant Professor  
217 Curtiss Hall

APPENDIX G

FINAL LETTER AND CERTIFICATE OF COMPLETION TO PRINCIPALS



January 29, 1998

Dear Principal,

About 7 weeks ago we mailed you a questionnaire concerning your views on the quality of agricultural educational programs. To date we have not received your completed questionnaire.

We are writing you again because your input is critical to the results of the study. Although the return rate has been encouraging thus far, it is important that you complete and return your questionnaire in order for the results to accurately represent the views of Iowa principals.

Attached you will find a certificate of completion that you can display in your office for taking part in this study. If you decide you are not willing to participate, please discard the certificate for you haven't completed the questionnaire.

Please return the completed questionnaire as soon as possible. Thank you for cooperating and using your valuable time to complete this survey. If you have any questions, please feel free to call (515) 294-1862.

Sincerely,

Neasa Kalme  
Research Assistant  
4 Brenton Center, Curtiss Hall

Dr. Jim Dyer  
Assistant Professor  
217 Curtiss Hall

# Certificate

has been awarded by

Agricultural Education and Studies Department at Iowa State University

To

Principals' Name

In recognition of

Successfully completing the survey entitled "Principals' Perceptions  
of Agricultural Education Programs"

01/29/98

DATE

NEASA KALME

AND

DR. JAMES DYER

## REFERENCES

- American Farm Bureau Federation. Important Facts About Agriculture. <<http://www.agriculture.com/contents/FFA/ffaweek/agfacts.html>> February 21-28, 1998. (Accessed February 15, 1998).
- Andreasen, R. J., Breja, L. M., and Dyer, J. E. (1997). Attitudes of Iowa State University College of Agriculture Freshman Toward Agriculture Proceedings of the Annual National Agricultural Education Research Meeting. Las Vegas, NV.
- Bailey, W. J. and Jenkins, K. D. (1996). Seven Significant Positions in Education. Lancaster, PA: Technomic Publishing Company, Inc.
- Bainter, J. J. (1975). Relationship of institutional factors to counselors' attitudes toward vocational education. Doctoral Dissertation, Indiana University, Bloomington, 1974.
- Barnett, S. M. (1985). Secondary school principals' attitudes toward vocational education programs in Texas. Doctoral Dissertation, East Texas State University, Commerce, 1984.
- Bender, M. E. (1997). Factors affecting enrollment trends in secondary agricultural programs as perceived by Oregon and California secondary agricultural instructors and their respective principals. Doctoral Dissertation, Oregon State University, Corvallis, 1996.
- Benson, D. (1982). Attitudes of Georgia comprehensive high school principals, counselors, and vocational supervisors toward industrial arts education. Doctoral Dissertation, University of Georgia, Athens.
- Brimm, J. L. and Cooper, J. (1974). Principal's Perception of the Vocational Agriculture Program. The Agricultural Education Magazine, 47 (5), 104
- Brooks, E. B. H. (1982). Attitudes of school board chairpersons in Georgia toward vocational education. Doctoral Dissertation, University of Georgia, Athens.
- Burns, J. A. (1986). The design and application of a scale to measure attitudes of secondary school administrators toward vocational education. Doctoral Dissertation, University of Maryland, College Park, 1985.
- Canfield, D. R. (1981). A study of the attitudes of Kansas superintendents of public school districts toward vocational education. Doctoral Dissertation, Kansas State University, Manhattan, 1981.

- Divita, C., Jr. (1968). Attitudes toward vocational education in the secondary schools of West Virginia. Part I: School administrators and boards of education members. Huntington, WV: West Virginia Research Coordinating Unit for Vocational Education, Marshall University, West Virginia.
- Dowell, T. M. (1980). Attitudes of principals toward vocational education versus perceived attitudes of principals by vocational teachers. Doctoral Dissertation, Florida State University, Tallahassee.
- Dyer, J. E. (1998). National FFA In-service, Washington, D.C.
- Dyer, J. E. (1994). Attitudes and perceptions of Illinois secondary guidance counselors toward agriculture and agricultural education. Doctoral Dissertation, University of Illinois at Urbana-Champaign.
- Eley, R. K. (1976). Attitudes of Indiana school board members toward vocational education. Doctoral Dissertation, Indiana University, Bloomington, 1975.
- English, K. L. (1992). Perceptions of guidance counselors and agricultural educators of agricultural education in Arizona. Doctoral Dissertation, University of Arizona, Tucson, 1991.
- Fishbein, M. and Ajzen, I. (1975). Beliefs, Attitudes, Intentions, and Behaviors. Reading, MA: Addison-Wesley Publishing Co.
- Foster, R., Bell, L., and Erskine, N. (1995). The importance of selected instructional areas in the present and future secondary agricultural education curriculum as perceived by teachers, principals, and superintendents in Nebraska. Journal of Agricultural Education, 36 (3), 1-7.
- Greenwald, A. G. (1989). Attitude structure and function. Hillsdale, NJ: Erlbaum Associates.
- Gott, R. E. (1980). Professional education competencies needed by teachers of vocational agriculture in Missouri as perceived by superintendents, principals, area vocational-technical school directors and agricultural educators. Doctoral Dissertation, University of Missouri-Columbia.
- Gray, M. B. (1979). An assessment of the attitudes of principals in Louisiana toward vocational education. Education Doctorate, Louisiana State University, Shreveport.
- Hajiaghazadeh Roodssari, M. R. (1981). A study of attitudes of school administrators and board of education members toward the vocational education programs in north Texas. Doctoral Dissertation, Texas Women's University, Denton, 1980.

