

MOTIVATION FOR ENROLLING IN SCHOOL-BASED  
AGRICULTURAL EDUCATION EXPRESSED BY CAFNR FRESHMEN  
STUDENTS

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science

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by

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The undersigned, appointed by the Dean of the Graduate School, have examined the thesis entitled

MOTIVATION FOR ENROLLING IN SCHOOL-BASED  
AGRICULTURAL EDUCATION EXPRESSED BY CAFNR FRESHMEN  
STUDENTS

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And hereby certify that in their opinion it is worthy of acceptance.

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## DEDICATION

I dedicate this work to the memory of my grandparents, Noble and Mable Craighead and Jewell Eldridge.

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## TABLE OF CONTENTS

Acknowledgements.....	ii
List of Tables .....	vii
Abstract .....	viii
CHAPTER I: Introduction .....	1
Background and Setting .....	1
Enrollment in School-Based Agricultural Education .....	3
Statement of the Problem .....	4
Significance of the Problem .....	5
Theoretical Framework.....	6
Purpose of the Study .....	7
Research Objectives.....	7
Definition of Terms.....	8
Limitations of the Study.....	9
Basic Assumptions.....	10
CHAPTER II: Review of Literature .....	11
Motivation.....	11
Theoretical Framework .....	13
Achievement .....	14
Power .....	16
Affiliation.....	18

Avoidance .....	19
Related Research.....	20
Motivational Needs of Students.....	20
Enrollment Factors in Agricultural Education .....	22
Summary .....	24
CHAPTER III: Methodology.....	27
Research Design.....	28
Population and Sample .....	29
Instrumentation .....	29
Measurement Error .....	30
Validity .....	31
Reliability.....	32
Data Collection .....	34
Data Analysis.....	35
Research Objective One: Selected Characteristics .....	36
Research Objective Two: Motivation for Enrollment in School-based Agricultural Education .....	36
Research Objective Three: Compare Motivation for Enrollment with Selected Characteristics.....	37
CHAPTER IV: Findings.....	40
Research Objective One: Selected Characteristics .....	40

Research Objective Two: Motivation for Enrollment in School-based Agricultural Education .....	43
Research Objective Three: Compare Motivation for Enrollment with Selected Characteristics.....	51
CHAPTER V: Summary, Conclusions, Implications, and Recommendations .....	57
Purpose of Study .....	57
Research Objectives .....	57
Research Design.....	58
Population .....	58
Instrumentation .....	58
Validity .....	59
Reliability.....	59
Data Collection .....	59
Research Objective One: Selected Characteristics .....	60
Summary of Findings.....	60
Conclusion .....	61
Research Objective Two: Motivation for Enrollment in School-based Agricultural Education .....	61
Summary of Findings.....	61
Conclusion .....	61
Implication .....	62
Recommendation .....	62

Research Objective Three: Compare Motivation for Enrollment with Selected	
Characteristics.....	64
Summary of Findings.....	64
Conclusion .....	65
Implication .....	66
Recommendation .....	67
Recommendations for Further Research.....	68
References.....	70

#### APPENDICES

APPENDIX A. PANEL OF EXPERTS.....	73
APPENDIX B. CAFNR STUDENT EMAIL INVITATION.....	75
APPENDIX C. CAFNR STUDENT QUESTIONNAIRE .....	77
APPENDIX D. PILOT EMAIL INVITATION.....	84
APPENDIX E. PILOT QUESTIONNAIRE.....	86

LIST OF TABLES

TABLE	PAGE
1. Reliability Estimates for Student Motivation Enrollment Questionnaire ( <i>n</i> = 23) .....	33
2. Distribution Schedule of Materials to Freshmen Students .....	35
3. Thalheimer and Cook’s (2003) Descriptors for Describing the Relative Size of Cohen’s <i>d</i> .....	38
4. Agriculture, Food, and Natural Resources Career Cluster .....	39
5. Sex, Home Setting, and Academic Major of CAFNR Freshmen Students .....	41
6. Agriculture Courses Completed in High School by CAFNR Freshmen .....	43
7. Level of Agreement for Motivational Constructs Expressed by CAFNR Freshmen Students .....	44
8. Level of Agreement of Achievement Factors of CAFNR Freshmen Students .....	46
9. Level of Agreement of Power Motive Factors of CAFNR Freshmen Students .....	48
10. Level of Agreement of Affiliation Motive Factors of CAFNR Freshmen Students .....	50
11. Comparison of Student Motivational Factors and Sex of CAFNR Freshmen Students.....	51
12. Comparison of Students’ Motivational Motives by Home Setting on CAFNR Freshmen Students .....	53
13. Comparison of Students’ Motivational Motives by Career Pathway Courses Completed in Secondary Agricultural Education .....	56

MOTIVATION FOR ENROLLING IN SCHOOL-BASED AGRICULTURAL  
EDUCATION EXPRESSED BY CAFNR FRESHMEN STUDENTS

Stacy Lynn French

Dr. Robert M. Torres, Thesis Supervisor

ABSTRACT

The purpose of this study was two-fold: 1) to describe the motivational factors of current CAFNR freshmen student who enrolled in school-based agricultural education, and 2) compare the motivational factors to selected characteristics of CAFNR freshmen students. The theoretical framework used as a basis for this study was McClelland's Acquired Needs Theory, that humans are motivated by their need for achievement, power and/or affiliation.

The CAFNR Freshmen Questionnaire was distributed via email to current freshmen students in CAFNR who indicated membership in FFA on their scholarship application ( $N = 127$ ). A total of 53 (48.86%) completed the instrument. Overall, students reported achievement, power and affiliation as motivational factors. Results indicated that the motivational factors of achievement, power, and affiliation vary little in terms of home setting and courses taken in high school Female students displayed a higher need for power, than their male counterparts.

# CHAPTER I

## INTRODUCTION

This chapter describes challenges faced in school-based agricultural education in regard secondary programs enrollment effort. It also further describes the significance of enrollment in agricultural education courses, introduction of the problem, address the need for and significance of the study, introduction of the conceptual frameworks upon which the study was based. Furthermore, definitions of terms, limitations of the study, and basic assumptions are addressed.

### Background and Setting

The vision of Agricultural Education is that, “All people value and understand the vital role of agriculture and natural resources in advancing personal and global well-being” (*Agricultural Education in Missouri*, 2009 p. 2). School-based agricultural education is a beginning step to attaining this vision. Agricultural education programs are prevalent in many secondary schools in Missouri and around the United states. Missouri has a total of 316 secondary agriculture programs and 26,473 secondary students in the 2008-2009 school year (*Agricultural Education in Missouri*, 2009). Enrollment in Agricultural Education has been increasing in Missouri since 1985 (*Agricultural Education in Missouri* 2009).

The development of more diverse markets in agriculture, food and natural resources require a diverse and highly trained workforce. The connection between a decrease in enrollment in agricultural education, and the declining amount of qualified

workforce in agriculture sciences was called to attention to by Thompson and Russell (1993). Agricultural education is vital in providing the basis for this work force (*Agricultural Education in Missouri*, 2009). Agricultural education is a preparatory program for a variety of careers and college or technical training in agricultural, food and natural resources system. School-based agricultural education provide opportunities for students to further develop knowledge and skills in agribusiness, food science, agricultural mechanics, horticulture, animal science, plant science, natural resources, and conservation. School-based agricultural education can provide the education to better prepare future employees in this diverse market (*Agricultural Education in Missouri*, 2009).

Even with increasing enrollments in Missouri agricultural education programs, there are students who decide agricultural education is not for them. Several factors have been determined to negatively affect the enrollment of students in school-based agricultural education programs. Factors which negatively affect enrollment in agricultural education courses include increased high school graduation requirements, changing college entrance requirements, interpersonal reasons and school factors among others (Reis & Kahler 1997).

### *Enrollment in School-based Agriculture*

Enrollment in school-based agricultural education has been the purpose of a number of studies (Gliem & Gliem, 2000; Hoover & Scanlon, 1991; Talbert & Larke, 1995; Sutphin & Newsom-Stewart, 1995; Reis & Kahler, 1997; Marshall, Herring & Briers, 1992; Turner & Herren, 1997; Rohs & Anderson, 2001; Dyer & Breja, 2003; Myers, Breja & Dyer, 2004; Esters & Bowen, 2004; Talbert & Balschweid, 2004). Dyer, Breja, and Ball stated, “the retention of a diverse student population that includes high quality students continues to be one of the most important and complex problems facing secondary agricultural education programs today” (p. 87). Student enrollment in school-based agricultural education must be addressed before the issue of retention is addressed.

Enrollment barriers to school-based agricultural education were described by Hoover and Scanlon (1991). The three factors that influenced enrollment included the future value of agricultural education, the image of agricultural education, and the role of significant others and school standards (Hoover & Scanlon 1991). Student perception and their image of agricultural education provided a barrier to enrollment. Hoover & Scanlon (1991) suggest that if students perceive agricultural education as having no future value, they will be influenced to not enroll.

Marshall, Herring, and Briers (1992) found that students enroll in secondary agricultural education because of the characteristics of the class. Class characteristics included items that looked at students’ perceptions of classroom activities. Talbert and Balschweid (2004) found enrollment reasons supporting this claim. Students felt agriculture courses were preparing them for the future, and were more challenging (Talbert & Balschweid, 2004). Esters and Bowen (2004) found that urban school-based

agricultural education programs that had a variety of learning experiences attracted students to the program.

### Statement of the Problem

Extensive research (Gliem & Gliem, 2000; Hoover & Scanlon, 1991; Talbert & Larke, 1995; Sutphin & Newsom – Stewart, 1995; Reis & Kahler, 1997; Marshall, Herring & Briers, 1992; Rohs & Anderson, 2001; Dyer, Breja, & Ball, 2003; Myers, Breja, & Dyer, 2004; Esters & Bowen, 2004; Talbert & Balschweid, 2004) has been conducted regarding enrollment in school-based agricultural education to determine student motivational factors. However, findings vary widely. Extensive research has also been completed on human motivation, and more specifically student motivation.

Turner and Herren (1997) and Rohs and Anderson (2001) completed research studies on the motivation of students to enroll in school-based agricultural education courses. While there is an array of factors that encourage or discourage students to enroll in agricultural education courses, “agricultural educators need to understand the motivational need structure of their students” (Turner & Herren, 1997, p. 31). Therefore, the problem of this study was: What is the relationship between selected characteristics of College of Agriculture, Food and Natural Resources freshmen and their reasons for completing school-based agricultural education?

## Significance of the Problem

The significance of this problem can be viewed by the implications and applications of the results.

### *Implications*

Motivators of a certain behavior, such as enrolling in school-based agricultural education, are important to identify in students. These motivators can be a predictor of certain behaviors (Turner & Herren, 1997). A vast amount of reasons can dictate a student's choice to enroll in school-based agricultural education and affiliate with this specific group. To completely understand the reasons students chose to enroll or not to enroll in school-based agricultural education, first the student motivation must be understood (Turner & Herren, 1997). Dyer, Breja, and Ball (2003) stated, "the retention of a diverse student population that includes high quality students continues to be one of the most important and complex problems facing secondary agricultural education programs today" (p. 87). Information gained from this study will aid in recruitment and retention of students by teacher understanding of the students' motivations.

### *Applications*

A number of applications have come from previous studies conducted on enrollment in school-based agricultural education. Agricultural education instructors and teachers who understand student motivators for enrolling in the courses will be able to develop the program and will be able to retain more students (Turner and Herren 1997). Agricultural educators should be aware of the differences in student motivation, including

gender and race differences (Rohs and Anderson 2001). Providing opportunities that will meet different motivational needs of students enrolled in agricultural education programs may increase student participation and retention in the program (Rohs and Anderson 2001).

### *Theoretical Framework*

There are a number of theories in reference to motivation. Abraham Maslow (1943) determined a hierarchy of psychological needs for human motivation. This hierarchy is divided into two main categories of deficiency needs and growth needs. Deficiency needs include humans' physiological need, safety need, love need, and esteem need. The growth need is self-actualization (Maslow, 1943).

Intrinsic and extrinsic motivations were discussed by Staw (1976). Staw (1976) defined intrinsic motivation as the pleasure or meaning of the activity itself. Intrinsic motivation can also be interpreted by the value of achievement (Staw, 1976). Extrinsic motivation is seen when an individual places meaning on the end result or reward from the activity (Staw 1976).

McClelland (1985) defined motivation as the *why* of a behavior, in contrast to the *what* and *how* of the specific behavior. McClelland's Acquired Needs Theory on human motivation provided the conceptual framework for this study. McClelland (1962) proposed four important motive systems; the achievement motive, the power motive, the affiliative motive, and the avoidance motive. Turner and Herren (1997) and Rohs & Anderson (2001) found McClelland's Motivational Theory may be a link to student motivation to enroll in school-based agricultural education.

