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PERCEPTIONS OF SECONDARY AGRICULTURAL EDUCATION PROGRAMS,
THE NATIONAL FFA ORGANIZATION, AND AGRICULTURAL CAREERS
OF STUDENTS NOT ENROLLED IN A HIGH SCHOOL AGRICULTURAL COURSE

THESIS

A thesis submitted in partial fulfillment of the
requirements for the degree of Masters of Science in the
College of Agriculture, Food and Environment
at the University of Kentucky

By

Rebecca Ann Russell

Lexington, Kentucky

Chair: Dr. Rebekah Epps, Assistant Professor of Agricultural Education

Lexington, Kentucky

2016

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ABSTRACT OF THESIS

PERCEPTIONS OF SECONDARY AGRICULTURAL EDUCATION PROGRAMS, THE NATIONAL FFA ORGANIZATION, AND AGRICULTURAL CAREERS OF STUDENTS NOT ENROLLED IN A HIGH SCHOOL AGRICULTURAL COURSE

Secondary agricultural education programs provide students an opportunity to gain a wide variety of knowledge about agriculture, as well as, the career opportunities within agriculture. The National FFA Organization is available for all youth enrolled in a secondary agricultural education program with a mission to make a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success. In order to continue to have youth interested in agricultural colleges and the potential for pursuing agricultural careers, students must be educated about those program areas. Student perceptions of these program areas can greatly influence their motivation enroll in secondary agricultural education programs, join the National FFA Organization, and pursue agricultural career. This study used a survey method to determine the perceptions of students not enrolled in a high school agricultural program of secondary agricultural education programs, the National FFA Organization, and agricultural careers, as well as, determine the demographic characteristics of those students.

KEYWORDS: Secondary Agricultural Education Program, National FFA Organization, Agricultural Careers, Motivation

Rebecca Ann Russell

July 28, 2016

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Dedicated to my parents for their continued encouragement, love, and support as I pursue higher education. Without their guidance and care, I would not be the person I am today.

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Chapter One: Introduction

Agriculture Importance

Agriculture is a broad industry which influences society by providing food, fiber, and fuel. The agriculture industry employs 15% of the total workforce in North America (American Farm Bureau, 2013). While the importance of agriculture is increasing, many people do not have a good understanding about agriculture, how food is produced, or the social and economic significance of agriculture (Frick, Birkenholz, Gardner, & Machtmes, 1995; Reis & Kahler, 1997). While it is important to educate the public about agriculture, it is equally important to know the public's current perceptions of agriculture.

Where and how the general public receives information about agricultural issues will affect their perceptions of agriculture. It is easy for American adults to find information through news mediums such as television, newspaper, or social media. The information received through these sources may not always be reliable and can affect adult perceptions of the agriculture industry. It is necessary to understand where youth receive information about agricultural issues because the youth are the next generation to enter the agricultural workforce; therefore, their perceptions can greatly affect the future of the industry as a whole. Richards et al. (2000) found middle schools students (grades 6-8) cited family, school, and parents as sources for agricultural information. With the majority of their sources being adult members, who receive their information through media sources instead of research, students may not be receiving reliable information about the agriculture industry.

Urban areas hold a large volume of students, yet the focus of agricultural studies in those areas may not be as strong as rural areas. Frick, Birkenholz, Gardner, & Machtmes (1995) found rural high school students have a higher content knowledge of agriculture than

urban high school students. They also concluded, while knowledge is limited for urban high school students, the urban student's perceptions of agriculture were still fairly positive. While perceptions may be fairly positive, urban high school students rarely have the opportunity to visit with farmers to develop their perceptions through real-life experience (Frick, Birkenholz, Gardner, & Machtmes, 1995). With a decline in rural farmland, urban areas are growing; increasing the percentage of youth which are removed from the farm. Farms may not be as conveniently located in urban areas as farms would be in a rural area; therefore, urban high school students could have difficulty finding transportation to farms. It is important to educate youth to keep positive perceptions of agriculture in heavily populated areas. Secondary agricultural education programs provide youth with reliable information about the agricultural industry. These programs enhance student's agricultural knowledge to help develop individuals who are ready to face future agricultural challenges.

Secondary Agricultural Education Programs

Secondary agricultural education programs provide students an opportunity to gain a wide variety of knowledge of agriculture and the opportunities within the industry. These program areas are offered as elective classes, therefore, students must choose to enroll in them. Program areas within secondary agricultural education programs include, but are not limited to, horticulture and plant science systems, animal science systems, environmental science and natural resources systems, and agricultural power, structural, and technical mechanics (Kentucky Department of Education, 2015). Secondary agricultural education programs use the three component model utilized by the National FFA Organization (Figure 1.1). The three component model consists of "classroom/laboratory, SAE, and FFA (National FFA Organization, 2015). According to the National FFA Organization (2015), the

classroom component should contain contextual, inquiry-based instruction and learning through an interactive classroom and laboratory. Agriculture teachers are encouraged to provide students the learning environment to adhere to the classroom component.

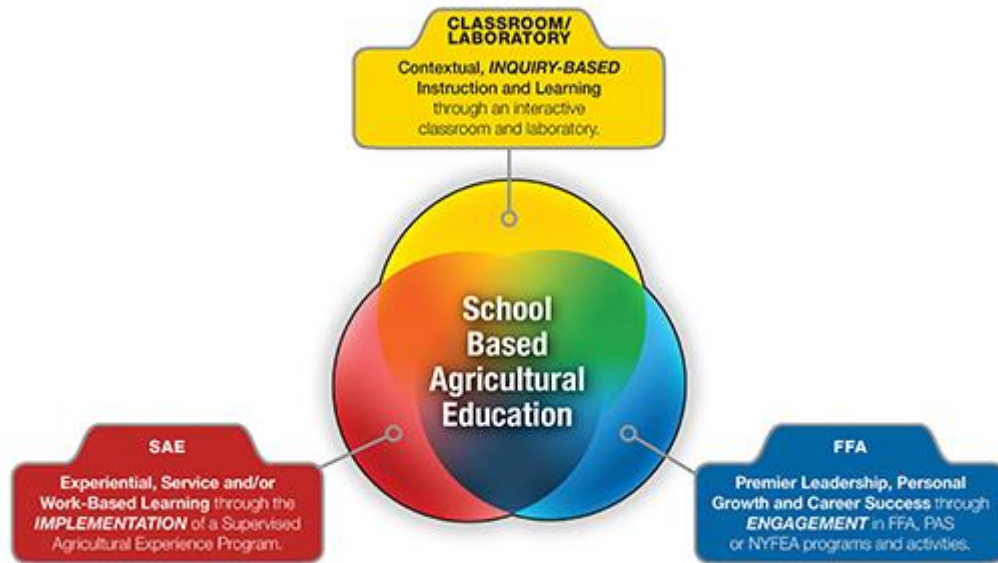


Figure 1.1. Three Component Model. “National FFA Organization, 2015”

Traditionally, agricultural education courses were known for teaching production agriculture (Dyer & Breja, 2003). Even with a shift to more modern curricula, there is still a common misconception that production agriculture is the primary focus of secondary agricultural education programs (Reis & Kahler, 1997). This misconception could cause students to choose other program areas that do not include agricultural studies.

National FFA Organization

The National FFA Organization (FFA) is for youth who are enrolled in an agricultural education program. The mission of FFA is to make a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success through agricultural education (National FFA Organization, 2015). FFA also

provides students a wealth of opportunities through 24 different Career Development Events (CDE's). Career Development Events allow students to begin exploring the agricultural job market and develop the necessary skills to be successful in those careers (National FFA Organization, 2015). FFA is another component within the three component model. In order to follow the model, students must actively be engaged in one of the following student leadership organizations: National FFA Organization, National Young Farmer Educational Association, or the National Post-Secondary Agricultural Student Organization. Through this model, students should be able to achieve the mission of FFA; in turn, developing students in to strong future agricultural leaders.

Students who are taking secondary agricultural education classes are encouraged to join FFA to reap the benefits, but not all students choose to join the organization. Student's perceptions of FFA help determine whether or not students will join FFA (Croom & Flowers, 2001). Members of the FFA are more influenced by an agricultural teacher than anyone else to join the organization, but members who did not join said they were not interested at all (Talbert & Balschweid, 2004). Peaking student interest in FFA as an intra-curricular activity is an integral part of the organization's success. Urban students' negative perceptions of FFA may be a barrier to recruiting urban students to be active in FFA (Martin & Kitchel, 2014). A student's need for a sense of belonging must be met by FFA to encourage them to join the organization (Croom & Flowers, 2001). Secondary agricultural education programs need to be sure they recruit students into FFA by providing a variety of events to meet a variety of needs. If a student feels FFA will not meet those needs, they may not be motivated to join.