- Heineman, B. C. (1975). An analysis of high school principals' attitudes toward and knowledge of vocational education in the state of Tennessee. Doctoral Dissertation, University of Tennessee, Knoxville.
- Hoskey, M. R. (1989). Opinions of public school administrators concerning agricultural education. Doctoral Dissertation, University of Missouri-Columbia, 1988.
- Huh, M. Y. (1991). Louisiana principals' perceptions of nontraditional vocational teachers and the importance of vocational education. Doctoral Dissertation, Louisiana State University, Shreveport.
- Iowa Department of Education (1993). Vocational-Technical Education Program Management Guide Model Programs for Agricultural Education. Des Moines, IA: Bureau of Technical and Vocational Education.
- Iowa Department of Education. (1997). Directory of Secondary and Postsecondary Agricultural Education Departments 1997-98 and Directory of Secondary Departments by District. Des Moines, IA: Bureau of Technical and Vocational Education.
- Iowa Department of Education. (1998). Iowa Agricultural Education Information. Des Moines, IA: Bureau of Technical and Vocational Education.
- Jah, A. S. (1994). Agricultural education leadership in Maryland: The role of high school principals as perceived by incumbents, agricultural leaders and teachers. Doctoral Dissertation, University of Maryland, College Park.
- Jewell, L. R. (1989). Opinions of school administrators concerning the purpose, community acceptance, and occupational placement as a basis for justification of vocational agricultural programs. Journal of Agricultural Education. Winter: 52-56.
- Jewell, L. R. (1995). Perceptions of secondary school principals toward agricultural education Proceedings of the Annual National Agricultural Education Research Meeting: Denver, CO.
- Jones, L. J. and Walls, J. E., Jr. (1994). The perceptions of high school principals toward integrating vocational education into the academic curriculum in Mississippi. Proceedings of the Annual meeting of the Mid-South Educational Research Association: Nashville, TN.
- Klewer, E. D. (1982). The extent of perceived differences among chief instructional officers, principals, vocational directors, and vocational counselors about three characteristics of the marketing and distributive education program. Doctoral Dissertation, Texas A & M University, College Station.

- Krejcie, R. V. and Morgan, D. W. (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30 607-610.
- Lipham, J. M., Rankin, R. E., and Hoen, J. A. Jr. (1985). The Principalship Concepts, Competencies, and Cases. New York, New York: Longman Inc.
- Marrs, J. B. (1983). Principals' perceptions of vocational education in Tennessee. Doctoral Dissertation, University of Tennessee, Knoxville.
- Martin, R. A., Nwozuzu, E., & Gleason, A. (1984). Perceived communications and support linkages of high school principals and vocational agriculture teachers. Proceedings of the Annual National Agricultural Education Research Meeting: New Orleans, LA.
- Matthews, E. (1987). Attitudes of public school superintendents in Kentucky toward vocational education at the high school level. Doctoral Dissertation, University of Cincinnati, Ohio.
- Matulis, J. K. (1989). Attitudes, perceptions, and guidance practices of Illinois guidance directors concerning vocational education in secondary schools. Doctoral Dissertation, University of Illinois at Urbana-Champaign.
- McGhee, M. B. (1974). Attitudes of superintendents, principals, county vocational directors, and guidance counselors regarding vocational agriculture in the public secondary schools of West Virginia. Doctoral Dissertation, Ohio State University, Columbus.
- McGill, R. R. (1991). Relationship of leadership behavior of principals and effective schools characteristics in vocational education schools. Doctoral Dissertation, State University of New York at Buffalo.
- Miller, L. E. and Smith, K. (1983). Handling nonresponse issues. Journal of Extension, 21, 45-50.
- Miller, P. G. (1981). Attitudes held by selected public school administrators in Louisiana towards vocational education. Doctoral Dissertation, Louisiana State University, Shreveport.
- National FFA Organization. (1986). Participation in selected FFA activities. Alexandria, VA: National FFA Organization.
- National FFA Partner Development Team. (1993). Promoting Programs By Building Partnerships. Alexandria, VA: National FFA Organization.
- National Research Council (1988). Understanding Agriculture: New Directions for Education. Washington, D. C.: National Academy Press.