## Purpose of the Study

Previous studies (Turner & Herren, 1997; Rohs & Anderson, 2001) provided valuable insight to the purpose and research objectives of this study. The purpose of this study was to describe the relationship between selected characteristics of College of Agriculture, Food and Natural Resources freshman and motivation for enrolling in school-based agricultural education courses.

## Research Objectives

This study was guided by the following research objectives:

1. Describe the selected characteristics (sex, home setting, major, agriculture classes completed in high school) of freshmen students in the College of Agriculture, Food and Natural Resources.
2. Describe the motivational factors regarding freshmen in students in CAFNR enrolled in secondary agricultural education programs.
3. Compare students' motivational factors for completing school-based agricultural education by selected characteristics (sex, home setting, and agriculture classes completed in high school).

## Definition of Terms

The following terms are defined to provide clarity. Each of the terms is used periodically within the thesis.

Career Cluster – Courses in career education that fall within similar career pathways, taken in either sequential or non-sequential order  
([http://www.dese.mo.gov/divcareered/documents/MCE\\_MCCTA-09\\_TSA-presentation.pdf](http://www.dese.mo.gov/divcareered/documents/MCE_MCCTA-09_TSA-presentation.pdf))

College of Agriculture Food and Natural Resources (CAFNR) – One of the 19 schools and colleges at the University of Missouri, focus of study is in Agriculture, Food and Natural Resources ([www.cafnr.missouri.edu](http://www.cafnr.missouri.edu))

Motivation – The *why* of a behavior, in contrast to the *what* and *how* of the specific behavior (McClelland 1985).

Secondary Agricultural Education – Also referred to as school-based agricultural education, Developed from the Smith-Hughes Act of 1917, public funded education, formal education system which provides instruction to secondary students (*Agricultural Education in Missouri* 2009).

Secondary Agricultural Education Student – A secondary student enrolled in agricultural education courses (*Agricultural Education in Missouri* 2009).

## Limitations of the Study

This study is using a convenience sample of CAFNR freshman students who indicated on their scholarship application they were FFA members in high school. Therefore, no generalization beyond CAFNR freshman who indicated they were FFA members in high school can be made. Correlation research measures the strength and directions of the relationship between two or more variables (Ary, Jacobs, Razavieh & Sorenson 2006). The relationship being studied is that between selected characteristics of CAFNR freshmen students and their motivation for completing school-based agricultural education. Furthermore, no manipulative measures will be taken in this study. Therefore, this study will be describing the relationship that exists in this situation.

McClelland (1985) discussed motives as only one determinant of behavior. Other determinants such as the skill determinant and the value determinant may also play a role in the decision making process (McClelland 1985). This study sought to link students' enrollment in school-based agricultural education courses to McClelland's motivational factors, but did not hold other determinants constant.

Other procedural limitations of this study included time to collect data from subjects. Because time was limited, a web-based questionnaire was utilized in this study. Accessibility of information also became a limitation of this research study. The CAFNR Academic Program Office was only able to provide information on students who indicated FFA membership on their scholarship application, but not on other students in CAFNR that may have been involved in school-based agricultural education courses.

## Basic Assumptions

The researcher presumed the intended subjects will be able to recall information from their school-based agricultural education experience. The presumption that the respondents were honest and forthcoming, as well as having the knowledge to respond to the questions is also being made. The researcher also assumed the intended subjects will have access to their email and the internet to complete the web based questionnaire.

## CHAPTER II

### REVIEW OF LITERATURE

This chapter provides a review of the literature relating to motivation and enrollment in school-based agricultural education programs. The first section is an introduction to human motivation and McClelland's Human Motivational Theory. It reviews the motivational theory, as well as human needs for achievement, power, affiliation, and avoidance. The second section elaborates on the related research that guided this study. The chapter is concluded with a summary of the literature.

#### *Motivation*

Motivation is a very broad construct used in educational research. Many different theories of human motivation exist in educational psychology research (Maslow, 1943; Staw, 1976; McClelland, 1985).

Maslow (1943) described five basic needs of human motivation. These needs can be divided into two sub-sections of deficiency needs and growth needs. Deficiency needs must be met before the growth needs can be accomplished. The deficiency needs include; physiological needs, safety needs, love needs, and esteem needs. The need for self actualization is the fifth need, and is referred to as a growth need (Maslow, 1943).

Physiological needs of humans include basic necessities for human life, including air, food and water. If these needs are not met, the individual cannot move up the hierarchy scale. The safety needs are met through an individual feeling secure and protected. If an individual feels threatened, even if it is not visible to others, their need for

safety is not being met. Unfamiliar stimuli can bring forth fear reactions in individuals (Maslow, 1943).

Love needs can be addressed when physiological and safety needs are met. The basis of the love need is affection and belongingness. Maslow clarifies that love needs include both giving and receiving love. Esteem needs stem from an individual's desire for self-respect. Esteem needs can be explained by two subsets of the need. First is an individual's need for personal achievement and confidence. Second being a person's need for a positive reputation or importance. If these needs are not adequately met, individuals are left with feeling of inferiority and helplessness (Maslow, 1943).

When the above four needs of human motivation are met, the need for self-actualization can be realized. Maslow (1943) describes the need of self actualization as "What a man *can* be, he *must* be" (p. 10).

This is a hierarchy of basic needs, starting with physiological needs, safety, love, esteem and finally, self actualization. While this hierarchy is in a fixed order, there are exceptions to the order indicated (Maslow, 1954). These needs are not exclusive motivators to behavior, but one behavior may meet a number of the needs.

A second theory to motivation comes from Staw (1976). Staw's (1976) definition for intrinsic motivation is the pleasure or value of the activity to the individual. It is the meaning and motivation the individual feels him/her self. Extrinsic motivation is the value an individual places on the probability of completing a task, an end reward. Extrinsic motivation is an outside reward or incentive to completing the given task (Staw, 1976).

The theory of extrinsic and intrinsic motivation aligns with McClelland's (1985) Acquired Needs Theory. McClelland's (1985) theory on motivation states motivation can refer to two main ideas; the conscious intents of an individual and outside inferences to those conscious intents done with observations (McClelland 1985).

As there are a number of theories on motivation, only one would be used for the purpose of this research. McClelland's Acquired Needs Theory was the best fit for the purpose of this research, as it most closely aligned with the available literature on the motivational factors of secondary agricultural education students. McClelland defines motivation as the *why* of a specific behavior, contrasted to the *what* and *how*.

Student motivation may be a link to student enrollment in school-based agricultural education classrooms and programs. McClelland's (1985) motivational theory describes human motivational factors. His proposal was that people are driven towards a specific goal or behavior because of one or more of the motivational factors; achievement, power and affiliation.

### *Theoretical Framework*

The theoretical framework which guided this study was McClelland's Acquired Needs Theory on human motivation. Motivation can refer to two main ideas; the conscious intents of an individual and outside inferences to those conscious intents done with observations (McClelland 1985). McClelland defines motivation as the *why* of a specific behavior, contrasted to the *what* and *how*. According to McClelland (1985), "motives drive, orient and select behavior" (p. 226). The behavior investigated in this study is that of reasons for enrolling in and completing school-based agricultural

education courses. McClelland (1962) proposed four important motive systems; the achievement motive, the power motive, the affiliative motive and the avoidance motive.

According to McClelland's Acquired Needs Theory (1962), intrinsic motivators are crucial to meeting an individual's needs. This can depict an individual's behavior pattern (McClelland 1962). People are motivated to a behavior by one or more of the above motives (McClelland 1962).

### *Achievement*

The basis of the achievement motive is "doing something better for its own sake" (McClelland 1985 p. 229). That is the natural incentive for individuals who are motivated by achievement (McClelland 1985). Individuals with a strong need to achieve have a strong personal responsibility for their own performance. These individuals tend to take more calculated risks, rather than go for the long shot (McClelland 1985).

Individuals high in achievement perform better or are motivated more when there is the achievement incentive available. Achievement incentives are ones that an individual gets satisfaction from doing something better, or to show he/she is more capable. There is an intrinsic satisfaction in achieving for some individuals. These same people are distracted by external incentives and encouragement (McClelland 1985). Individuals with a high achievement score tend to pay less attention to people around them, such as co-workers because of their need for individual achievement (Chusmir, 1989).

Because of the intrinsic nature of achievement incentives, there is a connection between achievement and task difficulty. Tasks that are too easy are not going to be an

incentive for an individual that is motivated by achievement. Likewise, tasks that are too difficult will not provide an incentive. Again, the achievement motive is “doing something better” (McClelland, 1985, p. 229). Neither a task that is too easy nor a task that is too difficult will motivate an individual to do better. Moderately difficult tasks should be provided to those individuals with a high need for achievement (McClelland, 1985).

Previous studies (Chusmir, 1989 and McClelland, 1985) also found that individuals motivated by a need for achievement worked more efficiently when provided with performance feedback. Chusmir (1989) agrees that individuals high in achievement seek response from managers and supervisors on their performance. These individuals thrived when they were told how well they were doing. They did not work as efficiently when feedback was based on how well they were working with other individuals. This shows individuals need concrete performance feedback if they are driven by the achievement motive (McClelland, 1985).

Innovativeness is a characteristic of the achievement motive. These individuals are motivated to “do something better” (McClelland, 1985, p. 229). This may mean they have to find a new, more efficient way to accomplish a task. These individuals always search for the moderately difficult tasks, leading to individuals always changing tasks. This also leads to a need to be innovative to find new ways to accomplish tasks (McClelland, 1985).

## *Power*

McClelland (1985) suggested there are two aspects of power; negative and positive (1985). McClelland's power motive came from the theory that all human beings have a need for power, control and dominance (1985). McClelland used Veroff's (1957) definition of the goal of power as, "exerting influence" (McClelland, 1985, p. 269). Individuals with a higher power motive tended to relate more to successful interpersonal influence than others lower in power (McClelland, 1985).

Power imagery is one aspect of the power motive. Power imagery includes establishing, maintaining and re-establishing power in a situation. This can include controlling and influencing other people or groups. Subcategories of power imagery can include; prestige, a stated need for power, and goal anticipation (McClelland, 1985).

The power motive has several different outlets. The first outlet is aggressiveness. Those with a higher need for power tend to have more aggressive impulses (McClelland, 1985). This can vary upon the situation the person is in at the time. In general, individuals high in the power motive tend to be more assertive and aggressive than individuals lower in the power motive (McClelland, 1985).

According to McClelland (1985), individuals who tend to be aggressive also tend to view themselves in a negative way and are sometimes seen as having anti-social tendencies. These tendencies are usually seen as negative and are punished in childhood. This in turn leads to a negative outlook of an individual's self, rather than a positive outlook (McClelland, 1985).

The positive aspect of the power motive still deals with the ability to influence others, but not in the aggressive and dominating way most commonly associate with

power (McClelland, 1985). This aspect of power also includes the persuasion and inspiration to help people attain goals and learn more about a specific topic. Individuals highest in this need provide inspiration to help in achieving their goals, but do not do so in a dictating manner (McClelland, 1985). Individuals that tend to have a strong need for power in a positive aspect will create alliances with individuals and groups (Chusmir, 1989). Chusmir (1989) identified power behaviors such as “listens to others, but initiates action” and “directs others toward goals” (p. 10).

French (1956) identified five power structures that individuals with a high need for power used. The attraction power is based on individuals B’s liking of individual A. An expert power base is gained when one has greater knowledge and information. The power base of reward power is guided by immediate production of rewards to individuals for doing the appropriate task. Coercive power is utilized when an individual can force another to do something he/she would not have previously done otherwise. The fifth power base proposed by French (1956) is legitimate power. Legitimate power is defined by the fact an individual thinks a person has justifiable power over them (French, 1956).

## *Affiliation*

Relationships dominate the motive for affiliation (McClelland, 1985). Chusmir (1989) defines affiliation as “maintaining positive friendship or love relationships with another person” (p. 3). Individuals with a higher need for affiliation are motivated to perform better when the incentives of affiliation are offered (McClelland, 1985). People in general like interacting with others, but some are more motivated by this interaction. These people are more motivated by affiliation (McClelland, 1985).

Individuals with a strong need for affiliation have certain characteristics. First, performance is increased on tasks when there is an affiliative incentive for subjects high in affiliation. Individuals high in affiliation learn these social relationships faster than others. They engage in more discussions and dialogue, and maintain connections with other people because of this motive. These interpersonal connections are extremely important to individuals with a higher need for affiliation (McClelland, 1985). These individuals tend to make more visits to friends, make more telephone calls and spend more time writing letters (Lansing & Heyns, 1959). People are what matter most individuals high in affiliation. These individuals prefer feedback on their working relationships rather than their task accomplishment in groups. They also prefer working with friends, over experts in the content area (McClelland, 1985).