Potential for participation in the FFA increases as enrollment in the secondary agricultural education program increases. The most used strategy for recruitment by

agricultural educators is to contact feeder schools for the agriculture program (Myers, Dyer, & Breja, 2003). A middle school would be a good example of a feeder school because those students will be entering the secondary schools in one to three years. Positive contact with guidance counselors can have a large impact on attitudes of students coming into the program (Myers, Dyer, & Breja, 2003). If positive contact is kept with guidance counselors, leaders in the secondary agricultural education programs can develop recruitment events at feeder schools. By working with feeder schools, agricultural programs and the National FFA Organization can maintain a more positive reputation.

Supervised Agricultural Experiences

The third component of the model is experiential, service, and/or work-based learning through implementation of a Supervised Agricultural Experience Program, also known as SAE (National FFA Organization, 2015). SAE's allow students to have an agricultural project in one of the following categories: entrepreneurship, placement, research and experimentation, and exploratory; which help connect real-life experiences to what students are learning in class and through FFA. Through their SAE projects, students develop crucial life skills, such as record-keeping (finances, hours, activities, etc.), problem-solving, and career exploration. These projects help prepare students for future agricultural careers.

Agricultural Careers

In order to continue to have youth interested in agriculture, students must be educated about the importance of, and opportunities in, the agriculture industry. Diversity in the agricultural workforce should depict the diversity of the U.S. population. Urban areas are growing; increasing the percentage of youth which are removed from the farm. With a limited knowledge of agriculture, urban high school students may also have a limited

knowledge of career opportunities in the agricultural industry. Underrepresented audiences in agricultural careers are limited, and a large barrier to these limitations is the lack of information about career opportunities in agriculture (Outley, 2008). Urban high school students perceive careers in agriculture as being for people who have an agricultural background (White, Stewart, & Linhardt, 1991). Esters & Bowen (2005) found students who did not choose an agricultural career cited a lack of career opportunities as a reason. Changing these perceptions is imperative to the success of agriculture programs. Merely taking part in a recruitment workshop can reflect more positive attitudes of students about agriculture as a career from before and after the workshop (Fraze, Wingenbach, Rutherford, & Wolfskill, 2011). General exposure to agricultural subjects could change the minds of many youth.

Demographics in urban high schools are largely diverse. It is important for urban high school students to be educated about the career opportunities within the agricultural workforce. Diversity in the agricultural workforce should depict the diversity in the United States. In order to have these accurate representations, colleges of agriculture must first recruit under-represented students in to agricultural degree programs, which can largely be done in urban areas (Fraze, Rutherford, Wingenbach, & Wolfskill, 2011). Some students who graduated from an urban agricultural high school indicated a lack of underrepresented audiences in agriculture, which kept students from pursuing an agricultural career (Esters & Bowen, 2005).

Educating students about career opportunities available in agriculture could, in turn, increase diversity in the agricultural workforce. Understanding the barriers of students enrolling in agriculture-related classes, FFA, or entering agriculture related careers is

important for the future of the agriculture industry. Vincent, Henry, & Anderson (2012) found structural barriers that exist for under-represented students enrolling in college of agriculture could start with the culture of the agricultural industry portrayed by the teacher. Identifying student attitudes toward agriculture can provide information about whether students would have an interest of entering an agriculture-related career (Osborne & Dyer, 2000).

Exposing students to agricultural opportunities and increasing the number of under-represented students studying in agricultural majors is necessary (Foster & Savala, 2012). Agricultural colleges are now trying to target a higher number of urban students; therefore, urban, under-represented students should be the populations which these colleges should turn recruitment efforts (White, Stewart, & Linhardt, 1991). Yet, it is still difficult for colleges of agriculture to recruit diverse populations of youth (Fraze, Wingenbach, Rutherford, & Wolfskill, 2011). New recruitment strategies need to be addressed in order to reach the ever-changing urban population.

Research Purpose and Objectives

This study is needed because the perceptions obtained from it can help determine what barriers exist for students choosing whether or not to enroll in secondary agricultural education programs, the National FFA Organization, and agricultural careers. There have been some studies that focus on perceptions of agriculture or focus on one of the three categories listed in this thesis to determine how student perceptions affected their willingness to enter an agricultural career. Understanding these perceptions can help determine what needs to be done at the secondary agricultural education level to help increase enrollment in this specific school.

The purpose of this study is to determine the perceptions students not enrolled in a secondary agricultural education program have of secondary agricultural education programs, the National FFA Organization, agricultural careers, and identify the demographics of the students with these perceptions. This study will evaluate the perceptions of students who are not enrolled in a secondary agricultural education program to determine what barriers may exist to students participating in those programs, and ultimately choosing agricultural careers. Knowing the perceptions of students not enrolled in the high school agriculture program may provide enough information to increase enrollment the next year. The following objectives guided this research:

1. Describe the perceptions of secondary agricultural education programs by students not enrolled in a high school agriculture program.
2. Describe the perceptions of the National FFA Organization by students not enrolled in a high school agriculture program.
3. Describe the perceptions of agricultural careers by students not enrolled in a high school agriculture program.
4. Identify demographic characteristics of students not enrolled in a high school agriculture program.

Operational Definitions

The following terms used in this study were defined as follows:

1. Urban- city with a population of at least 50,000 people
2. Rural- encompasses all population, housing, and territory not included within an urban area

3. Urban adjacent community- a community located in close proximity to an urban community
4. Secondary agricultural education programs- programs available to high school students to learn about agriculture and natural resources, as well as, careers within the agricultural industry
5. The National FFA Organization (FFA)- student organization open to any student enrolled in a secondary agricultural education program
6. Supervised agricultural experiences (SAE)- agricultural projects completed during a student's agricultural course
7. Career and development events (CDE's)- contests for FFA members that are used to test skills they have learned in their agricultural course
8. Agricultural careers- careers that fall within the agriculture and natural resources career cluster

Chapter Two: Literature Review

Outside of core curriculum, elective curriculum in schools is very diverse; which allows students to have a variety of options when it comes to classes they can take. Students are motivated in the choices they make based on future goals, intrinsic motivation, extrinsic motivation, classroom environment, teacher effectiveness, potential for achievement, along with many other factors (Wigfield & Eccles, 2000, Ames, 1990, Husman & Lens, 1999, Ryan & Deci, 2000). Determining what motivates students to take particular classes can be instrumental in the development of elective programs in the future.

Theoretical Framework

According to Weiner (1992), motivation is why people think and behave the way they do. Studying motivation helps researchers understand those thoughts and behaviors (Weiner, 1992). People differ in the amount of motivation, as well as, the types of motivation they have (Ryan & Deci, 2000). One important factor in education is determining what motivates students to learn. In order to be effective at sustaining students to be involved in learning, teachers must “develop goals, beliefs, and attitudes” (Ames, 1990, p. 410) within the classroom. If students are motivated to learn, they will value and engage in the informational process (Brophy, 1983). Yet, peaking student’s interest and motivation for school activities can be difficult (Husman & Lens, 1999).

People’s perceptions of potential achievement will determine their willingness to participate in activities (Wigfield & Eccles, 2000). If a person believes they will be unsuccessful in an activity, that person less likely to participate in that activity. Yet, to determine if they will be successful or not, a person must be familiar with the task they are assessing (Myers, Dyer, & Breja, 2003). For example, a student may choose to enroll in a

course because they believe they will be successful in that course because they have taken the course before it and have a general knowledge of the subject matter. An example in the context of this study; a student may choose not to enroll in a secondary agricultural education program or the National FFA Organization because they are not familiar with the course or organization and may not be able to determine potential success.

According to Ames (1990), desired rewards and the potential to develop skills and ability may be why students choose to participate in activities at school. In the context of this study, student perceptions of secondary agricultural education programs and the National FFA Organization are important to determine motivation to enroll or not enroll in those programs. There are many theories that fall under the theoretical construct of motivation. The theory specific to this study is Expectancy-Value Theory, which focuses on differences in decision making when choosing academic courses, potential careers, and activities to participate in (Wigfield, Eccles, Shiefele, Roeser, and Davis-Kean, 2006). This theory was chosen because student perceptions of potential achievement will determine their willingness to participate in activities, in turn, the perceptions of agricultural programs was studied to determine why students may not be motivated to choose agricultural programs.