- Norris, R. J. and Townsend, J. (1987). Coping with declining enrollment. Agricultural Education Magazine, 60 (1) 7-8.
- Pace, E. M. (1981). A national study of the attitude of school board members toward vocational education. Doctoral Dissertation, Virginia Polytechnic Institute and State University, Blacksburg.
- Price, L. E. (1990). Attitudes of school administrators in the southern region of the United States toward agricultural education. Doctoral Dissertation, North Carolina State University, Raleigh.
- Pryor, W. D. (1984). A study of the attitudes of high school administrators, guidance counselors, and teachers in Nacogdoches county, Texas toward vocational education. Education Doctorate, East Texas State University, Commerce.
- Renton School District 403 (1976). Attitudes of secondary school principals and superintendents in the state of Washington toward vocational education. Olympia, WA: Washington Research Coordinating Unit for Vocational Education.
- Renton School District 403 (1979). Attitudes of secondary school principals and superintendents in the state of Washington toward vocational education. Final Report. Olympia, WA: Washington Research Coordinating Unit for Vocational Education.
- Ricadela, T. A. (1981). The relationship between counselor attitude toward vocational education and counselor education and occupational experiences on the vocational level. Education Doctorate, Rutgers State University, New Brunswick.
- Rosati, R. R. (1984). Administrators' perceptions of national issues in agricultural education. Doctoral Dissertation, Iowa State University, Ames.
- Schildgen, T. E. (1987). Superintendents' perceptions of district practices and local governing board policies regarding secondary vocational education programs in Arizona. Doctoral Dissertation, Northern Arizona University, Flagstaff.
- Schumann, H. B. and Webb, E. S. (1974). Beliefs about vocational agriculture by teachers and principals. The Agricultural Education Magazine, 46 (7), 154-155.
- Shepherd, B. (1977). A study to determine the attitudes of guidance counselors in Ohio toward vocational education. Doctoral Dissertation, Ohio State University, Columbus.
- Simpson, W. N. (1976). A comparison of the attitudes of pupils, their parents, and teachers toward the vocational education program in selected comprehensive and vocational high schools in Dayton, Ohio. Doctoral Dissertation, University of Cincinnati, Ohio, 1975.

- Spillman, R. D. (1983). Attitudes of guidance counselors in North Carolina toward vocational education in comprehensive secondary schools. Doctoral Dissertation, Ohio State University, Columbus.
- Sponaugle, A. J. (1973). Attitudes of guidance counselors regarding vocational education. Doctoral Dissertation, Ohio State University, Columbus, 1972.
- United States Department of Education, National Center for Education Statistics. (1996). Schools and Staffing in the United States: A Statistical Profile, 1993-1994. Washington, DC: U. S. Government Printing Office.
- Webster, W. E. (1994). Voices in the hall high school principals at work. Bloomington, IN: Phi Delta Kappa Educational Foundation.
- Wood, C. L., Nicholson, E. W., and Findley, D. G. (1979). The Secondary School Principal: Manager and Supervisor. Boston, MA: Allyn and Bacon, Inc.
- Woodard, J. & Herren, R. V. (1994). Perceptions of Georgia guidance counselors regarding agricultural education programs. Proceedings of the Forty-third Annual Southern Region Agricultural Education Research Meeting. Greenville, SC.



## ACKNOWLEDGEMENTS

To my major professor, Dr. James Dyer, you provided the faith when there was doubt. You provided excellent advice as I struggled. You were great to work with as you guided, suggested and supported the work that I was doing, not to mention hanging in until the last minute for me. They truly broke the mold when you were born because no one even comes close to all the things you do for students.

To the rest of my committee, Dr. Lynn Jones, Dr. Wade Miller and Dr. Ann Vail, I couldn't have done it without you, your advice and input gave me the extra plug and spark I needed to make this piece of work good research, Thanks!

To another faculty member, Dr. Harold Crawford, even though your weren't on my thesis committee you saw me through the whole process. The bending and changing of both of our schedules made things work out great. Thank you, I learned so much from you and I truly had a wonderful time working on grant proposals and projects with you.

To my wonderful parents, Ascold and Harriet Kalme, thank you for instilling values into my life to get me where I am today. You are both irreplaceable! To the rest of my family, I know there have been several hundred miles in between us but I never forgot the special occasions. As you well know I will be moving to another location and new goal. At this point in time the location is unknown, but the goal is to become the best agricultural education teacher in the community I relocate to. On last comment for my family, even though I came last, I did it first!

To the "Peanut Gallery," through our moaning and complaining it truly has been a wonderful year! I wish you all the best of luck, I know you will do well and I look forward to hearing about all the things you are doing. Let's treasure all of our memories!

As we part our separate ways...I would like to thank my roommates for many great times. Jennifer Raymond and Jessica Felton, you both have provided an ear in the time of need, I appreciate you both.

Finally, to all those that I didn't mention...you have been a significant part of my life and I will never forget all the times that we have had together. May God bless you all!

### **BIOGRAPHICAL SKETCH**

Neasa Kalme was born December 15, 1973 in Glens Falls, New York. Raised on a dairy farm, she graduated from Greenwich Central High School, Greenwich, New York in 1992. She received her Associate of Arts degree from Adirondack Community College in 1994, her Bachelors of Science in Agricultural Education from Iowa State University in 1996, and her Master of Science in Agricultural Education from Iowa State University. She was awarded the 110% Award from the Graduate Organization in Agricultural Education in 1997. She has served as a Graduate Assistant in the Department of Agricultural Education and Studies at Iowa State University.