McClelland also acknowledges individuals high in the need for affiliation are more likely to avoid conflict than others lower in this motive. They tend to make fewer suggestions in a group that would be potentially disruptive. These individuals also steer away from competitive games, such as roulette. These individuals are more passive than others, and stay clear of confrontation (McClelland, 1985).

These individuals also tend to have a fear of rejection. They are apprehensive about relationships with others, and worried about disapproval. These individuals are sometimes viewed as unpopular because of their constant seeking of approval and reassurance from others. Others may view these individuals as approval seeking and self-centered. Individuals scoring high in affiliation are most concerned about having close friends with similar attitudes and beliefs. This can ensure their friends agree with them, and approve of them (McClelland, 1985).

### *Avoidance*

McClelland (1985) states the avoidance motive is rooted in fear. There have been several avoidance motives measured; fear of failure, fear of rejection and fear of success (McClelland, 1985). The avoidance motive was derived from efforts of subjects, animals in the laboratory, to avoid discomfort. This motive was also viewed as an individual's motivation to reduce anxiety.

The fear of failure originated from an external force in the environment. This usually is learned from punishments. A repeated punishment can increase the fear of failure in that task, and lead to the individual avoiding the specific task. The fear of failure and the fear of rejection both have connections to the need of an individual for social acceptance and approval (McClelland, 1985).

## Related Research

A review of the literature has revealed a difference in ways students are motivated to enroll in school-based agricultural education. Turner and Herren (1997) studied motivational needs of agricultural education students in Georgia. Rohs and Anderson's (2001) study focused on motivational needs of middle grade students enrolled in agricultural education. Sutphin and Newsom-Stewart (1995) looked for students' rationale for selecting agriculturally related courses in high school. Talbert and Larke (1995) studied factors that influenced minority and non-minority students to enroll in introductory agriculture courses. Along with motivational factors for becoming involved in agricultural courses, Gliem and Gliem (2000) looked at factors that encouraged, discouraged and would encourage agriculture students to join the FFA. Other research that has studied enrollment factors in secondary or school-based agricultural education include; Marshall, Herring and Briers (1992) and Reis and Kahler (1997).

### *Motivational Needs of Students*

“Motivation is recognized as a critical need for a society that is clearly worried about its future” (Maehr & Midgley, 1991, pg. 400). This need for motivation is especially important in schools and for leadership in schools. Student change is inevitable, and student motivation may change with this (Maehr & Midgley, 1991). As student motivation changes, educators must understand motivators. There are different motivators that encourage students to enroll in agricultural education courses in high school (Turner & Herren, 1997). Dyers, Breja and Ball stated student retention is a problem plaguing school-based agricultural education (2003).

Using McClelland's theoretical framework, Turner and Herren (1997) conducted a similar study of motivational need of students enrolled in agricultural education programs in Georgia. Turner and Herren found that students were motivated by the need for achievement more so than the need for affiliation and power. Students that were members of FFA had a higher need for all three motivational factors, achievement, power and affiliation, than non-FFA members. Female students enrolled in agricultural education had a higher motivational need for affiliation and power than their male counterparts (Turner & Herren, 1997). Turner and Herren (1997) also found students living in rural settings had a higher need for the power factor than those from urban home settings.

Rohs and Anderson (2001) completed a similar study to Turner and Herren (1997), looking at seventh and eighth grade students in Georgia. Rohs and Anderson's results were similar to Turner and Herren's 1997 study. Seventh and eighth grade students had a higher need for achievement than affiliation. These students had a higher need for affiliation than power. Like Turner and Herren found, female students in middle grade agricultural education classes had a higher need for affiliation and power than the male students. Females are more concerned about building and maintaining relationships, as well as influencing others, than males are (Rohs & Anderson, 2001). The study results did differ from Turner and Herren (1997) in the motivational needs of students living on a farm versus those not living on a farm. Rohs and Anderson (2001) found no differences in any of the three motivational needs. This was also true for students who joined the FFA compared to non-FFA members. There was no difference in the motivational needs of achievement, power or affiliation (Rohs & Anderson, 2001).

### *Enrollment Factors in Agricultural Education*

Exploring factors that contribute to student enrollment has been the topic of many studies (Marshall, Herring, & Briers, 1992, Reis & Kahler, 1997, Sutphin & Newsom-Stewart, 1995, Talbert and Larke, 1995, Hoover & Scanlon, 1991). Marshall, Herring and Brier's 1992 study of secondary students enrolled in agricultural science in Texas found enrollment reasons for students in agricultural science classes to include; characteristics of the class and identity enhancement as a person. Class characteristics was defined as "students' perceptions of what they would be doing in class" (Marshall et al. 1992 pg. 20). Identity enhancement consisted of items that "indicated a positive effect on the adolescent developmental task of identity resolution" (Marshall et al. 1992 pg. 20).

While Marshall et al. identified class characteristics and identity enhancement as reasons to enroll in agricultural science courses, Reis and Kahler (1997) identified individuals that influenced students' enrollment in agriculture courses. Reis and Kahler (1997) found a number of individuals who were most influential in secondary agricultural education students' decision to enroll in agricultural education. These individuals included parents, the agriculture instructor, a friend and former agricultural education students. By contrast, Reis and Kahler (1997) also suggested that county extension directors, other teachers, the 4-H leader and the high school counselor were least influential in students' decision to enroll in high school agricultural education.

Other factors Reis and Kahler (1997) found to influence students' enrollment in school-based agricultural education included personal and organizational factors. Personal interests, possession of a farm background, and fun/interesting agriculture

courses had the most influence on students' decisions to enroll in high school agricultural education courses (Reis and Kahler 1997). Factors with the least influence on students' decision to enroll included 4-H activities, pre-high school recruitment programs, farm organizations and interest in agriculture as a major in college (Reis & Kahler 1997).

A third study conducted by Sutphin and Newsom-Stewart (1995) described other enrollment reasons of secondary agriculture students. Sutphin and Newsom-Stewart (1995) conducted the study of tenth grade students enrolled in agricultural courses in the state of New York to help "clarify the rationale that students use in selection of agriculturally related courses in high school" (pg. 54) Students indicated a higher need for activity centered learning, work experience opportunities, interest, and teamwork and life skills development as reasons for enrollment in school-based agricultural education (Sutphin & Newsom-Stewart 1995).

Unlike the aforementioned studies, Talbert and Larke (1995) conducted a study which investigated attitudes of minority and non-minority students to enroll in secondary agriculture courses. Lack of 4-H experience led to a lack of positive images of agriculture and agricultural education among minorities in Texas (Talbert & Larke 1995). Peer pressure to not enroll and negative interactions with agriculture students were causes for minorities to not enroll in agricultural education courses (Talbert & Larke 1995). Positive role models of the same race and ethnicity are influential factors to minority students to enroll in agricultural education courses (Talbert & Larke 1995).

While other studies have researched reasons for enrollment in secondary agricultural education, Hoover and Scanlon (1991) conducted a study to find the barriers to enrollment in secondary agricultural education courses for eighth and eleventh grade

students in twelve states. A purposive sampling technique was used to gain the sample of students from across the United States (Hoover & Scanlon 1991). Hoover and Scanlon (1991) found three major concerns that act as barriers to enrollment in agricultural education. The image of agriculture in general, not only the agricultural education program and FFA, is one barrier to enrollment in agricultural education. Enrollment decisions are influenced by the perceived value of the course and future usefulness of the students' involvement. Finally, the FFA and agricultural education program's initial perception is likely to remain constant in each student (Hoover & Scanlon 1991).

### Summary

Student motivation can be determined in a number of ways. For this study, the theoretical framework is that of McClelland's Acquired Needs Theory. McClelland's (1985) three motivational needs of humans are achievement, power and affiliation. McClelland (1985) proposed one or a combination of these three needs must be met to motivate and drive a person toward a goal or behavior, such as enrolling in school-based agricultural education. Students motivated by a need for achievement seek to do something better. Students motivated by the need for power seek to influence others. Students with a need for affiliation are motivated by relationships they form with others.

The enrollment factors of students in school-based agricultural education can be distilled into the three motivational needs described in McClelland's Acquired Needs Theory (1985). Marshall et al. (1992) cited class characteristics and identity enhancement as enrollment factors for students in the study. This can be linked to McClelland's need for

achievement. The achievement motive is very intrinsic in nature (McClelland 1985) and these factors align with the definition of this motive.

The study which Reis and Kahler (1997) conducted focused on the individual's who were most influential in students' decision to enroll in agricultural education. McClelland's (1985) need for affiliation is directly connected to this study's results. As Reis and Kahler (1997) discovered, specific individuals have more influence on students' decisions to enroll in agricultural education courses, while others have little influence on the decision.

The need for achievement and power can be cited as reasons for students' selection of agriculturally related courses in Sutphin and Newsom-Stewart's study (1995). Sutphin and Newsom-Stewart (1995) found reasons such as activity centered learning, work experience and leadership development for student enrollment in agriculture courses. The definitions of these line up with the motivational factors for power and achievement.

Talbert and Larke (1995) conducted a study of enrollment of minorities enrolled in agricultural education. Reasons Talbert and Larke (1995) cited for minorities to not enroll in agricultural education included peer pressure. Their findings can be directly linked to McClelland's (1985) need for affiliation.

McClelland's Acquired Needs Theory is very applicable to enrollment decisions of secondary agricultural education students. Student enrollment was linked to the motivational factors proposed by McClelland (1985). Their personal needs for achievement, power and affiliation drive their behavior to enroll in school-based agricultural education courses. There are external factors that may play a role in

influencing the students' decisions such as the perception of the agriculture program or even agriculture in general. Although these factors played a minute role in the research related to this study, they should be addressed. However, students' needs for achievement, power and affiliation are linked to enrollment in school-based agricultural education.

## CHAPTER III

### METHODOLOGY

This chapter will address the research design, population and subject selection, data collection instrument, validity and reliability of the instrument, the data collection process, and finally, the process of data analysis for the study. This study applied for and received University of Missouri Institutional Review Board Approval (# 1163258).

#### Purpose of the Study

Previous similar studies (Turner & Herren, 1997; Rohs & Anderson, 2001) provided valuable insight to the purpose and objectives of this study. The purpose of this study is to describe the relationship between selected characteristics of College of Agriculture, Food and Natural Resources freshman and reasons for enrolling in school-based agricultural education courses.

#### Research Objectives

This study was guided by the following research objectives:

1. Describe the selected characteristics (sex, home setting, major, agriculture classes completed in high school) of freshmen students in the College of Agriculture, Food and Natural Resources.
2. Describe the motivational factors regarding freshmen students in CAFNR enrolled in secondary agricultural education programs.
3. Compare students' motivational factors for completing school-based agricultural education by selected characteristics (sex, home setting, major, and agriculture classes completed in high school).

## Research Design

This research design of this non-experimental quantitative study was descriptive - correlational in nature. Descriptive research studies focus on describing existing conditions (Ary, Jacobs, & Razavieh, 2006). Ary et al. (2006) explain that this type of research often uses questionnaires to gather information from the subjects of the study. As literature on research design implied, this study utilized an online instrument to gather information regarding student motivation for enrollment in school-based agricultural education and their characteristics.

In addition to describing the existing condition with respect to student motivation, the study also employed correlational research methods to investigate potential relationships between variables of interest (Gall, Gall, & Borg, 2003). Correlational research examines the relationships between two characteristics and/or variables (Ary et al. 2006). This study sought to explore the relationships among selected student characteristics, including sex, home setting, major, agriculture classes completed in high school and their motivation. This aspect of the research attempted to explain the variability within student motivation for enrollment in school-based agricultural education in terms of the selected characteristics, including, sex, home setting, major, and agriculture classes completed in high school. Gall et al. (2003) stated educational research may tend to lean toward unveiling a cause-and-effect relationship; however defining such causation is not the purpose of this study.

The overarching construct this study sought to measure motivation, an intangible construct (Ary, et al. 2006). Because intangible constructs are not directly observable, they must be measured using multiple items on a questionnaire. This study will compare

motivational factors by selected characteristics of College of Agriculture, Food, and Natural Resources (CAFNR) freshman. The selected characteristics that were investigated in this study included sex, home setting, major, agriculture classes completed in high school.

### Population and Sample

The CAFNR Academic Programs Office listed 127 freshmen students who listed FFA membership on their scholarship application. A census of the CAFNR freshmen students that reported to be FFA members was taken. This study did not take a sample because of the relatively small number of subjects included in the frame, thus the 127 freshmen students became the accessible population.