Expectancy is defined as what we believe about our future or how we expect activities to contribute to our future or if a person expects to do well on a specific task. (Wigfield & Eccles, 2000). If a person deems an activity as having no contribution to their future or they feel they will not be successful, that person may not be motivated to participate in that activity. Value is defined as the appeal an activity has to increase the individual's desire to participate; or the worth of the activity to the individual (Wigfield, Tonks, & Klauda, 2009). If a person deems an activity to have no value, they may not be motivated to

participate in that activity. According to Croom & Flowers (2001, p. 28), “the value of any member-based organization resides essentially in the minds of its members.” To become involved in elective classes or extracurricular activities, a person must feel it will add value to their life. According to Brophy (1983), if students value learning, they will attempt to maximize their ability to understand concepts or skills. Current expectancy-value theories determine how values and expectancies influence “choice, persistence, and performance” (Wigfield, Tonks, & Klauda, 2009). Eccles, Wigfield & colleagues Expectancy-Value Model is shown in Figure 2.1.

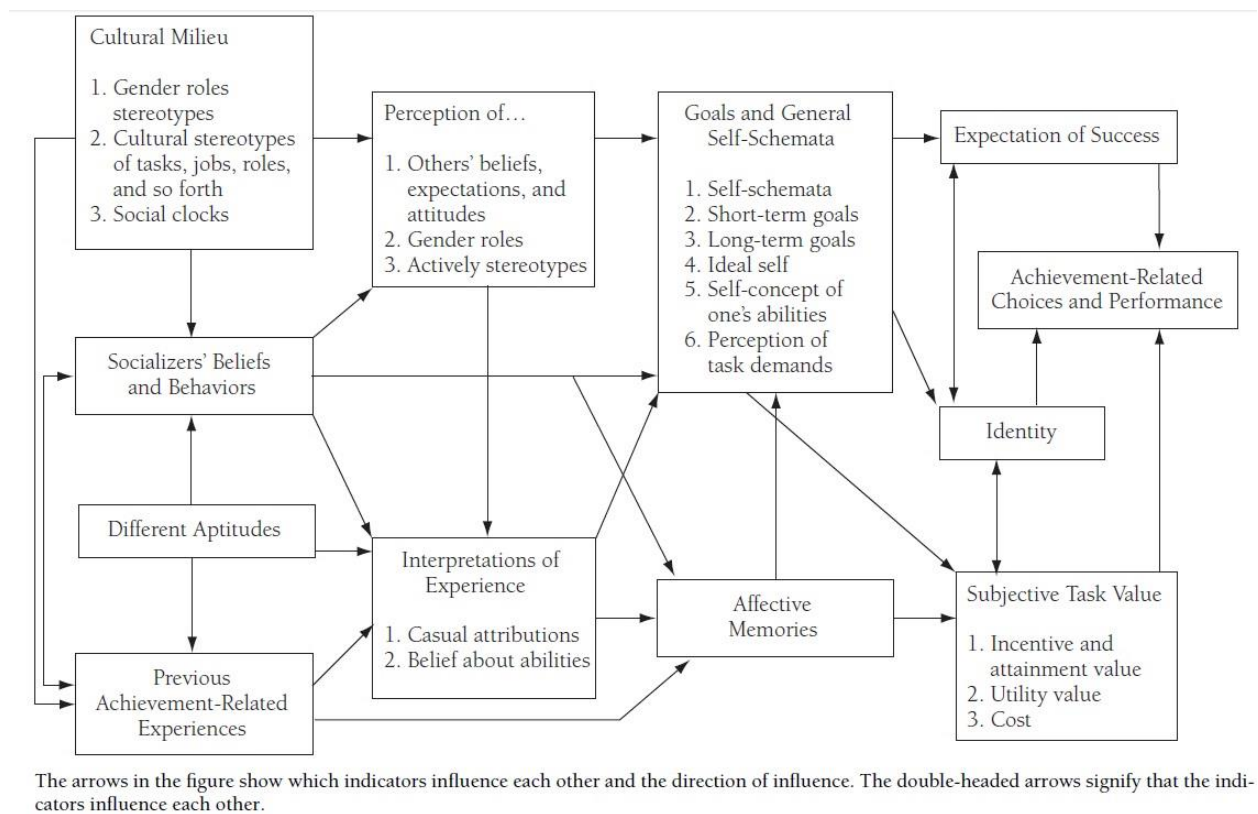


Figure 2.1: Eccles, Wigfield, and colleagues “Expectancy-Value Model”

This model shows “expectancies and values are assumed to be influenced by task-specific beliefs such as ability beliefs, the perceived difficulty of different tasks, and individuals’ goals, self-schema, and affective memories” (Wigfield & Eccles, 2000, p. 69).

According to Wigfield et.al. (2006), a child's beliefs, values, and goals influence their motivation to participate in a variety of activities. For example, if there are two students who go to a recruitment event for programs in their school and determine the agriculture class will be fun, both hold the class at the same value. Student One then meets the teachers and has a positive experience; Student One's value for that class is still high. Student Two meets the teacher and has a negative experience; Student Two's value for the class then falls. In return, Student One's expectancy outcome for the class is the class will be good but Student Two's expectancy outcome is the class will be bad. Therefore, Student One may choose to take the class while Student Two may choose not to take the class. For students to become involved in extracurricular activities, they must be motivated to do so.

Students' perceptions of agriculture will influence their choice of pursuing an agricultural career (Osborne & Dyer, 2000). Osborne & Dyer (2000) examined attitudes of students and parents toward agriculture as a career, education program, and agriculture program quality. While both parents and students held positive perceptions of agriculture, parents were not sure they would encourage their child to pursue an agricultural career (Osborne & Dyer, 2000). While Osborne & Dyer (2000) found the perceptions of students and parents of agriculture and science programs to be high, both groups were not as certain about the quality of high school agricultural education programs. This could be a major factor as agricultural education programs try to recruit more high school students.

Esters & Bowen (2004) studied both the factors influencing urban student enrollment in agricultural programs and urban students' choices of agricultural careers. Esters & Bowen (2004) used a questionnaire to survey students who graduated from an urban agricultural high school between 1992 and 1995. Parents or guardians had the highest influence of

students enrolling in an urban agricultural high school, with the female parent or guardian having the most influence (Esters & Bowen, 2004). Other factors that influenced enrollment in the urban agricultural program included: “recruitment events, interest in animals, and agricultural career aspirations” (Esters & Bowen, 2004, p. 32). While parents had the highest influence on students choosing to enroll in agricultural programs, students responded parents had a low influence on their choice of an agricultural career (Esters & Bowen, 2005). Some factors which were identified by students to not choose agricultural careers included the lack of under-represented populations in agricultural careers and a lack of career opportunities (Esters & Bowen, 2005). This can be extremely important in urban areas where the majority of some schools can be under-represented students. It is critical to target students of all ethnicities and socio-economic statuses to join the agriculture and FFA programs.

Student’s perceptions of FFA help determine whether or not they will join the organization (Croom & Flowers, 2001). Croom & Flowers (2001) wanted to determine if there was a difference between members and non-members of FFA about the perception of the program. They also wanted to determine what influenced those perceptions of FFA. The researchers studied first year students of an agricultural program who were enrolled in the introductory course. Croom & Flowers (2001) found the perception of the school’s FFA was more positive by members than by non-members. They also found student perceptions of FFA were not affected by gender, ethnicity, enrollment in an agriculture class, block scheduling, or grade level.

The organizational culture of FFA and urban students’ abilities to identify with FFA can influence whether urban students choose to be active in the organization (Martin & Kitchel, 2014). Martin & Kitchel (2014) performed a case study to determine how urban

students attending a national FFA convention perceived the organizational culture of FFA and if they could identify with that culture. The researchers conducted interviews before the convention, focus groups during the convention, and interviews after the convention. Martin & Kitchel (2014) found before the convention students at the junior level had little knowledge about FFA and were not able to identify with FFA while seniors, with one year of FFA experience, were able to identify specific benefits FFA would provide. During the convention, students started connecting their culture with the cultures of members from other states and how the urban students fit in to the FFA organizational culture. After the convention, Martin & Kitchel (2014), found the urban students identified the convention as being mostly rural focused agriculture and wanted more urban relevance. Most students indicated they could connect and identify with FFA and were motivated after the convention to strengthen their local program. While there are cultural differences in FFA, students are able to overcome those differences to participate if they are exposed to the opportunities available in FFA (Martin & Kitchel, 2014). In order for urban students to find their fit in to the FFA organization, they must be exposed to the culture of the organization and gain knowledge about what benefits the organization provides.