The frame was scrutinized for frame and selection error. Nineteen subjects were identified as being no longer enrolled in the University of Missouri at the time of data collection. These individuals no longer had a valid email address, and were not enrolled beyond the 2009 fall semester. The frame was also evaluated for duplications or omissions of student names that could lead to possible selection error. As a result of the scrutinizing efforts, the final count was 108 CAFNR freshmen.

### Instrumentation

The data collection instrument (Appendix C) was developed by the researcher after consulting similar questionnaires. Similar studies conducted by Rohs and Anderson (2001), Turner and Herren (1997), Reis and Kahler (1997), Sutphin and Newsom-Stewart (1995), and Marshall, Herring, and Briers (1992) guided the statements the researcher created for the questionnaire. The questionnaire for this study was comprised of two

sections. The first section of the questionnaire sought to measure students' motivation for enrolling in a high school agricultural education course. Thirty statements were constructed to measure motivation. McClelland's Acquired Needs Theory (1985) was used as the framework for item construction and/or selection. Specifically, ten statements referenced achievement, ten statements referenced power and ten statements referenced affiliation. Students were able to respond to each statement using a five point, Likert scale with possible response choices as; 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, and 5 = Strongly Agree.

The second section of the questionnaire sought to obtain selected student characteristics. Selected characteristics included: sex, home setting, major, agriculture classes completed in high school.

Dillman (2009) guided the design and format of the questionnaire. To improve response rates, questionnaires must be easy to understand, answer, and should be easy to use by the respondent (Dillman 2009). The subjects of this study were CAFNR freshmen students with a valid university e-mail address. Therefore, the researcher chose to send web-based questionnaires to subjects.

#### Measurement Error

A questionnaire "can be reliable with out being valid; but it cannot be valid unless it is first reliable" (Ary et al., 2006 p. 256). Validity and reliability must be established by appropriate methods. Information from similar studies was used to construct this questionnaire. This made for validity and reliability issues. Both validity and reliability are addressed in the subsequent paragraphs.

## *Validity*

The focus of validity is accuracy of the instrument. An inaccurate instrument is not a valid tool (Ary et al., 2006). Two types of validity were established for the questionnaire used in this study; face and content validity. To evaluate the face validity and content, a panel of six experts ( $n = 6$ ) reviewed the questionnaire. Each panel member was selected for their expertise (Appendix A). Three members of the expert panel were faculty members of the Department of Agricultural Education at the University of Missouri; all of whom are considered experts in the areas of agricultural education, instrument development and research methodology. One member of the expert panel was a faculty member of the College of Education at the University of Missouri; with an expertise in educational research methodology. Additionally, one panel member was a graduate student and graduate assistant in the Department of Agricultural Education at the University of Missouri with an expertise in agricultural education and instrument development. The sixth panel member was a University of Missouri CAFNR sophomore with an expertise in the field of the target population as a student. He represented the target population of the study on the expert panel and could offer feedback on clarity of directions and terminology used.

The “appropriateness and representativeness of the items” (Ary et al., 2006, p. 256) on the questionnaire were determined by panel of experts. Content validity was addressed by providing the panel with a list of the statements aligned with the respective construct (achievement, power, and affiliation), access to the web-based questionnaire that would be used in the data collection process, and the purpose and objectives of the research study. The panel of experts was asked to determine if the statements correctly

measured the construct it was aligned with. The panel was also asked to evaluate the statements for construct underrepresentation and construct – irrelevant variance. Panel members were also asked to render judgment on the face validity of the questionnaire. All panel member feedback and comments were carefully considered as minor revisions were made in drafting the final web-based questionnaire.

### *Reliability*

Consistency is significant in reliability (Ary et al., 2006). If the instrument is inconsistent, it is not a reliable tool to use for research. A pilot test was used to determine the reliability of the questionnaire. The pilot test group was comprised of individuals with similar characteristics to the target population; in this case current sophomore in CAFNR who were former high school FFA members ( $n = 25$ ). The web-based questionnaire (Appendix C) was distributed by e-mail using the Hosted Survey™ software. Hosted Survey™ software is a web-based program used to create and distribute web-based questionnaires. The researcher chose to utilize Hosted Survey™ after viewing other similar programs. Hosted Survey™ allowed more options, question types and data options than other web-based programs.

In February 2010, a personalized email message (Appendix B) was sent each CAFNR sophomore in the pilot test group by referencing the e-mail address listed in the global address list for the University of Missouri. The e-mail address indicated the researcher's University e-mail as the origin of the message, and the "reply to" address. Twenty – three responses were collected from the e-mail invitation sent. Response data were downloaded from the Hosted Survey™ website in a .txt formatted document. The

data were then imported into a Microsoft Excel spreadsheet, and variable data labels were added. The Microsoft Excel spreadsheet was then imported into SPSS data analysis software. Results of reliability analysis are listed in Table 1.

Table 1.

*Reliability Estimates for Student Motivation Enrollment Questionnaire (n = 23)*

Construct	<i>Cronbach's Alpha</i>
Achievement	.86
Power	.91
Affiliation	.65
Entire Instrument	.91

Miller, Torres and Lindner (2004) noted that summated items measured using Likert – type response categories could use a Cronbach's  $\alpha$  coefficient to determine reliability estimates. The statements in section one of this questionnaire used the five point Likert responses and items were summated. Therefore, a Cronbach's  $\alpha$  was reported as an estimate of the reliability for the motivation construct and sub-constructs. Section two of the questionnaire was comprised of student characteristics and not subject to reliability issues; therefore, reliability was not determined on section two of the questionnaire.

## Data Collection

Implementation of the web survey was guided by Dillman (2009). Dillman suggested sending an initial contact e-mail to subjects, with the link to the web-based questionnaire in the body of the message. The number of follow-up e-mails was dependent on the number of respondents received after each invitation to participate in the study. E-mails sent to subjects were personalized to increase response rate (Dillman, 2009). The researcher also took precautionary steps to make sure emails were not flagged as spam in subjects' inboxes. The e-mails to subjects were sent from the researcher's University e-mail address to decrease the chance of the e-mail being flagged as spam. The subject line also referred to an invitation to participate in the study, and listed the study title.

This study followed the schedule suggested by Dillman (2009). Table 2 notes the specific dates of each of the points of contact for the study.

Table 2

*Distribution Schedule of Materials to CAFNR Freshmen Students*

Data Collection Activity	Medium	Date Sent
Initial Letter	e-mail	3/09/2010
1 <sup>st</sup> Follow-Up Reminder	e-mail	3/15/2010
2 <sup>nd</sup> Follow-Up Reminder	e-mail	3/22/2010
3 <sup>rd</sup> Follow-Up Reminder	e-mail	3/26/2010
Final Reminder	e-mail	3/30/2010

### *Data Collection Process for CAFNR Freshmen Students*

The implementation of the data collection process began with an e-mail message and link to the web-based questionnaire (Appendix B) sent to the accessible population ( $N= 108$ ). The intent of this e-mail was to inform the subjects about the purpose of the study, the incentive to participate in the study, as well as provide the web link to the web-based questionnaire. The e-mail message was sent out using the Hosted Survey™ software to each subject's University e-mail address. Each e-mail message indicated the researcher's University e-mail address as the origin of the message, as well as the "reply to" message.

It is important to note that nineteen e-mail messages were returned, indicating that the message was undeliverable to the recipient. After checking with the Academic Affairs Office, it was realized these nineteen students were no longer enrolled in the University of Missouri, and these names were given to the researcher by mistake. This adjustment was acknowledged in the population and sample section of this chapter.

### Data Analysis

Data collected from the respondents were downloaded from the Hosted Survey™ software in a .txt document and then imported into a Microsoft Excel spreadsheet. Variable labels were added to the spreadsheet; spreadsheets were then imported into the SPSS data analysis software.

SPSS version 17 for Windows platform computers was used to analyze data collected by the study. Ary et al. (2006) described the scales of measurement and guided the appropriate analysis of the data collected. The scales of measurement are nominal, ordinal, interval, and ratio.

*Research Objective One: Selected Characteristics*

Research objective one sought to describe selected characteristics of freshmen students in the CAFNR at the University of Missouri. Each subject was asked his/her sex, home setting, major, and agriculture classes completed in high school. Sex, home setting, major, agriculture classes completed in high school were nominal scale items; therefore, frequency and percent were reported.

*Research Objective Two: Motivation for Enrollment in School-based Agricultural Education*

Research objective two sought to determine motivation for students who enrolled in school-based agricultural education. CAFNR freshmen students were asked to respond to thirty statements on a five point Likert scale. For this study, each statement was considered ordinal in nature; therefore, frequencies and percents were reported. However, mean, standard deviation and mode were reported to order the statements from high to low. Additionally, three variables constructed to measure the three motivational factors (achievement, power, and affiliation) by totaling the statements aligned with each factor. An overall measure of motivation was also constructed and reported. These data approximate an interval scale of measurement consequently means and standard deviations were reported.

*Research Objective Three: Compare Enrollment Reasons with Selected Characteristics*

Research objective three sought to determine a relationship between the three constructs of motivation (and overall motivation) and the selected student characteristics. Selected characteristics include sex, home setting, and agriculture courses completed in high school. To analyze the motivational factors of students to enroll in school-based agricultural education courses, mean scores and standard deviations were calculated. Responses to each of the thirty items were summated and treated as interval data because of the use of a modified Likert scale. Cohen's *d* was then utilized to compare the mean scores of each variable of interest.

Effect sizes were calculated and interpreted according to Thalheimer & Cook's (2003) Excel spreadsheet (see Table 3).

Table 3

*Thalheimer and Cook's (2003) Descriptors for Describing the Relative Size of Cohen's *d**

Value of Cohen's <i>d</i>	Effect Size
> 1.45	Huge Effect
> 1.10 and < 1.45	Very Large Effect
> 0.75 and < 1.10	Large Effect
> 0.40 and < 0.75	Medium Effect
> 0.15 and < 0.40	Small Effect
≥ - 0.15 and < 0.15	Negligible Effect

The agriculture courses completed in high school were grouped in their respective career clusters as set for by Missouri Career Education. The following table (Table 4) depicts the six career pathways in the Agriculture, Food, and Natural Resources Career Cluster. The core career education courses, Agricultural Science I and Agricultural Science II are listed as introductory courses. The other six career pathways include; Agricultural Business and Management Systems, Agricultural Mechanics and Technology Systems, Plant Science/Horticulture Systems, Food Science Systems, Natural Resources Conservation Systems, and Animal Science Systems.

Table 4

*Missouri Agriculture, Food, and Natural Resources Career Clusters*

	Ag Business and Management	Ag Mechanics System	Plant Science/ Horticulture System	Food Science System	Natural Resources and Conservation System	Animal Science System
Introductory Course	Agricultural Management & Economics	Agricultural Structures	Biotechnology	Food Science & Technology	Conservation of Natural Resources	Animal Science
Agricultural Science I	Agricultural Management & Economics	Agricultural Structures	Biotechnology	Food Science & Technology	Conservation of Natural Resources	Animal Science
Agricultural Science II	Agricultural Sales & Marketing	Agricultural Power I	Crop Science	Supervised Agricultural Experience Co-op	Forestry Management	Biotechnology
39	Agricultural Communications	Agricultural Power II	Floriculture	Supervised Agricultural Experience Co-op	Supervised Agricultural Experience Co-op	Equine Science
	Supervised Agricultural Experience Co-op	Agricultural Machinery	Landscaping			Veterinary Science
		Supervised Agricultural Experience Co-op	Greenhouse Operations and Management			Supervised Agricultural Experience Co-op
			Nursery Operations & Management			
			Turf Management			
			Supervised Agricultural Experience Co-op			

## CHAPTER IV

### FINDINGS

Chapter IV addresses the findings of the study, presented in order of the research objectives.

#### *Research Objective One: Selected Characteristics*

Research Objective One sought to describe selected characteristics (sex, home setting, major and agriculture courses completed in high school) of CAFNR freshmen students. Data were summarized using frequencies and percentages. Table 5 displays the frequencies and percentages of the selected characteristics. A total of 41 (77.36 %) students were female, while the remaining 12 (22.64 %) were male.

CAFNR freshmen students' home setting is shown in Table 5. The greatest percentage of students, 64.15% ( $n = 34$ ), were from a farm setting. Nine (16.98 %) students reported being from a rural setting. 15.09% ( $n = 8$ ) reported being from a small town. The smallest percentage of students, 3.77% ( $n = 2$ ), were from a city.

CAFNR freshmen students reported their current major (see Table 5). The largest percentage (35.88%,  $n = 19$ ) were Animal Science majors. Agricultural Business Management comprised 16.98% ( $n = 9$ ) of the students. Eight (15.09%) of the students were Agricultural Education majors. Four (7.55 %) of the students were Agricultural Journalism majors. Three (5.66 %) of the students were Agricultural Systems Management majors, two (3.77 %) were enrolled in the Food Science major. Plant Science, Agricultural Economics, Biochemistry, and Fisheries and Wildlife Science each accounted for 1.89% ( $n = 1$ ) of the students. Four (7.55%) of the students reported

another major outside of CAFNR. Other majors listed included; Journalism, Health Sciences, Occupational Science, and Communication Science and Disorders.

Table 5

*Sex, Home Setting, and Academic Major of CAFNR Freshmen Students (n = 53)*

Characteristic	<i>f</i>	%
Sex		
Female	41	77.36
Male	12	22.64
Home Setting		
Farm	34	64.15
Rural	9	16.98
Small Town	8	15.09
City	2	3.77
Academic Major		
Animal Science	19	35.88
Agricultural Business Management	9	16.98
Agricultural Education	8	15.09
Agriculture Journalism	4	7.55
Agricultural Systems Management	3	5.66
Food Science	2	3.77
Plant Science	1	1.89
Agricultural Economics	1	1.89
Biochemistry	1	1.89
Fisheries and Wildlife Science	1	1.89
Other Major	4	7.55

Table 6 displays the agriculture courses completed in high school by CAFNR freshmen students. Nearly all (98.11%;  $n = 52$ ) of the students completed Agriculture Science I. Forty-six (86.79%) students completed Agriculture Science II. Twenty-five (47.17%) students completed Animal Science and 25 (47.17%) completed Greenhouse Operations and Management. Over thirty-five percent (35.85%;  $n = 19$ ) of the students completed Agricultural Management/Economics. Thirteen (24.53%) students completed

Floriculture and nine (16.98%) students completed Crop Science. The same amount (16.98%;  $n = 9$ ) also completed Agriculture Structures. Seven (13.21%) of the students were enrolled in Conservation Natural Resources in high school. Six (11.32%) students took Agricultural Power I and six (11.32%) students took Landscaping in school-based agricultural education. Agriculture Machinery, Agricultural Communications, and Turf Managements were each taken by 5 (9.43%) students. Supervised Occupational Experience in Agriculture (Co-op), Food Science and Technology, and Veterinary Science were each taken by four students (7.55%). Three (5.66%) students reported to have taken Nursery Operations and Management. Three students (5.66%) also reported to have completed Forest Management. Two (3.77%) students had taken Equine Science in high school. Agricultural Power II and Agricultural Literacy both had 1 student (1.89%) report to have completing the course in high school. No students reported having taken Biotechnology. Nineteen (35.85%) students reported completing other agricultural courses in high school. Other agricultural courses respondents listed were; Agriculture Leadership, Agriculture Construction, Woodworking, and Environmental Science.

Table 6  
*Agriculture Courses Completed in High School by CAFNR Freshmen (n = 53)*

Course	<i>f</i>	%
Agriculture Science I	52	98.11
Agriculture Science II	46	86.79
Animal Science	25	47.17
Greenhouse Operations & Management	25	47.17
Agricultural Management/ Economics	19	35.85
Agricultural Sales & Marketing	13	24.53
Floriculture	13	24.53
Crop Science	9	17.98
Agriculture Structures	9	17.98
Conservation Natural Resources	7	13.21
Agricultural Power I	6	11.32
Landscaping	6	11.32
Agricultural Machinery	5	9.43
Agricultural Communications	5	9.43
Turf Management	5	9.43
Supervised Occupational Experience in Ag (Co-op)	4	7.55
Food Science and Technology	4	7.55
Veterinary Science	4	7.55
Nursery Operations and Management	3	5.66
Forest Management	3	5.66
Equine Science	2	3.77
Agricultural Power II	1	1.89
Agricultural Literacy	1	1.89
Biotechnology	0	0.00
Other Agriculture Courses	19	35.85

*Research Objective Two: Motivation for Enrollment in School-based Agricultural Education*

The second research objective sought to describe the motivation for enrollment in school-based agricultural education of CAFNR freshmen students. Motivational factors addressed included: achievement, power, and affiliation.

Using a 5-point Likert scale, Table 7 displays the level of agreement for overall motivation to enroll in school-based agricultural education courses ( $M = 4.28$ ;  $SD = .19$ ).

Table 7 also shows the sub-constructs of motivation in regards to student enrollment in school-based agricultural education. Achievement was reported with a summated mean of 4.55 ( $SD = .53$ ). Power was reported with a summated mean of 4.25 ( $SD = .41$ ). Finally, affiliation was reported with a summated mean of 4.05 ( $SD = .21$ ).

Table 7

*Level of Agreement for Motivational Constructs Expressed by CAFNR Freshmen Students (n = 53)*

Construct	<i>M</i>	<i>SD</i>
Overall Motivation	4.28	.19
Achievement	4.55	.53
Power	4.25	.41
Affiliation	4.05	.21
Overall Motivation	4.28	.19

*Note.* Scale coded: 1.00 – 1.50 = Strongly Disagree, 1.51 – 2.50 = Disagree, 2.51 – 3.50 = Neither Agree/Disagree, 3.51 – 4.50 = Agree, 4.51 – 5.00 = Strongly Agree

Using frequencies and percentage, Table 8 summarizes the agreement level of CAFNR freshmen students to the statements under the construct of achievement, ranked in order from highest to lowest based upon mean level. All ten statements were found to have a mean value of 4.00 or greater. The highest rated item was; “I wanted to compete in contests in FFA such as Career Development Events” ( $M = 4.64$ ;  $SD = .59$ ). “I want to learn more about agriculture.” ( $M = 4.64$ ;  $SD = .71$ ), “I want to compete in award programs offered in FFA.” ( $M = 4.62$ ;  $SD = .77$ ), “I have a positive future in agriculture careers.” ( $M = 4.57$ ;  $SD = .77$ ), “I could be more competitive for college scholarships if I was involved in FFA.” ( $M = 4.57$ ;  $SD = .82$ ), “I wanted to expand my knowledge in agriculture.” ( $M = 4.53$ ;  $SD = .64$ ), “Agriculture classes were going to prepare me for a future career.” ( $M = 4.53$ ;  $SD = .72$ ), “I wanted to study agriculture in college.” ( $M =$

4.44;  $SD = .87$ ), “I wanted to better my understanding about agriculture.” ( $M = 4.47$ ;  $SD = .72$ ), and “I knew there would be employment opportunities in agriculture.” ( $M = 4.45$ ;  $SD = .91$ ).

Table 8

*Level of Agreement of Achievement Factors of CAFNR Freshmen Students (n = 53)*

Statement	1		2		3		4		5		M	SD
	f	(%)	f	(%)	f	(%)	f	(%)	f	(%)		
I wanted to compete in contests in FFA such as Career Development Events.	0	(0.00)	1	(1.82)	4	(7.27)	13	(23.64)	37	(67.27)	4.64	.59
I wanted to learn more about agriculture.	1	(1.82)	0	(0.00)	1	(1.82)	13	(23.64)	40	(72.73)	4.64	.71
I wanted to compete in award programs offered in FFA.	0	(0.00)	2	(3.64)	5	(9.09)	8	(14.55)	40	(77.73)	4.62	.77
I have a positive future in agriculture careers.	0	(0.00)	2	(3.64)	3	(5.45)	11	(20.00)	39	(70.91)	4.57	.77
I could be more competitive for college scholarships if I was involved in FFA.	1	(1.89)	1	(1.89)	2	(3.77)	12	(22.64)	37	(67.27)	4.57	.82
I wanted to expand my knowledge in agriculture.	0	(0.00)	1	(1.89)	1	(1.89)	20	(37.74)	31	(58.49)	4.53	.64
Agriculture classes were going to prepare me for a future career.	0	(0.00)	2	(3.77)	1	(1.89)	17	(32.08)	33	(62.26)	4.53	.72
I wanted to study agriculture in college.	0	(0.00)	4	(7.27)	1	(1.82)	14	(25.45)	34	(61.82)	4.47	.87
I wanted to better my understanding about agriculture.	1	(1.89)	0	(0.00)	2	(3.77)	20	(37.74)	30	(56.60)	4.47	.72
I knew there would be employment opportunities in agriculture.	2	(3.64)	0	(0.00)	3	(5.45)	15	(27.27)	35	(63.64)	4.45	.91

Note. Scale is coded: 1.00 – 1.50 = Strongly Disagree, 1.51 – 2.50 = Disagree, 2.51 – 3.50 = Neither Agree/Disagree, 3.51 – 4.50 = Agree, 4.51 – 5.00 = Strongly Agree

Using frequency and percentages, Table 9 summarizes the agreement level of CAFNR freshmen students to the statements under the construct of power, ranked in order from highest to lowest based upon mean level. Nine of the statements were found to have a mean value of 4.00 or higher. The nine statements were; “I wanted to have leadership roles in FFA.” ( $M = 4.64$ ;  $SD = .65$ ), “I wanted to be involved in decision making in the FFA chapter.” ( $M = 4.55$ ;  $SD = .77$ ), “I wanted to develop my leadership skills to use later in life.” ( $M = 4.53$ ;  $SD = .69$ ), “I wanted to promote agriculture to other students.” ( $M = 4.43$ ;  $SD = .79$ ), “Involvement in FFA would allow me to influence younger students.” ( $M = 4.38$ ;  $SD = .86$ ), “I wanted to have authority in the FFA chapter.” ( $M = 4.23$ ;  $SD = .93$ ), “My goal in FFA was to obtain leadership positions.” ( $M = 4.21$ ;  $SD = .90$ ), “I wanted to positively shape others through leadership abilities.” ( $M = 4.15$ ;  $SD = .79$ ), and “I had a personal interest in influencing other students.” ( $M = 4.11$ ;  $SD = .89$ ). The final statement in regards to the power motive was “I wanted to change the type of FFA activities at my high school.” ( $M = 3.32$ ;  $SD = 1.05$ ).

Table 9

*Level of Agreement of Power Motive Factors of CAFRN Freshmen Students (n = 53)*

Statement	1		2		3		4		5		M	SD
	f	(%)	f	(%)	f	(%)	f	(%)	f	(%)		
I wanted to have leadership roles in FFA.	0	(0.00)	1	(1.82)	5	(9.09)	10	(18.18)	39	(70.91)	4.64	.65
I wanted to be involved in decision making in the FFA chapter.	1	(1.82)	1	(1.82)	3	(5.45)	14	(25.45)	36	(65.45)	4.55	.77
I wanted to develop my leadership skills to use later in life.	0	(0.00)	1	(1.82)	3	(5.45)	16	(29.09)	35	(63.64)	4.53	.69
I wanted to promote agriculture to other students.	1	(1.89)	0	(0.00)	4	(7.55)	18	(33.96)	30	(56.60)	4.43	.79
Involvement in FFA would allow me to influence younger students.	1	(1.82)	1	(1.82)	7	(12.73)	16	(29.09)	30	(54.55)	4.38	.86
I wanted to have authority in the FFA chapter.	1	(1.89)	1	(1.89)	9	(16.98)	16	(30.19)	20	(49.06)	4.23	.93
My goal in FFA was to obtain leadership positions.	0	(0.00)	3	(5.66)	8	(15.09)	17	(32.08)	25	(47.17)	4.21	.90
I wanted to positively shape others through leadership abilities.	0	(0.00)	2	(3.60)	7	(12.73)	26	(47.27)	20	(36.36)	4.15	.79
I had a personal interest in influencing other students.	0	(0.00)	3	(5.66)	9	(16.98)	20	(37.74)	21	(39.62)	4.11	.89
I wanted to change the type of FFA activities at my high school.	2	(3.77)	10	(18.87)	17	(32.08)	17	(32.08)	7	(13.21)	3.32	1.05

Note. Scale is coded: 1.00 – 1.50 = Strongly Disagree, 1.51 – 2.50 = Disagree, 2.51 – 3.50 = Neither Agree/Disagree, 3.51 – 4.50 = Agree, 4.51 – 5.00 = Strongly Agree

Using frequency and percents, Table 10 summarizes the agreement level of CAFNR freshmen students to the statements under the construct of affiliation, ranked in order from highest to lowest based upon mean level. Seven of the statements were found to have mean values of 4.00 or greater. The seven statements were: “I wanted to be a part of the FFA chapter.” ( $M = 4.72$ ;  $SD = .69$ ), “The agriculture teacher was committed to the students in the agriculture program.” ( $M = 4.53$ ;  $SD = .82$ ), “The agriculture teacher took an interest in my education.” ( $M = 4.53$ ;  $SD = .77$ ), “The community was supporting of the agriculture program at my high school.” ( $M = 4.30$ ;  $SD = .97$ ), “Former agriculture students encouraged me to be involved in FFA.” ( $M = 4.30$ ;  $SD = .89$ ), “My friends were involved in the agriculture program.” ( $M = 4.21$ ;  $SD = .90$ ), and “My parents encouraged me to enroll in agriculture classes.” ( $M = 4.17$ ;  $SD = .89$ ).