Colleges of agriculture are now becoming more concerned with recruiting under-represented populations of students to keep up with changing U.S. demographics (Foster & Savala, 2012). Foster & Savala (2012) studied the effectiveness of engaging under-represented youth in food and natural resources at summer programs. Two summer programs were assessed: a one-week program and a six-week program. Foster & Savala (2012) found students who participated in a one-week summer program at a college of agriculture were able to gain knowledge about career opportunities in food and natural resources. Students

who attended the six-week program were able to gain the same career knowledge, more knowledge about food and natural resources, as well as, gain knowledge crucial for the student's first year of college. Under-represented students who had not been exposed to agricultural programs were interested in these programs after attending one of the two summer programs. Giving under-represented student's summer program opportunities could be beneficial to colleges of agriculture wishing to recruit these students. Once students see the opportunities in the agricultural field, their motivation to participate in these programs may increase.

Under-represented students still enter colleges of agriculture so it is important to understand what motivated them to do so. Vincent, Henry, & Anderson (2012) studied under-represented college of agriculture students enrolled in an introductory level course to determine why they chose an agricultural major. They found students indicated their passion for teaching and the knowledge agriculture provides students as reasons they valued the agricultural major but the students indicated they did not know about all of the opportunities in agriculture until someone exposed them to those opportunities. Vincent, Henry, & Anderson (2012) also found under-represented students chose advancement beyond the degree and connections they would make because of the major as other reasons they chose an agricultural major. Barriers to students enrolling in agricultural majors could be personal, familial, or structural (the teacher's ability to connect student culture with agriculture). Understanding these motivating factors and barriers can help with recruitment efforts of teachers and college personnel.

In conclusion, Expectancy-Value Theory suggests students expect some sort of value to come from an activity. A child's motivation to participate in activities declines as they get

older and as they become more critical of themselves and their competence to do well in a variety of activities (Wigfield & Eccles, 2000). It is important to encourage children to continue to participate in a variety of activities so their self-worth will not deteriorate. The factors that influence student's intrinsic and extrinsic motivation to participate in extracurricular activities is necessary to determine the barriers for enrollment in those activities. Understanding these decision making processes is crucial to further participation in these activities.

Chapter Three: Methodology

Introduction

As the demand for a diverse agricultural workforce increases, students must be targeted for recruitment into secondary and post-secondary agricultural education programs (White, Stewart, & Linhardt, 1991; Scott & Lavergne, 2004). There has been a decline in the number of students choosing agricultural majors (Scott & Lavergne, 2004). Prior exposure to agriculture is a major factor influencing students to choose an agricultural career (Donnermeyer & Kreps, 1994). In order to understand why fewer students are choosing agricultural careers, perceptions of secondary agricultural education programs, the National FFA Organization, and agricultural careers must be evaluated. The problem is urban students have a limited knowledge of agriculture and do not choose to study in agricultural education programs.

The purpose of this study was to determine the perceptions students not enrolled in a secondary agricultural education program have of secondary agricultural education programs, the National FFA Organization, agricultural careers, and identify the demographics of the students with these perceptions. Students were asked to reflect on their perceptions of secondary agricultural education programs, the National FFA Organization, and agricultural careers to determine what barriers may exist to students participating in those programs, and ultimately choosing agricultural careers. This study will evaluate the perceptions of students who are not currently enrolled in a secondary agricultural education program to determine if their perceptions are positive or negative. Knowing the perceptions of students not enrolled in the high school agriculture program may provide enough information to increase enrollment the next year.

Research Objectives

The research objectives that guided this thesis are as follows:

1. Describe the perceptions of secondary agricultural education programs by students not enrolled in a high school agriculture program.
2. Describe the perceptions of the National FFA Organization by students not enrolled in a high school agriculture program.
3. Describe the perceptions of agricultural careers by students not enrolled in a high school agriculture program.
4. Identify demographic characteristics of students enrolled in a high school agricultural program.

Instrument

The design of the study was a descriptive and convenient. Quantitative data was collected for this study via paper cross-sectional surveys. Paper surveys were used to allow for ease of distribution in a classroom. In order to account for validity and reliability, instruments that have already been tested and released were used. Instruments from a study done by Barry Croom and James Flowers (2001) were used. These instruments (Appendix A) were field tested by the authors and yielded a Cronbach's Alpha of 0.88.

This study used a survey consisting of four sections. The first section of the survey included statements about secondary agricultural education programs. This portion of the survey consisted of 26 statements using a 5 point Likert scale. Students were given the following directions: "The purpose of Part I of the survey is to find out your perceptions of agriculture classes. Please read the items below and circle the answer that most closely represents your thoughts. If you do not understand an item, please ask for help." The

response categories included: 1= strongly disagree, 2= disagree, 3= undecided, 4= agree, 5= strongly disagree.

The second section of the survey included statements about the National FFA Organization. This portion of the survey consisted of 14 statements using a 5 point Likert scale. The response categories included: 1= strongly disagree, 2= disagree, 3= undecided, 4= agree, 5= strongly disagree. Students were given the following directions: “The purpose of Part II of the survey is to find out your perceptions of the National FFA Organization. Please read the items below and circle the answer that most closely represents your thoughts. If you do not understand an item, please ask for help.”

The third section of the survey included statements about agricultural careers. This portion of the survey consisted of nine statements using a 5 point Likert scale. The response categories included: 1= strongly disagree, 2= disagree, 3= undecided, 4= agree, 5= strongly disagree. Students were given the following directions: “The purpose of Part III of the survey is to find out your perceptions of agricultural careers. Please read the items below and circle the answer that most closely represents your thoughts. If you do not understand an item, please ask for help.”

The fourth section of this survey examined the general demographics of participants. The demographic questions included the age of the participant, gender, race, how many agricultural courses taken, how much they pay for school lunch, highest level of education attained by mother and father of participant, involvement in 4-H, likelihood of entering an agricultural career, whether they live within city limits, if parents commute to a larger city for work, if they grew up in that county, and if not, if they moved from a larger or smaller community.

Population

The target population for this study was students enrolled at Central Kentucky High School during the 2013-2014 school year. This school was chosen because it had a large population that was urban adjacent. According to the Kentucky School Report Card (2014), Central Kentucky High School had a population of 1617 students in the 2013-2014 school year. In regards to race, 87.8% (N=1419) of students were identified as White, 7.4% (N=120) of students were identified as African American, 3.6% (N=59) of student were identified as Hispanic, 0.7% (N=11) were identified as two or more races, 0.4% (N=7) were identified as Asian, and 0.1% (N=1) were identified as American Indian or Alaska native. In regards to gender, 52.7% (N=852) of students were male and 47.3% (N=765) were female. In regards to socio-economic level, 50.0% (N=809) of students were on free or reduced lunch. Students who were not enrolled (N=110) in a secondary agricultural education program in 2013 were chosen as the population for this study. This sample of students was convenient because students from one English class were used due to teacher approval to perform the study in their class. The population was of either gender. All races were included except American Indian, Alaskan Native, Native Hawaiian or Other Pacific Islander because they are not represented at the school. One hundred and ten students who are not enrolled in the agricultural education program were chosen to participate in this study based on teacher willingness to allow the survey to be administered during the teacher's class periods.

Data Collection

Approval (Appendix B) from the University of Kentucky's Institutional Review Board (IRB, protocol 14-0226-P45) was obtained before data collection occurred. All data was collected in one day. Parental consent (Appendix C) for students under the age of 18 was

obtained prior to survey administration. Students who were 18 years of age or older signed an adult consent form (Appendix D). The research investigators provided an assent form (Appendix E) and questionnaire to each student on the day of data collection. A research investigator was present at the time of survey administration. A pre-survey script (Appendix F) with all instructions was read to the participants before survey administration. Paper surveys consisting of four sections were distributed to participants in the study. Surveys were kept anonymous at the time of administration and collection. Surveys from each class were collected by the research investigator as the participants completed the survey. After all participants from all classes completed the survey, the surveys were brought back to the University of Kentucky to be analyzed.

Data Analysis

Data was entered into SPSS to analyze data. Data was analyzed through SPSS to determine the perceptions of secondary agricultural education programs, the National FFA Organization, and agricultural careers by students who were not enrolled in a secondary agricultural education program. A Likert scale and demographics were analyzed by determining frequency and percentage of responses. Data analysis results are reported in Chapter 4.

Limitations

The following are methodological limitations to the study:

- Instruments were not altered. Some questions were written in negative format and were difficult to understand and others were not relevant to the population surveyed.
- Teacher questions on the instrument referred to one teacher, but the school had three teachers.

- Students who needed accommodations while taking the survey did not have accommodations given to them.
- One school and one classroom were used for the study.

Chapter Four: Results

Introduction

Data collected from survey participants was used to determine the perceptions of high school students not enrolled in a secondary agricultural education class of the following topics: secondary agricultural education programs, the National FFA Organization, and agricultural careers. Data was also used to determine the demographics of survey participants. One hundred and ten participants completed the survey on the day surveys were distributed.

Findings

Secondary Agricultural Education Programs

The first objective of this study was to describe the perceptions of secondary agricultural education programs of students not enrolled in a high school agriculture program. Students responded to a series of 26 statements using a 5-point Likert scale (strongly disagree, disagree, undecided, agree, strongly agree) to answer why they were not enrolled in an agriculture course. To report data on the first section, statements were divided in to the following sections: personal influence, family influence, agriculture teacher/counselor influence, friends/students, and current courses/future plans.

Personal Influence

Table 4.1 includes statements related to student's personal influence in choosing an agriculture course. The table includes the number of responses (N), as well as the percentage (%) each answer held. The statement, "agriculture is not for all students" had 26.4% (N=29) of students strongly agreed, 40.9% (N=45) of students chose agree, 12.7% (N=14) were undecided, 9.1% (N=10) of students disagreed with the statement, and 10.9% (N=12)

strongly disagreed. Twenty percent (N=22) of students strongly agreed with the statement “I do not feel as if I belong in an agriculture course”, while 30% (N=33) students agreed, 14.5% (N=16) students were undecided, 26.4% (N=29) of students disagreed, and 9.1% (10) strongly disagreed. While 4.5% (N=5) of students strongly agreed and 6.4% (N=7) agreed with the statement “I feel that I would be discriminated against in agriculture classes,” 34.5% (N=38) of students disagreed and 44.5% (N=49) strongly disagreed with the statement. When given the statement “agriculture classes are only for males,” 71.8% (N=79) of students strongly disagreed, 23.6% (N=26) disagreed, 0.9% (N=1) of students strongly agreed, and 2.7% (N=3) were undecided. When given the statement “agricultural classes are only for females,” 73.6% (N=81) of students strongly disagreed, 22.7% (N=25) disagreed, and 0.0% (N=0) agreed or strongly agreed.

Table 4.1

Personal Influence on Students Choosing to not take an Agriculture Course

ITEM	Strongly Disagree % (N)	Disagree % (N)	Undecided % (N)	Agree % (N)	Strongly Agree % (N)
The students in agriculture classes are not like me.	12.7 (14)	33.6 (37)	23.6 (26)	18.2 (20)	11.8 (13)
I do not feel as if I belong in an agriculture course.	9.1 (10)	26.4 (29)	14.5 (16)	30.0 (33)	20.0 (22)
I feel that I would be discriminated against in agriculture classes.	44.5 (49)	34.5 (38)	10.0 (11)	6.4 (7)	4.5 (5)
I do not enjoy working with animals.	45.5 (50)	30.9 (34)	11.8 (13)	9.1 (10)	2.7 (3)
Agriculture is not for all students.	10.9 (12)	9.1 (10)	12.7 (14)	40.9 (45)	26.4 (29)
Agriculture classes are only for males.	71.8 (79)	23.6 (26)	2.7 (3)	0 (0)	0.9 (1)
Agriculture classes are only for females.	73.6 (81)	22.7 (25)	3.6 (4)	0 (0)	0 (0)
The general environment of agriculture classes does not feel right to me.	11.8 (13)	30.0 (33)	27.3 (30)	21.8 (24)	9.1 (10)
I cannot relate to the image agriculture has in this school.	10.9 (12)	30.0 (33)	30.0 (33)	14.5 (16)	14.5 (16)
I cannot relate to the image agriculture has in this community.	13.6 (15)	30.9 (34)	30.9 (34)	15.5 (17)	9.1 (10)

Family Influence

Table 4.2 includes statements related to the family's influence on the student not to take an agriculture class. The table includes the number of responses (N), as well as the percentage (%) each answer held. While 2.7% (N=3) of students strongly agreed and 1.8% (N=2) agreed with the statement "my family does not approve of agriculture courses," 34.5% (N=38) of students disagreed and 54.5% (N=60) strongly disagreed with the statement, leaving 6.4% (N=7) undecided. Zero percent of students indicated they strongly agreed or agreed with the statement "my brother (s)/sister(s) discouraged me from taking one," while

the majority (60.0%, N=66) of students strongly disagreed with the statement. One student agreed with the statement “my mother/female guardian discouraged me from taking one,” and one student agreed with the statement “my father/male guardian discouraged me from taking one,” while the majority (60.0%, N=66) of students strongly disagreed with the statement.

Table 4.2

Family Influence on Students Choosing to not take an Agriculture Course

ITEM	Strongly Disagree % (N)	Disagree % (N)	Undecided % (N)	Agree % (N)	Strongly Agree % (N)
My mother/female guardian discouraged me from taking one.	60.0 (66)	33.6 (37)	5.5 (6)	0.9 (1)	0 (0)
My father/male guardian discouraged me from taking one.	60.0 (66)	33.6 (37)	5.5 (6)	0.9 (1)	0 (0)
My brother(s)/sister(s) discouraged me from taking one.	61.8 (68)	30.0 (33)	7.3 (8)	0 (0)	0(0)
My family does not approve of agriculture courses.	54.5 (60)	34.5 (38)	6.4 (7)	1.8 (2)	2.7 (3)

Agriculture Teacher/Counselor Influence

Table 4.3 includes statements related to the agriculture teacher or counselor’s influence in choosing an agriculture course. The table includes the number of responses (N), as well as the percentage (%) each answer held. The statement “I have had negative experiences in my contacts with the agriculture teacher” had 44.5% (N=49) of students strongly disagree and 30.9% (N=34) disagree. This statement had 1.8% (N=2) of students agree and 1.8% (N=2) strongly agree. When given the statement “the teacher in agriculture classes is not like me,” 31.8% (N=35) of students strongly disagreed and 23.6% (N=26) disagreed, while 8.2% (N=9) agreed and 5.5% (N=6) strongly agreed. While 0.9% (N=1)

agreed, 30.0% (N=33) of students disagreed and 60.0% (N=66) strongly disagreed with the statement, “the counselor discouraged me from taking one.”

Table 4.3

Agriculture Teacher/Counselor Influence on Students Choosing to not take an Agriculture Course

ITEM	Strongly Disagree % (N)	Disagree % (N)	Undecided % (N)	Agree % (N)	Strongly Agree % (N)
The teacher in agriculture classes is not like me.	31.8 (35)	23.6 (26)	30.9 (34)	8.2 (9)	5.5 (6)
The agriculture teacher acts “cold” towards me.	46.4 (51)	22.7 (25)	30.0 (33)	0 (0)	0.9 (1)
I have had negative experiences in my contacts with the agriculture teacher.	44.5 (49)	30.9 (34)	20.0 (22)	1.8 (2)	1.8 (2)
The agriculture teacher discouraged me from taking one.	60.9 (67)	31.8 (35)	6.4 (7)	0.9 (1)	0 (0)
A counselor discouraged me from taking one.	60.0 (66)	30.0 (33)	9.1 (10)	0.9 (1)	0 (0)

Friends/Student Influence

Table 4.4 includes statements related to the influence of friends or other students on the student participant to not take an agriculture class. The table includes the number of responses (N), as well as the percentage (%) each answer held. When given the statement, “I have had negative experiences in my contacts with agriculture students,” 41.8% (N=46) of students strongly disagreed and 30.0% (N=33) disagreed, while 8.2% (N=9) of students agreed and 3.6% (N=4) strongly agreed. A higher percentage of students strongly disagreed (20.9%, N=23) and disagreed (32.7%, N=36) when given the statement “my friends do not recommend these courses for me,” than agreed (14.5%, N=16) or strongly agreed (9.1%, N=10).