Additionally, three statements were found to have mean values of less than 4.00. The three statements were: “The administration at my school supported the agriculture program.” ( $M = 3.91$ ;  $SD = 1.14$ ), “My siblings were involved in FFA.” ( $M = 3.19$ ;  $SD = 1.46$ ), and “My guidance counselor encouraged me to enroll in agriculture classes.” ( $M = 2.60$ ;  $SD = .90$ ).

Table 10

*Level of Agreement of Affiliation Motive Factors of CAFRN Freshmen Students (n = 53)*

Statement	1		2		3		4		5		M	SD
	f	(%)										
I wanted to be a part of the FFA chapter.	1	(1.89)	0	(0.00)	1	(1.89)	9	(16.98)	42	(79.25)	4.72	.69
The agriculture teacher was committed to the students in the agriculture program.	0	(0.00)	2	(3.77)	5	(9.43)	9	(16.98)	37	(69.81)	4.53	.82
The agriculture teacher took an interest in my education.	0	(0.00)	2	(3.77)	3	(5.66)	13	(24.53)	35	(66.04)	4.53	.77
The community was supportive of the agriculture program at my high school.	0	(0.00)	4	(7.27)	7	(12.73)	12	(21.82)	32	(58.18)	4.30	.97
Former agriculture students encouraged me to be involved in FFA.	1	(1.82)	2	(3.64)	6	(10.91)	19	(34.55)	27	(49.09)	4.30	.89
My friends were involved in the agriculture program.	1	(1.82)	1	(1.82)	20	(14.55)	20	(36.36)	25	(45.45)	4.21	.90
My parents encouraged me to enroll in agriculture classes.	1	(1.82)	0	(0.00)	12	(21.82)	19	(34.55)	23	(41.82)	4.17	.89
The administration at my school supported the agriculture program.	3	(5.45)	4	(7.55)	7	(13.21)	20	(37.74)	19	(35.85)	3.91	1.14
My siblings were involved in FFA.	11	(20.75)	4	(7.55)	17	(32.08)	6	(11.32)	15	(28.30)	3.19	1.46
My guidance counselor encouraged me to enroll in agriculture classes.	7	(12.73)	15	(27.27)	27	(49.09)	5	(9.09)	1	(1.82)	2.60	.90

Note. Scale is coded: 1.00 – 1.50 = Strongly Disagree, 1.51 – 2.50 = Disagree, 2.51 – 3.50 = Neither Agree/Disagree, 3.51 – 4.50 = Agree, 4.51 – 5.00 = Strongly Agree

*Research Objective Three: Compare Enrollment Reasons with Selected Characteristics*

The purpose of research objective three was to compare the level of agreement of each of the three constructs of motivation by CAFNR freshmen students' sex, home setting, major, and high school agriculture courses they completed.

To compare level of agreement by students' sex, means and standard deviations for each of the three motivation constructs are provided in Table 11. Cohen's *d* was used to compare the means values to determine the effect size reported (see Table 12). Effect sizes were calculated and interpreted using Thalheimer and Cook's (2003) descriptors. A huge effect size was found for the power motive (Cohen's *d* = 1.78). A very large effect size was found for the overall motivation of respondents (Cohen's *d* = 1.43). A medium effect size was found for the achievement motive (Cohen's *d* = 0.66). Finally, a negligible effect size was found for the affiliation motive (Cohen's *d* = 0.05).

Table 11

*Comparison of Students' Motivational Motives by Sex of CAFNR Freshmen Students*

Motive	Female ( <i>n</i> = 41)		Male ( <i>n</i> = 12)		Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Power	4.39	.29	3.77	.53	1.78 <sup>d</sup>
Overall Motivation	4.35	.13	4.06	.37	1.43 <sup>c</sup>
Achievement	4.60	.15	4.36	.75	0.66 <sup>b</sup>
Affiliation	4.04	.22	4.05	.20	0.05 <sup>a</sup>

*Note.* Scale coded: 1.00 – 1.50 = Strongly Disagree, 1.51 – 2.50 = Disagree, 2.51 – 3.50 = Neither Agree/Disagree, 3.51 – 4.50 = Agree, 4.51 – 5.00 = Strongly Agree  
Thalheimer & Cook's (2003) descriptors for describing relative size of Cohen's *d*: <sup>a</sup>= negligible, <sup>b</sup>= medium, <sup>c</sup>= very large, <sup>d</sup>= huge.

To compare levels of agreement with motivational factors with students' home setting, means and standard deviations are reported (see Table 12). For the achievement motive, students from a farm home setting reported a mean of 4.56 (*SD* = .45). Students

from a rural home setting (non-farm) reported a mean of 4.66 ( $SD = .35$ ). Students from a small town reported a mean level of agreement for achievement of 4.38 ( $SD = .99$ ).

Students reporting to have lived in a city while in high school reported a mean of 4.60 ( $SD = .14$ ) for achievement.

Students from a farm home setting reported a mean of 4.17 level of agreement, with a standard deviation of .60. Students from a rural setting reported a mean of 4.42 with a standard deviation of .57. Students from a small town reported a mean of 4.33 with a standard deviation of .95 for the power motive. Students residing in the city during high school reported a mean of 4.65 for power ( $SD = .07$ ).

For affiliation, students from a farm setting reported a mean of 4.05 ( $SD = .41$ ). Rural students reported a mean of 3.99 with a standard deviation of .43 for the motive of affiliation. Students from a small town reported a mean of 4.15 ( $SD = .44$ ) for affiliation. Students from a city reported a mean of 3.80 with a standard deviation of .26 for the motive of affiliation.

For overall motivation, students from a farm setting reported a mean level of agreement of 4.26 ( $SD = .41$ ). Students from a rural setting reported a mean level of agreement of 4.36 ( $SD = .29$ ). Students from a small town reported a mean level of agreement of 4.28 with the standard deviation being .74. The mean level of agreement for individuals residing in a city during high school was 4.35 for overall motivation ( $SD = .26$ ).

Table 12

*Comparison of Students' Motivational Motives by Home Setting on CAFNR Freshmen Students*

Motive	Farm ( <i>n</i> = 34)		Rural ( <i>n</i> = 9)		Small Town ( <i>n</i> = 8)		City ( <i>n</i> = 2)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Achievement	4.56	.45	4.66	.35	4.38	.99	4.60	.14
Power	4.17	.60	4.42	.57	4.33	.95	4.65	.07
Affiliation	4.05	.47	3.99	.43	4.15	.44	3.80	.70
Overall Motivation	4.26	.41	4.36	.29	4.28	.74	4.35	.26

*Note.* Scale coded: 1.00 – 1.50 = Strongly Disagree, 1.51 – 2.50 = Disagree, 2.51 – 3.50 = Neither Agree/Disagree, 3.51 – 4.50 = Agree, 4.51 – 5.00 = Strongly Agree

Table 13 depicts the comparison of motivational factors and the career pathway courses completed in secondary agricultural education. Students who completed introductory courses, Agriculture Science I and Agriculture Science II (*n* = 46), reported a mean score of 4.53 level of agreement for the achievement motive (*SD* = .56). Students completing coursework in the Agriculture Business and Management Systems career pathway (*n* = 31) reported a mean score of 4.51 for the achievement motive with a standard deviation of .61. Students completing coursework in the Agricultural Mechanics and Technology Systems career pathway (*n* = 18) reported a mean score of 4.61 for the achievement motive (*SD* = .75). Students completing courses in the Plant Science/Horticulture Systems (*n* = 40) career pathway reported a mean score of 4.55 for achievement with a standard deviation of .58. Students completing courses in the Food Science Systems (*n* = 7) career pathway reported a mean score of 4.67 for the achievement motive (*SD* = .41). Students completing coursework in the Natural Resources Conservation Systems (*n* = 12) career pathway reported a mean of 4.58 (*SD* = .42). Animal Science Systems career pathway students (*n* = 30) reported a mean of 4.60 (*SD* = .62).

The mean score reported for the power motive from students who completed introductory courses was 4.28 with a standard deviation of .64. Students who completed Agricultural Business and Management Systems course work reported a mean score of 4.28 with a standard deviation of .71 for the power motive. The mean score for the power motive from students completing course work in Agricultural Mechanics and Technology Systems was 4.23 ( $SD = .71$ ). Students who completed Plant Science/Horticulture coursework reported a mean score of 4.24 with a standard deviation of .71 for the power motive. The mean score of students completing Food Science Systems coursework for the power motive was 4.07 ( $SD = .48$ ). Students completing courses in Natural Resources Conservations Systems reported a mean score of 4.20 with a standard deviation of .66 for the power motive. The final career pathway, Animal Science Systems, reported a mean score of 4.23 with a standard deviation of .69 for the power motive.

The mean score reported for the affiliation motive from students who completed introductory courses was 4.05 with a standard deviation of .43. Students completing coursework in the Agricultural Business and Management Systems reported a mean score of 4.05 for the affiliation motive ( $SD = .37$ ). The mean score of students completing course work in Agricultural Mechanics and Technology Systems pathway for the affiliation motive was 4.01 with a mean score of .40. Students completing coursework in Plant Science/Horticulture Systems also reported a mean score of 4.01 for the affiliation motive ( $SD = .44$ ). The mean score for students completing course work in the Food Science Systems was 4.07 for the affiliation motive ( $SD = .33$ ). Students completing course work in Natural Resources Conservation Systems reported a mean score of 4.08 ( $SD = .38$ ) for the affiliation motive. Students completing course work in the Animal

Science Systems career pathway reported a mean score of 4.02 for affiliation motive ( $SD = .42$ ).

The overall level of agreement with the presented motivational factors did not vary among the seven career pathways in Missouri secondary agricultural education career pathways. Students completing coursework in Introductory Courses and Natural Resources Conservation Systems both reported a mean score of 4.29 with standard deviations of .45 and .40 respectively. Students completing course work in Agricultural Business and Management Systems, Agricultural Mechanics and Technology Systems, and Animal Science Systems reported a mean score for overall motivation of 4.28 ( $SD = .49$ ,  $SD = .53$ , and  $SD = .47$ ). Students completing coursework in Plant Science/Horticulture Systems and Food Science Systems reported mean scores of 4.27, with standard deviations of .48 and .30 respectively, for the level of overall agreement with the presented motivational characteristics.

Table 13

*Comparison of Students' Motivational Motives by Career Pathway Courses Completed in Secondary Agricultural Education*

Motive	Intro Courses (n = 46)		Ag Business (n = 31)		Ag Mechanics (n = 18)		Plant Science (n = 40)		Food Science (n = 7)		Natural Resources (n = 12)		Animal Science (n = 30)	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Achievement	4.53	.56	4.51	.61	4.61	.75	4.55	.58	4.67	.41	4.58	.42	4.60	.62
Power	4.28	.64	4.28	.71	4.23	.71	4.24	.68	4.07	.48	4.20	.66	4.23	.69
Affiliation	4.05	.43	4.05	.37	4.01	.40	4.01	.44	4.07	.33	4.08	.38	4.02	.42
Overall														
Motivation	4.29	.45	4.28	.49	4.28	.53	4.27	.48	4.27	.30	4.29	.40	4.28	.47

Note. Scale is coded: 1.00 – 1.50 = Strongly Disagree, 1.51 – 2.50 = Disagree, 2.51 – 3.50 = Neither Agree/Disagree, 3.51 – 4.50 = Agree, 4.51 – 5.00 = Strongly Agree

## CHAPTER V

### SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Chapter V will begin with an overview of the purpose of the study, research objectives, research design, population, instrumentation, and data collection methods. Chapter V will then address the summary of findings, conclusions, implications, and recommendations for future research.

#### Purpose of the Study

Previous similar studies (Turner & Herren, 1997; Rohs & Anderson, 2001) provided valuable insight to the purpose and research objectives of this study. The purpose of this study is to describe the relationship between selected characteristics of College of Agriculture, Food and Natural Resources freshman and motivation for enrolling in school-based agricultural education courses.

#### Research Objectives

This study was guided by the following research objectives:

1. Describe the selected characteristics (sex, home setting, major, agriculture classes completed in high school) of freshmen students in the College of Agriculture, Food and Natural Resources.
2. Describe the motivational factors regarding freshmen in students in CAFNR enrolled in secondary agricultural education programs.
3. Compare students' motivational factors for completing school-based agricultural education by selected characteristics (sex, home setting, and agriculture classes completed in high school).