Table 4.4

Friends/Student Influence on Students Choosing to not take an Agriculture Course

ITEM	Strongly Disagree % (N)	Disagree % (N)	Undecided % (N)	Agree % (N)	Strongly Agree % (N)
I have had negative experiences in my contacts with agriculture students.	41.8 (46)	30.0 (33)	16.4 (18)	8.2 (9)	3.6 (4)
My friends do not recommend these courses for me.	20.9 (23)	32.7 (36)	22.7 (25)	14.5 (16)	9.1 (10)

Current Courses/Future Plans Influence

Table 4.5 includes statements related to the student participant's current courses or future plans which influenced them to not take an agriculture class. The table includes the number of responses (N), as well as the percentage (%) each answer held. While 20.9% (N=23) of students strongly agreed and 16.4% (N=18) agreed with the statement "agriculture would not prepare me for a career," 23.6% (N=26) of students disagreed and 21.8% (N=24) strongly disagreed. When given the statement "agriculture would not prepare me for college," 17.3% (N=19) of students strongly disagreed, 20.9% (N=23) disagreed, 20.9% (N=23) agreed, and 23.6% (N=26) strongly disagreed, leaving 17.3% (N=19) undecided. The highest percentage of students agreed (37.3%, N=41) and strongly agreed (8.2%, N=9) with the statement "the semester course does not fit into my schedule." When given the statement "agriculture classes are too easy for me," 18.2% (N=20) of students strongly disagreed, 25.5% (N=28) disagreed, 11.8% (N=13) agreed, and 6.4% (N=7) strongly agreed, leaving 38.2% (N=42) undecided. When given the statement "agriculture classes are too hard for me," 30.9% (N=34) of students strongly disagreed, 30.0% (N=33) disagreed, 1.8% (N=2) agreed, and 0.9% (N=1) strongly agreed, leaving 36.4% (N=40) of students undecided.

Table 4.5

Current Courses/Future Plans Influence on Students Choosing to not take an Agriculture Course

ITEM	Strongly Disagree % (N)	Disagree % (N)	Undecided % (N)	Agree % (N)	Strongly Agree % (N)
Agriculture would not prepare me for a career.	21.8 (24)	23.6 (26)	16.4 (18)	16.4 (168)	20.9 (23)
Agriculture would not prepare me for college.	17.3 (19)	20.9 (23)	17.3 (19)	20.9 (23)	23.6 (26)
The semester course does not fit into my schedule.	12.7 (14)	16.4 (18)	24.5 (27)	37.3 (41)	8.2 (9)
Agriculture classes are too easy for me.	18.2 (20)	25.5 (28)	38.2 (42)	11.8 (13)	6.4 (7)
Agriculture classes are too hard for me.	30.9 (34)	30.0 (33)	36.4 (40)	1.8 (2)	0.9 (1)

The National FFA Organization

The second objective of this study was to describe the perceptions of the National FFA Organization of students not enrolled in a high school agriculture program. Students responded to a series of 14 statements using a 5-point Likert scale (strongly disagree, disagree, undecided, agree, strongly agree) to respond to statements regarding the National FFA Organization.

Table 4.6 includes statements regarding the National FFA Organization. The table includes the number of responses (N), as well as the percentage (%) each answer held. When given the statement “I would join FFA in the future if given the chance,” 21.8% (N=24) strongly disagreed, 28.2% (N=31) disagreed, 13.6% (N=15) agreed, and 3.6% (N=4) strongly agreed, leaving 32.7% (N=36) of students undecided. The higher percentages of students strongly agreed (8.2%, N=9) and agreed (31.8%, N=35) with the statement “FFA has a great image at our school,” than disagreed (9.1%, N=10) and strongly disagreed (6.4%, N=7).

When given the statement “I have been provided with a lot of information about FFA,” 26.4% (N=29) of student strongly disagreed and 31.8% (N=35) disagreed, while 25.5% (N=28) of students agreed and 4.5% (N=5) strongly agreed with the statement. When given the statement “the benefits I would receive in FFA are worth the cost of membership dues,” 47.3% (N=52) of students were undecided, 1.8% (N=2) strongly agreed, 18.2% (N=20) agreed, and 17.3% (N=19) disagreed, and 14.5% (N=16) strongly disagreed. The highest percentage (45.5%, N=50) of students chose undecided when given the statement “I think FFA is a cool organization.” The highest percentages of students strongly agreed (30.9%, N=34) and agreed (39.1% (N=43) with the statement “FFA has activities for all students regardless of gender.” While 4.5% (N=5) of students strongly disagreed and 10.0% (N=11) of students disagreed, 24.5% (N=27) of students agreed and 17.3% (N=19) strongly agreed with the statement “FFA members at my school are nice and treat non-members with respect.” When given the statement “FFA is only for students who want to be farmers,” 11.8% (N=13) of students strongly disagreed, 31.8% (N=35) disagreed, while 40% (N=44) of students were undecided.

Table 4.6

The National FFA Organization Statement Frequency

ITEM	Strongly Disagree % (N)	Disagree % (N)	Undecided % (N)	Agree % (N)	Strongly Agree % (N)
My parents would encourage me to join FFA.	10.9 (12)	20.0 (22)	37.3 (41)	28.2 (31)	3.6 (4)
I would join FFA in the future If given the chance.	21.8 (24)	28.2 (31)	32.7 (36)	13.6 (15)	3.6 (4)
FFA has a great image at our school.	6.4 (7)	9.1 (10)	43.6 (48)	31.8 (35)	8.2 (9)
I have been provided with a lot of information about FFA.	26.4 (29)	31.8 (35)	10.9 (12)	25.5 (28)	4.5 (5)
I think FFA is a cool organization.	10.0 (11)	13.6 (15)	45.5 (50)	22.7 (25)	8.2 (9)
A lot of my friends are FFA members.	27.3 (30)	34.5 (38)	13.6 (15)	19.1 (21)	5.5 (6)
The benefits I would receive in FFA are worth the cost of membership dues.	14.5 (16)	17.3 (19)	47.3 (52)	18.2 (20)	1.8 (2)
Our school has a lot of FFA activities.	5.5 (6)	11.8 (13)	37.3 (41)	35.5 (39)	10.0 (11)
Participation in FFA activities does not cost much.	4.5 (5)	5.5 (6)	72.7 (80)	13.6 (15)	3.6 (4)
My agriculture teacher encouraged me to join FFA.	28.2 (31)	29.1 (32)	30.0 (33)	7.3 (8)	5.5 (6)
FFA has activities for all students regardless of their race.	7.3 (8)	3.6 (4)	29.1 (32)	33.6 (37)	26.4 (29)
FFA has activities for all students regardless of gender.	1.8 (2)	0.9 (1)	27.3 (30)	39.1 (43)	30.9 (34)
FFA members at my school are nice and treat non-members with respect.	4.5 (5)	10.0 (11)	43.6 (48)	24.5 (27)	17.3 (19)
FFA is only for students who want to be farmers.	11.8 (13)	31.8 (35)	40.0 (44)	8.2 (9)	8.2 (9)

Agricultural Careers

The third objective of this study was to describe the perceptions of agricultural careers of students not enrolled in a high school agriculture program. Students responded to a series of nine statements using a 5-point Likert scale (strongly disagree, disagree, undecided, agree, strongly agree) to respond to statements regarding agricultural careers.

Table 4.7 includes statements regarding agricultural careers. The table includes the percentage (%), as well as the number of responses (N), each answer held. When given the statement “employment opportunities in agriculture are declining,” 56.4% (N=62) of students were undecided, 2.7% (N=3) strongly disagreed, 21.8% (N=24) disagreed, 17.3% (N=19) agreed, and 1.8% (N=2) strongly agreed. When given the statement “most people in agricultural careers work on farms,” 5.5% (N=6) of students strongly agreed, 34.5% (N=38) agreed, 27.3% (N=30) disagreed, and 5.5% (N=6) strongly disagreed, leaving 27.3% (N=30) of students undecided. While 0.9% (N=1) of students strongly agreed and 18.2% (N=20) agreed with the statement, “society has a negative image of agricultural careers,” 40.0% (N=44) of students disagreed and 9.1% (N=10) strongly disagreed. When given the statement “there is a lack of minorities in agricultural careers,” 45.5% (N=50) of students were undecided, 6.4% (N=7) of students strongly disagreed, 29.1% (N=32) disagreed, 11.8% (N=13) of students agreed, and 7.3% (N=8) strongly agreed. Ten percent (N=11) of students strongly disagreed and 40.0% (N=44) disagreed with the statement “careers in agriculture are for people who have an agricultural background,” while 16.4% (N=18) of students strongly agreed and 4.5% (N=5) agreed. The highest percentage of students were undecided (58.2%, N=64) when given the statement “agriculture is a high-paying occupation. When given the statement, “there are no career opportunities in agriculture for me,” 25.5% (N=28) of

students strongly agreed, 11.8% (N=13) agreed, 16.4% (N=18) disagreed, and 15.5% (N=17) strongly disagreed, leaving 30.9% (N=34) undecided.