## Research Design

This research design of this non-experimental quantitative study was descriptive -- correlational in nature. Descriptive research studies focus on describing existing conditions (Ary, Jacobs, & Razavieh, 2006). Ary et al. (2006) explain that this type of research often uses questionnaires to gather information from the subjects of the study. As literature on research design implied, this study utilized an online instrument to gather information regarding student motivation for enrollment in school-based agricultural education and their characteristics.

## Population

The target population of this study was all freshmen students in CAFNR who reported to be members of the National FFA Organization while in high school ( $N = 127$ ). The frame for this study was 2009 CAFNR freshmen students who indicated FFA membership on their scholarship application. This frame was obtained from the CAFNR Academic Programs Office.

A census of this population was used for two reasons. First, all students were accessible through University of Missouri e-mail system. Second, the questionnaire was distributed online, so cost was not a factor.

## Instrumentation

An online instrument, the Enrollment in High School Agricultural Education Questionnaire (Appendix C), was the primary data collection instrument. The instrument was distributed via e-mail and utilized Hosted Survey™, a web-hosted software application.

The Enrollment in High School Agricultural Education Questionnaire consisted of two sections. Section I measured the students' motivation for enrolling in a high

school agricultural education course. Section II addressed selected characteristics of CAFNR freshmen students such as; sex, home setting, major and agricultural courses completed in high school.

#### *Validity of the Enrollment in High School Agricultural Education Questionnaire*

To ensure validity of Section I of the Enrollment in High School Agricultural Education Questionnaire, face and construct validity were addressed. A panel of experts comprised of 6 individuals involved in agricultural education (Appendix A) reviewed the instrument and addressed face and construct validity. Slight modifications were made to Section I of the instrument as a result of the feedback provided by the panel.

#### *Reliability of the Enrollment in High School Agricultural Education Questionnaire*

The reliability of the instrument was also a concern. A pilot test was conducted with 25 current sophomores in CAFNR that were former high school FFA members. These students were asked via e-mail to complete the instrument. Based on the responses generated from the pilot test, Cronbach's alpha was calculated for each of the three motivation constructs. Cronbach's alpha levels ranged from .65 to .91. These results indicate internal reliability of the variables of interest. The second section of the questionnaire asked students to provide demographic information, which is not subject to reliability issues.

### Data Collection

The implementation of the data collection process began with an e-mail message and link to the web-based questionnaire (Appendix B) sent to the accessible population ( $N= 108$ ). The intent of this e-mail was to inform the subjects about the purpose of the study, the incentive to participate in the study, as well as provide the web link to the web-

based questionnaire. The e-mail message was sent out using the Hosted Survey™ software to each subject's University e-mail address. Each e-mail message indicated the researcher's University e-mail address as the origin of the message, as well as the "reply to" message.

## Summary of Findings With Conclusions, Implications and Recommendations

### *Research Objective One: Selected Characteristics*

CAFNR freshmen participating in this study consisted of 41 (77.36 %) females and 12 (22.64 %) males. The most frequent home setting for CAFNR freshmen students was a farm setting ( $n = 34$ ). 16.98% of the respondents lived in a rural setting. 15.09% lived in a small town (20,000 or less population), whereas 2 lived in a city (20,001 to 100,000 population).

Nineteen (35.88%) of CAFNR freshmen students in this study were Animal Science majors. 9 (16.9%) reported Agricultural Business Management majors. 8 (15.09 %) reported Agricultural Education majors. 4 (7.55 %) reported a major of Agricultural Journalism. 4 (7.55 %) reported a major outside of CAFNR. 3 (5.66 %) reported an Agricultural Systems Management major. 2 (3.77%) reported a Food Science major. Plant Science, Agricultural Economics, Biochemistry and Fisheries and Wildlife Science each were reported as a major for students ( $n = 1$ , 1.89%). Almost all (98.11%;  $n = 52$ ) of the respondents reported completing Agriculture Science I. This ranges to no students having completed Biotechnology.

### *Conclusion*

Demographic characteristics (sex, home setting, and career pathway) of the sample were described. Over 75 % of the CAFNR freshmen students who responded to the study were female. Nearly 65 % of the students reported living on a farm while they were enrolled in high school. The typical CAFNR freshmen student is a female from a farm that was enrolled in Agricultural Science I, Agricultural Science II, and other courses in an Agricultural Career Pathway.

### *Research Objective Two: Motivation for Enrollment in School-based Agricultural Education*

CAFNR freshmen students indicated a level of agreement to all three motivational constructs; achievement, power, and affiliation, as well as the overall construct of motivation. The level of agreement for overall motivation was a summated mean of 4.28 ( $SD = .19$ ). The summated mean level of agreement for the achievement motive was 4.55 ( $SD = .53$ ). The summated mean level of agreement for the power motive was 4.25 ( $SD = .41$ ). The summated mean level of agreement for the affiliation motive was 4.05 ( $SD = .19$ ). The scale of measurement for the levels of agreement was; 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree/Disagree, 4 = Agree, 5 = Strongly Agree.

### *Conclusion*

CAFNR freshmen students indicated a high level of agreement to all three factors of motivation, as well as the overall construct of motivation. The motivational factor of achievement was a high motivator to enroll in school-based agricultural education courses. This supports the 1997 study by Turner and Herren that reported agricultural

education students had a higher need for achievement, than affiliation and power. The need for power was found to have a stronger level of agreement than the need for affiliation. This displays an inconsistency compared to Turner and Herren (1997) and Rohs and Anderson (2001). Both the aforementioned studies found that the need for affiliation was higher than the need for power.

In conclusion, achievement, power and affiliation all are motivating factors that apply to why students enroll in school-based agricultural education. These three needs must be met for a student to be motivated to enroll in school-based agricultural education courses.

### *Implications*

CAFNR freshmen students were motivated by all three factors of McClelland's Acquired Needs Theory to enroll in school-based agricultural education courses. All three motives play a part in the decision making process.

If secondary agriculture instructors understood the motivational factors of students to enroll in agriculture courses, they will be able to effectively recruit and retain more students into their program. As Dyer, Breja, and Ball (2003) stated, retention of quality students is a problem afflicting secondary agriculture programs.

### *Recommendations*

Student motivation is an important factor when looking at student enrollment and retention in school-based agricultural education programs. It is essential for agriculture instructors to have an awareness of student motivational factors that are affecting enrollment in their agriculture courses. Furthermore, it is imperative that secondary

agriculture instructors utilize the motivational factors which affect enrollment to promote enrollment in their respective agricultural education program.

Agriculture instructors should be aware of the motivational needs of their students. To motivate a student driven by achievement to enroll in agricultural education coursework, teachers should provide opportunities to students that will be an attainable challenge. There are a number of opportunities in agricultural education to promote students with a high need for achievement such as, award programs, career development events, and classroom activities. Agriculture instructors should also provide students opportunities to learn more about agriculture, as this is an important aspect to the achievement motive. Having a positive future in agricultural careers is also an important point to make to students when recruiting.

Teachers should also make future students aware of the opportunities of group work, working within teams, and other opportunities to reach students with a high need for affiliation. Students with a high need for affiliation need to see the teamwork of officer teams, or the group dynamic of the FFA chapter or agriculture classes. Being a part of the FFA chapter is important to students motivated by affiliation. It is also important for the students to know the agriculture instructor is committed to the agricultural education program. Furthermore, the agriculture instructor must show an interest in students' learning to appeal to students motivated by affiliation.

Opportunities such as becoming officers in the FFA chapter and chairperson of committees should be addressed as some of the many ways to motivate students with a higher need for power. Agriculture instructors should showcase opportunities students will have to be involved in the decision making in the FFA chapter. Leadership skills that

will be useful later in life should also be presented to future students who may be motivated by the power motive. The main aspect agriculture instructors should promote to motivate future students with a need for power should be opportunities to influence and hold leadership positions.

Agriculture instructors need to incorporate the three motives suggested by McClelland into their recruitment strategies. To motivate a student with a high need for affiliation, the teacher should promote activities that allow the student to set and achieve attainable goals. To motivate a student with a higher need for power, the teacher should promote leadership opportunities, and opportunities for the student to influence the program or the FFA chapter. Students with a higher need for affiliation are motivated to enroll because of group or team activities. The agriculture instructor should promote activities that involve working with teams or groups to motivate these students.

*Research Objective Three: Compare Enrollment Motivation by Selected Characteristics*

Research objective three sought to compare the level of agreement on a 5 – point Likert scale of each of the three constructs of motivation by CAFNR freshmen students' sex, home setting, and agriculture courses completed in high school. To compare summated means of levels of agreement with the students' sex, a Cohen's  $d$  was used to report the effect size. A huge effect size was found for the power motive (Cohen's  $d = 1.78$ ). A very large effect size was found for the overall motivation of respondents (Cohen's  $d = 1.43$ ). A medium effect size was found for the achievement motive (Cohen's  $d = 0.66$ ). Finally, a negligible effect size was found for the affiliation motive (Cohen's  $d = 0.05$ ).

The overall motivation mean values ranged from 4.26 (Farm) to 4.36 (Rural). Summated mean values for each motivational factor was compared between the home setting of CAFNR freshmen students. The summated mean scores reported for the achievement motive ranged from 4.38 (Small Town) to 4.66 (Rural). The summated mean score reported for the power motive ranged from 4.17 (Farm) to 4.65 (City). The summated mean values reported for the affiliation motive ranged from 3.80 (City) to 4.15 (Small Town).

The summated mean values for the overall level of agreement with the motivational factors presented had little differentiation. The summated mean values ranged from 4.27 (Plant Science/Horticulture Systems and Food Science Systems) to 4.29 (Introductory Courses and Natural Resources Conservation Systems). Summated mean values for each motivational factor was also compared to the career pathway of courses completed by the student while in secondary agricultural education. The summated mean values for the achievement motive ranged from 4.53 (Introductory Courses) to 4.67 (Food Science Systems). The summated mean values for the power motive ranged from 4.07 (Food Science Systems) to 4.28 (Introductory Courses and Agricultural Business and Management Systems). The summated mean values for the affiliation motive ranged from 4.01 (Agricultural Mechanics and Technology Systems and Plant Science/Horticulture Systems) to 4.08 (Natural Resources Conservation Systems).

### *Conclusions*

Female students display a higher need for power than do males. Both male and female students indicated agreement with the achievement motive, the affiliation motive and the overall construct of motivation using these three motives. Turner and Herren

(1997) however found differences between male and female students in terms of the power and affiliation motive and no differences in the need for achievement.

Students from a farm, small town, or city indicated a higher need for the motive of achievement, than students from a rural, non-farm setting. Students from a city indicated a need for the power motive, than students from a farm setting, rural setting, or small town setting. All students indicated a high need for affiliation and the overall construct of motivation. Turner and Herren (1997) however found differences between rural and urban students in regards to the need for power. That study suggested students in a rural setting had a higher need for power than urban students.

Students across all career pathways in Missouri agricultural education had a high need for the motive of achievement. Students across all career pathways in Missouri also possessed a need for the motive of power, the motive of affiliation, and the overall all construct of motivation using these three motives.

### *Implications*

CAFNR freshmen students indicated a high need for all three of the constructs of motivation by sex, home setting, and career pathway of courses completed. Because of the small amount of differences in levels of agreement, secondary agriculture instructors should understand all three motivational needs of students and be prepared to present to meet all three motivational needs. The conclusions suggest all three motives must be addressed for individual students to be motivated to enroll in school-based agricultural education.

### *Recommendations*

The data suggests all students are motivated by the three motives (achievement, affiliation, and power) suggested by McClelland. Secondary agriculture instructors need to be aware of these motivators, but should not discount other factors that may provide motivation to students to enroll in agricultural education courses.

Because of the slight difference in the level of agreement of the motivational factor of power between male and female students, agriculture educators should keep this in mind and provide opportunities that will motivate the students to enroll in school-based agricultural education. Female students are more motivated by power, and agriculture instructors should illustrate opportunities for power in agricultural education courses. Female students will be more motivated by the opportunity to have leadership roles and be involved in decision making than males will be.

Male and female students did not differ in their level of agreement on the constructs of achievement and affiliation. Both male and female students should be provided opportunities that will tap into these motivational factors. Students will be motivated to enroll in school-based agricultural education if they understand the opportunity for achievement. Activities that will appeal to students motivated by the achievement motive include; Career Development Events, award programs, and future career opportunities. For the affiliation motive, one of the many opportunities would be to work in teams on assignments. One aspect of school-based agricultural education that appeals to student motivated by the affiliative motive is being a part of the FFA chapter. This can be accomplished through chapter activities, such as BBQs, trips and meetings. It

can also be accomplished through items that build chapter identity, such as chapter t-shirts, official dress, and teams.