Table 4.7

Agricultural Careers Statement Frequency

ITEM	Strongly Disagree % (N)	Disagree % (N)	Undecided % (N)	Agree % (N)	Strongly Agree % (N)
Employment opportunities in agriculture are declining.	2.7 (3)	21.8 (24)	56.4 (62)	17.3 (19)	1.8 (2)
Most people in agricultural careers work on farms.	5.5 (6)	27.3 (30)	27.3 (30)	34.5 (38)	5.5 (6)
Most people in agricultural careers live on farms.	4.5 (5)	23.6 (26)	43.6 (48)	22.7 (25)	5.5 (6)
Society has a negative image of agricultural careers.	9.1 (10)	40 (44)	31.8 (35)	18.2 (20)	0.9 (1)
There is a lack of minorities in agricultural careers.	6.4 (7)	29.1 (32)	45.5 (50)	11.8 (13)	7.3 (8)
There is a lack of mentors/role models to help pursue agricultural careers.	6.4 (7)	27.3 (30)	42.7 (47)	19.1 (21)	4.5 (5)
Careers in agriculture are for people who have an agriculture background.	10 (11)	40 (44)	29.1 (32)	16.4 (18)	4.5 (5)
Agriculture is a high-paying occupation.	9.1 (10)	11.8 (13)	58.2 (64)	18.2 (20)	2.7 (3)
There are no career opportunities for me in agriculture.	15.5 (17)	16.4 (18)	30.9 (34)	11.8 (13)	25.5 (28)

Demographics

The fourth objective of this study was to identify demographic characteristics of students not enrolled in a high school agricultural program. Students responded to a series of multiple choice demographic questions. The following tables represent the responses of students who took the survey. Table 4.8 represents the demographics (age, gender, and ethnicity) of the responding students. Responding students at George Rogers Clark High

School were predominately white (non-hispanic). Almost the same number of male and female students participated in the survey. Over half of the students who responded were 17 years old. Table 4.9 represents the number of past agriculture courses taken by the responding students and the amount the students pay for school lunch. The majority (66.4%, N=73) of students have never taken an agriculture class, while 28.2% (N=31) of students indicated they had taken one agriculture class. Over half (57.3%, N=63) of students indicated they were free/reduced lunch and pay \$0.00-\$1.00 for school lunch, while 37.3% (N=41) of students indicated they pay \$2.01-\$3.00 for school lunch. Table 4.10 represents the education of the responding student's mother and father. The highest percentage (42.7%, N=47) of students indicated their mother had received a high school diploma or GED. The highest percentage (43.6%, N=48) of students indicated their father had received a high school diploma or GED. Students were asked if they are a 4-H member; responses are listed in Table 4.11. The majority (78.2%, N=86) of students were not 4-H members. Students were asked if they would pursue an agricultural career; responses are listed in Table 4.12. Forty percent (N=44) of students indicated they definitely would not pursue an agricultural career, while 23.6% (N=26) indicated they probably would not, 24.5% (N=27) were unsure, 10.9% (N=12) indicated they probably would pursue an agriculture career, and 0.9% (N=1) indicated they definitely would. Table 4.13 represents student responses to whether or not they live within the city limits of Winchester and if their parents commute to Lexington for work. The highest percentage (78.2%, N=86) of students indicated they do live within the city limits of Winchester. The same number of students (49.1%, N=54) indicated their parents do or do not commute to Lexington to work. This indicates there may be students

who have little to no interaction outside of the city limits and may not have ever had any agricultural background.

Table 4.8

Demographics

Age (years)	Frequency (N)	Percent (%)
15	4	3.6
16	37	33.6
17	59	53.6
18	10	9.1
Gender		
Male	53	48.2
Female	57	51.8
Ethnicity		
African-American (Black)	12	10.9
American Indian	3	2.7
Hispanic	5	4.5
Asian-American or Pacific Islander	1	0.9
White (Non-Hispanic)	85	77.3
Bi-Racial	4	3.6

Table 4.9

Number of Agriculture Courses Taken and Student Cost of School Lunch

How many agriculture courses have you taken?	Frequency (N)	Percent (%)
None	73	66.4
1-2	31	28.2
2	1	0.9
3-4	4	3.6
5-6	0	0.0
7 or more	1	0.9
How much do you pay for school lunch?		
0.00-1.00	63	57.3
1.01-2.00	6	5.5
2.01-3.00	41	37.3

Table 4.10

Parent/Guardian Education Attained

What is the highest level of education your mother/female guardian, and father/male guardian has complete?	Less than high school diploma % (N)	A high school diploma or GED % (N)	An associate degree or technical certification % (N)	Bachelor's degree % (N)	Advanced degree % (N)
Mother/Female Guardian	10.9 (12)	42.7 (47)	23.6 (26)	19.1 (21)	2.7 (3)
Father/Male Guardian	14.5 (16)	43.6 (48)	12.7 (14)	20.0 (22)	6.4 (7)

Table 4.11

4-H Membership

Are you now or have you ever been a member of 4-H?	Frequency (N)	Percent (%)
Yes	24	21.8
No	86	78.2

Table 4.12

Pursuit of an Agricultural Career

After you graduate from high school or college, do you see yourself employed in an agricultural career?	Frequency (N)	Percent (%)
Definitely not	44	40.0
Probably not	26	23.6
Unsure	27	24.5
Probably yes	12	10.9
Definitely yes	1	0.9

Table 4.13

Living within City Limits

Do you live within the city limits of Winchester?	Frequency (N)	Percent (%)
Yes	86	78.2
No	24	21.8

Do your parents commute to Lexington for work?	Frequency (N)	Percent (%)
Yes	54	49.1
No	54	49.1

Chapter Five: Conclusion, Recommendations, and Implications

Conclusion

The purpose of this study was to determine the perceptions students not enrolled in a secondary agricultural education program have of secondary agricultural education programs, the National FFA Organization, agricultural careers, and identify the demographics of the students with these perceptions. By conducting this study, perceptions of secondary agriculture education programs, the National FFA Organization, and agricultural careers were determined. Demographic information was also collected. The results of this study will help determine current perceptions and indicate what areas of secondary agricultural education programs, the National FFA Organization, and agricultural careers need to be targeted for students who do not enter these programs.

Secondary Agriculture Education Programs

The first factor examined was personal influence on choosing whether or not to take an agriculture course. Most students indicated they felt like they did not belong in an agriculture course. Students also indicated they felt as though agriculture is not for everyone. These statements indicate students will not be motivated to take a course they feel they do not belong in. These feelings were not supported by students feeling like agriculture courses were only for male or female students.

More students disagreed than agreed with the statement “the students in agriculture courses are not like me.” This indicates most students do not perceive agriculture students as being different than them, and therefore would not use that as a negative value factor for being motivated to take that course. Students did not feel like they would be discriminated against in agriculture courses, indicating students do not feel negative toward these courses.

A high percentage of students were “undecided” about relating to the image agriculture has in the school and community. This could imply that students are unfamiliar with the image agriculture has in the school and community.

The second factor examined was family influence on choosing whether or not to take an agriculture course. The large majority of students indicated their family members did not discourage them from taking a course. They also indicated their families approve of agriculture courses. This could imply family influence has little to do with student motivation to take an agriculture course. This does not, however, indicate whether family members determine student perceptions of agriculture courses.

The third factor examined was the agriculture teacher or counselor’s influence on choosing whether or not to take an agriculture course. Student responses (for this population) to survey statements indicate the agriculture teacher is not the reason they do not take an agriculture course. Students did not indicate negative experiences with the agriculture teacher. A high percentage of students were “undecided” on these statements, which could indicate they had not had any contact with the agriculture teacher. If one third of students have no contact with the agriculture teacher, it could be a large reason students are not choosing to take these courses. Students indicated neither the agriculture teacher nor counselor discouraged them from taking a course. The responses in this factor indicate the agriculture teacher and counselor have little to no effect on student motivation to take an agriculture course.

The fourth factor examined was friend’s or agriculture student’s influence on choosing whether or not to take an agriculture class. Though some students indicated they had negative encounters with agriculture students, the majority of students had not. This

indicates students were not influenced by agriculture students to take agriculture courses. More students indicated their friends did not recommend agriculture courses for them. This indicates students, in this population, may be influenced by their friends when choosing whether or not to take an agriculture course. Some students were “undecided” which could indicate they do not talk to their friends about taking agriculture courses.

The final factor examined of influence on the student to take or not take an agriculture course was their current courses or future plans. More students felt like agriculture would prepare them for a career, but more students indicated agricultural courses would not prepare them for college. These perceptions could indicate students still perceive agriculture as being for students wanting to enter a career instead of go to college or it could indicate students did not expect agricultural courses to prepare them for what they want to study in college. While many students indicated they did not believe agriculture classes were too hard or too easy for them, a large percentage of students were “undecided” which could indicate these are the students who have never taken an agriculture course. The majority of students indicated the agriculture courses did not fit in their schedule.