### Recommendations for Further Research

Human motivation has been a concern for many years. Enrollment in school-based agricultural education has been tracked since its inception. Studies have been conducted to determine student motivation for enrollment in school-based agricultural education. However, these studies have just begun to scratch the surface of motivational factors that students feel to enroll in school-based agricultural education. Therefore, further research should be conducted in the motivational factors of students to enroll in school-based agricultural education courses. Further research should also be conducted in the motivational factors that retain students in school-based agricultural education.

The conclusions of this study may lead one to ask if McClelland's Acquired Needs Theory is the most appropriate motivational theory to apply to student enrollment factors in school-based agricultural education. Further investigation should be conducted to determine other motivational factors students feel to enroll in school-based agricultural education courses.

This study focused on CAFNR freshmen students' levels of agreement with McClelland's motivational factors they felt to enroll in school-based agricultural education courses. Therefore, further research should be conducted to determine secondary students' levels of agreement with the motivational factors they feel to enroll in school-based agricultural education courses.

Because this study focused on CAFNR freshmen students, further research could be conducted to determine those students' past activities in school based agricultural education. A question to ask for this research would be if there was a correlation between students' motivational needs and the activities in school-based agricultural education they were involved in. Activities could include CDE teams, chapter/area/state FFA offices, committees, and community events.

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APPENDIX A

PANEL OF EXPERTS

Name and Affiliation	Title
Agricultural Education	
Dr. Robert Torres	Professor, Director of Graduate Studies
Dr. Robert Terry Jr.	Professor, Department Chair
Dr. Anna Ball	Associate Professor, Director of Undergraduate Studies
William A Bird	Ph.D. Student and Graduate Assistant
College of Education	
Dr. Eryca Neville	Professor and Assistant Teacher
CAFNR Student	
Sean O'Brien	Sophomore CAFNR Student

APPENDIX B

CAFNR FRESHMEN STUDENT E-MAIL INVITATION

Dear <insert name> ,

You are receiving this e-mail because you were a former high school agricultural education student. I am writing to ask your help in a study of the motivational factors that lead students to enroll in school-based agricultural education. Your input will be used to enhance the understanding of student motivation and enrollment.

Your past involvement in high school agricultural education and in the FFA Organization allows you insight that is extremely valuable to the study. Your perspective can be provided by completing a web questionnaire. The web-based questionnaire consists of two sections. The first is reasons for enrollment in high school agricultural education courses. The second section gathers basic background information. The entire questionnaire will take approximately *10 minutes to complete*. I ask that you respond to each question openly and honestly by **Wednesday March 31**.

Your responses to this questionnaire are completely confidential and will be released only as summaries in which no individual's answers can be identified.

Survey

URL: <http://www.hostedsurvey.com/takesurvey.asp?c=Enroll144954&rc=adh%2D60>

Participation in this study is voluntary; however, you can help me very much by taking a few minutes to share your reasons of enrollment in high school agricultural education. Should you choose to not participate in this study, please reply to this e-mail "not participating" in the subject line. As a token of my appreciation, all individuals who complete this questionnaire will be entered into a random drawing for one of three *\$25 Visa gift cards*.

Should you have any questions regarding this study, please do not hesitate to contact me at [stacy.french@mizzou.edu](mailto:stacy.french@mizzou.edu).

Thank you in advance for your participation! I look forward to receiving your response by **Wednesday March 31**. Have a great day!

Sincerely,

**Stacy French**

**Department of Agricultural Education**

**University of Missouri**

This email was sent to [adhw26@mail.missouri.edu](mailto:adhw26@mail.missouri.edu) by [stacy.french@mizzou.edu](mailto:stacy.french@mizzou.edu).

If you have questions about this email or do not wish to receive additional emails, please reply or contact the survey administrator.

APPENDIX C

CAFNR FRESHMEN STUDENT QUESTIONNAIRE



# ***Enrollment in High School Agricultural Education***

PURPOSE: The purpose of this study is to find the motivation of students for enrolling in agricultural education courses in high school.

INSTRUCTIONS: There are two (2) sections to this questionnaire. The first section will consist of statements. Please choose your level of agreement with each statement in regards to reasons you enrolled in agriculture.

The second section asks for your demographic information.

Please read the INSTRUCTIONS on each page before beginning the section.

If you need assistance or have questions while taking this survey, please contact:

Stacy French  
[stacy.french@mizzou.edu](mailto:stacy.french@mizzou.edu)

**PREVIEW / TEST MODE**

*Your Responses Will Not Be Permanently Saved.*

Contact your survey administrator if you were directed to this INACTIVE version of the survey.

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### Enrollment in High School Agricultural Education

INSTRUCTIONS: On this page you will find statements that will describe reasons for enrolling in agriculture courses in high school. Please select the number that best describes level of agreement with the statement of your reason for enrollment in agriculture courses.

Page 1/4

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
My parents encouraged me to enroll in agriculture classes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to compete in award programs offered in FFA.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to have leadership roles in FFA.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to compete in contests in FFA such as Career Development Events (CDEs).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My guidance counselor encouraged me to enroll in agriculture classes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to positively shape others through leadership abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to be involved in decision making in the FFA chapter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The community was supportive of the agriculture program at my high school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a positive future in agriculture careers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to learn more about agriculture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My friends were involved in the agriculture program.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to develop my leadership skills to use later in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Involvement in FFA would allow me to influence younger students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Former agriculture students encouraged me to be involved in FFA.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I knew there would be employment opportunities in agriculture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### PREVIEW / TEST MODE

Your Responses Will Not Be Permanently Saved.

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### Enrollment in High School Agricultural Education (continued)

**INSTRUCTIONS:** One this page you will find statements that will describe reasons for enrolling in agriculture courses in high school. Please select the number that best describes level of agreement with the statement of your reason for enrollment in agriculture courses.

Page 2/4

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I wanted to study agriculture in college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My siblings were involved in FFA.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to change the type of FFA activities at my high school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to expand my knowledge in agriculture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The agriculture teacher was committed to the students in the agriculture program.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to promote agriculture to other students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had a personal interest in influencing other students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The agriculture teacher took an interest in my education.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agriculture classes were going to prepare me for a future career.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to better my understanding about agriculture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
The administration at my school supported the agriculture program.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to have authority in the FFA chapter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to be a part of the FFA chapter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could be more competitive for college scholarships if I was involved in FFA.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My goal in FFA was to obtain leadership positions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### PREVIEW / TEST MODE

Your Responses Will Not Be Permanently Saved.

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## Demographic Information

INSTRUCTIONS: Please select the answer that best describes you.

Page 3/4

What is your sex?

- Female
- Male

Where did you live when attending high school?

- Farm
- Rural
- Small Town (Less than 20,000 population)
- City (20,001 - 100,000 population)
- Urban (Greater than 100,000 population)

What is your current major?

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## Demographics Information (continued)

Page 4/4

What agricultural education classes did you take in high school? (Select all that apply)

- Agricultural Science I
- Agricultural Science II
- Agricultural Management/Economics
- Animal Science
- Crop Science
- Agricultural Sales and Marketing
- Agricultural Power I
- Agricultural Power II
- Agricultural Machinery
- Agricultural Structures
- Floriculture
- Greenhouse Operation/Management
- Nursery Operation and Management
- Turf Management
- Landscaping
- Conservation Natural Resources
- Forest Management
- Supervised Occupational Experience in Ag (Co-op)
- Agricultural Literacy
- Food Science and Technology
- Agricultural Communications
- Biotechnology
- Equine Science
- Veterinary Science
- Other Agricultural Course
- None of the above

### PREVIEW / TEST MODE

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Please list other agriculture courses you took in high school.

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APPENDIX D

CAFNR STUDENT PILOT E-MAIL INVITATION

Dear <insert name>,

You are receiving this email because you were a former high school agricultural education student. I am writing to ask your help in developing a questionnaire to be used in a study of the motivational factors that lead students to enroll in high school agricultural education. Your input will be used to enhance the questionnaire designed to study the understanding of student motivation and enrollment.

Your past involvement in high school agricultural education and in the FFA Organization allows you insight that is extremely valuable to this study. Your perspective can be provided by completing a web questionnaire. The web-based questionnaire consists of two sections. The first is reasons for enrollment in high school agricultural education courses. The second section gathers basic background information. The entire questionnaire will take approximately *10 minutes to complete*. I ask that you respond to each question openly and honestly by **March 5**.

Your responses to this questionnaire are completely confidential and will be used only for questionnaire development.

Survey URL: <http://www.hostedsurvey.com/takesurvey.asp?c=Enroll144954>

Thank you in advance for your participation! I look forward to receiving your response by **Friday March 5<sup>th</sup>**. Have a great day!

Sincerely,

Stacy French  
Department of Agricultural Education  
University of Missouri

This email was sent to adhw26@mail.missouri.edu by stacy.french@mizzou.edu.

If you have questions about this email or do not wish to receive additional emails, please reply or contact the survey administrator.

APPENDIX E

PILOT QUESTIONNAIRE



# ***Enrollment in High School Agricultural Education***

PURPOSE: The purpose of this study is to find the motivation of students for enrolling in agricultural education courses in high school.

INSTRUCTIONS: There are two (2) sections to this questionnaire. The first section will consist of statements. Please choose your level of agreement with each statement in regards to reasons you enrolled in agriculture.

The second section asks for your demographic information.

Please read the INSTRUCTIONS on each page before beginning the section.

If you need assistance or have questions while taking this survey, please contact:

Stacy French  
[stacy.french@mizzou.edu](mailto:stacy.french@mizzou.edu)

**PREVIEW / TEST MODE**

*Your Responses Will Not Be Permanently Saved.*

Contact your survey administrator if you were directed to this INACTIVE version of the survey.

[Begin Survey](#)

If you are resuming this survey, please enter your return code here:





### Enrollment in High School Agricultural Education

INSTRUCTIONS: On this page you will find statements that will describe reasons for enrolling in agriculture courses in high school. Please select the number that best describes level of agreement with the statement of your reason for enrollment in agriculture courses.

Page 1/4

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
My parents encouraged me to enroll in agriculture classes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to compete in award programs offered in FFA.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to have leadership roles in FFA.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to compete in contests in FFA such as Career Development Events (CDEs).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My guidance counselor encouraged me to enroll in agriculture classes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to positively shape others through leadership abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to be involved in decision making in the FFA chapter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The community was supportive of the agriculture program at my high school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a positive future in agriculture careers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to learn more about agriculture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My friends were involved in the agriculture program.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to develop my leadership skills to use later in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Involvement in FFA would allow me to influence younger students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Former agriculture students encouraged me to be involved in FFA.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I knew there would be employment opportunities in agriculture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### PREVIEW / TEST MODE

Your Responses Will Not Be Permanently Saved.

Contact your survey administrator if you were directed to this INACTIVE version of the survey.



### Enrollment in High School Agricultural Education (continued)

INSTRUCTIONS: On this page you will find statements that will describe reasons for enrolling in agriculture courses in high school. Please select the number that best describes level of agreement with the statement of your reason for enrollment in agriculture courses.

Page 2/4

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I wanted to study agriculture in college.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My siblings were involved in FFA.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to change the type of FFA activities at my high school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to expand my knowledge in agriculture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The agriculture teacher was committed to the students in the agriculture program.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to promote agriculture to other students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had a personal interest in influencing other students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The agriculture teacher took an interest in my education.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agriculture classes were going to prepare me for a future career.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to better my understanding about agriculture.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
The administration at my school supported the agriculture program.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to have authority in the FFA chapter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wanted to be a part of the FFA chapter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could be more competitive for college scholarships if I was involved in FFA.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My goal in FFA was to obtain leadership positions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### PREVIEW / TEST MODE

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### Demographic Information

INSTRUCTIONS: Please select the answer that best describes you.

Page 3/4

What is your sex?

- Female
- Male

Where did you live when attending high school?

- Farm
- Rural
- Small Town (Less than 20,000 population)
- City (20,001 - 100,000 population)
- Urban (Greater than 100,000 population)

What is your current major?

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## Demographics Information (continued)

Page 4/4

What agricultural education classes did you take in high school? (Select all that apply)

- Agricultural Science I
- Agricultural Science II
- Agricultural Management/Economics
- Animal Science
- Crop Science
- Agricultural Sales and Marketing
- Agricultural Power I
- Agricultural Power II
- Agricultural Machinery
- Agricultural Structures
- Floriculture
- Greenhouse Operation/Management
- Nursery Operation and Management
- Turf Management
- Landscaping
- Conservation Natural Resources
- Forest Management
- Supervised Occupational Experience in Ag (Co-op)
- Agricultural Literacy
- Food Science and Technology
- Agricultural Communications
- Biotechnology
- Equine Science
- Veterinary Science
- Other Agricultural Course
- None of the above

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Please list other agriculture courses you took in high school.

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