For this agriculture program, it is recommended for agriculture teachers to develop a plan to reach students who are not in the secondary agricultural education program to educate those students about the program at their school. Examples of educational tools that could be used include (but are not limited to) recruitment events or educational materials such as flyers or brochures to highlight the benefits of the agricultural program. The teacher should also focus on making more contact with students not enrolled in the agricultural program. The factor that had the most influence on students choosing to take an agricultural course was personal influence. This agricultural program should target students not enrolled in

agricultural courses to show them the benefits of agricultural courses. Students did not necessarily feel like they were unlike other students in the program, but they did not feel like agricultural courses were for them. With education about the program, students may see what the program involves and may choose to take an agricultural course in the future if they feel it will benefit them. Students also indicated they were influenced by friends or other students to participate in these programs. Students who are currently enrolled in the secondary agricultural education program need to be trained how to positively discuss the program with students who are not enrolled. These encounters could educate students not enrolled in secondary agricultural education programs about what the program offers.

The National FFA Organization

Many students indicated they were “undecided” if they would join the National FFA Organization (FFA). This could indicate students are uneducated about the benefits of FFA but would be open to the idea. Over half of students indicated they had not been provided with a lot of information about FFA, which further supports the idea they were uneducated about FFA. Students will not be motivated to join an organization they are not familiar with. In order to be motivated to join extracurricular activities, students need to feel they would benefit from that activity (Wigfield, Tonks, & Klauda, 2009). Providing students information about the benefits and opportunities in FFA could potentially increase membership. Educating student could be done in a variety of ways such as a benefits pamphlet, FFA education day at the school where students set up a benefit fair, or even hosting an event for students specifically who are not in FFA. Getting information to students is necessary for increasing enrollment and targeting a new audience.

Though students indicated FFA members in their school are nice and treat non-members with respect, almost half of students indicated they would not join FFA if given the chance. Yet, almost half of students believed FFA had a great image at their school. This suggests, though students indicated they would not join FFA, it is not because FFA has a negative image. Students believe FFA has activities for all genders and many students did not believe FFA in only for students who want to be farmers. This suggests students understand they can join FFA even if they want to pursue other careers. It could be beneficial for the agricultural program at this school to take a career inventory of the students who are not members of FFA and connect a way FFA can benefit them for their current career choice.

Agricultural Careers

Students indicated they did not believe agricultural careers are only for people with an agricultural background and they also did not believe society has a negative image of agricultural careers. Despite this, students indicated they did not believe there are career opportunities for them in agriculture. Students believe most people who have an agricultural career work on farms. This could be an indication about why they believe there are no career opportunities for them in agriculture. This also suggests students are not aware of the variety of careers available in the agricultural industry. This lack of knowledge could prohibit these students from entering a career. Educating students about career opportunities in agriculture could increase interest in entering these career fields in the future.

Students were unsure if employment opportunities in agriculture are declining and if there is a lack of minorities in agricultural careers. They also indicated they were unsure if agriculture is a high-paying occupation. This indicates students have not been educated about potential careers in agriculture. This most likely comes as a result of choosing not to take an

agriculture class or the students not receiving information about agricultural careers when choosing courses to take in high school. Most of the data indicates student's choice for pursuing or not pursuing an agriculture career relied heavily on their lack of knowledge about agricultural careers. The secondary agricultural education program at this school could conduct an agricultural career fair for students in the school who are not enrolled in the agricultural program. The career fair could be hosted by current students in the secondary agricultural education program to help educate students not in the program about potential careers in the agricultural industry.

Recommendations

When determining perceptions of secondary agricultural education programs, the National FFA Organization, and agricultural careers by students not enrolled in those programs, it is evident there is a lack of knowledge or education of participating students about those topics. It is important for the secondary agricultural education program at George Rogers Clark High School to create educational events about those programs for students who are not enrolled in them. Current secondary agricultural education program students need to be trained how to advocate for their program to students who choose not to enroll in them. If students are influenced most by personal benefits and friends and other students, they must be educated about the benefits of these programs and their friends or other students could be the perfect avenue to educate them.

Future research should focus on educational efforts of secondary agricultural education programs to provide information to students not enrolled in their program about the secondary agricultural education program, the National FFA Organization, and agricultural careers. If students are not receiving information about agricultural programs that

are available, they may not choose to join those programs. Appropriate delivery methods of information should also be examined. Future research should also focus on determining the results of those educational efforts; if these efforts increase enrollment in these programs, and which methods work the best. Knowing these educational methods could help secondary agricultural education programs increase enrollment if they choose to use them.

If future research uses the instrument from this study, it is recommended questions are reviewed; negative questions should be made positive, certain questions were specific to students who were enrolled in a secondary agricultural education program, and teacher questions need to be a reflection on the teacher population at the school. It is also recommended for future research to focus on students who have never taken an agricultural course instead of students who are not currently enrolled in an agricultural course.

Implications

As secondary agricultural education programs battle to increase enrollment, knowing what motivates students to enroll in these programs is crucial. Students choosing not to enroll in these programs must be educated about the benefits they would receive if they were to enroll. If students are motivated most by their personal influence, they must be targeted with the opportunities secondary agricultural education programs, the National FFA Organization, and agricultural careers provide. Not only should they be educated about the benefits of these programs, but they should be educated about what specific career opportunities available to them. Educating students about career opportunities could not only increase enrollment at the high school level, but could also increase enrollment in higher education agricultural programs.

APPENDIX A: INSTRUMENT

Part I: Perceptions of Secondary Agricultural Education Classes

The purpose of Part I of the survey is to find out your perceptions of agriculture classes. Please read the items below and circle the answer that most closely represents your thoughts. If you do not understand an item, please ask for help.

I AM NOT ENROLLED IN AGRICULTURE CLASSES BECAUSE...

Example:

<i>ITEM</i>	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Undecided</i>	<i>Agree</i>	<i>Strongly Agree</i>
<i>I would not enjoy them.</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

I AM NOT ENROLLED IN AGRICULTURE CLASSES BECAUSE...

ITEM	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
The students in agriculture classes are not like me.	1	2	3	4	5
I do not feel as if I belong in an agriculture course.	1	2	3	4	5
I have had negative experiences in my contacts with agriculture students.	1	2	3	4	5
My friends do not recommend these courses for me.	1	2	3	4	5
My family does not approve of agriculture courses.	1	2	3	4	5
I feel that I would be discriminated against in agriculture classes.	1	2	3	4	5
The teacher in agriculture classes is not like me.	1	2	3	4	5
The agriculture teacher acts “cold” towards me.	1	2	3	4	5
I have had negative experiences in my contacts with the agriculture teacher.	1	2	3	4	5
Agriculture would not prepare me for a career.	1	2	3	4	5

I AM NOT ENROLLED IN AGRICULTURE CLASSES BECAUSE...

ITEM	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
I do not enjoy working with animals.	1	2	3	4	5
The semester course does not fit into my schedule.	1	2	3	4	5
Agriculture is not for all students.	1	2	3	4	5
Agriculture classes are only for males.	1	2	3	4	5
Agriculture classes are only for females.	1	2	3	4	5
My mother/female guardian discouraged me from taking one.	1	2	3	4	5
My father/male guardian discouraged me from taking one.	1	2	3	4	5
My brother(s)/sister(s) discouraged me from taking one.	1	2	3	4	5
The agriculture teacher discouraged me from taking one.	1	2	3	4	5
A counselor discouraged me from taking one.	1	2	3	4	5
Agriculture classes are too easy for me.	1	2	3	4	5
Agriculture classes are too hard for me.	1	2	3	4	5
The general environment of agriculture classes does not feel right to me.	1	2	3	4	5
I cannot relate to the image agriculture has in this school.	1	2	3	4	5
I cannot relate to the image agriculture has in this community.	1	2	3	4	5
Agriculture would not prepare me for college.	1	2	3	4	5

Part II: Perceptions of the National FFA Organization

The purpose of Part II of the survey is to find out your perceptions of the National FFA Organization. Please read the items below and circle the answer that most closely represents your thoughts. If you do not understand an item, please ask for help.

Example:

<i>ITEM</i>	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Undecided</i>	<i>Agree</i>	<i>Strongly Agree</i>
<i>I would not enjoy this organization.</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

ITEM	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
My parents would encourage me to join FFA.	1	2	3	4	5
I would join FFA in the future If given the chance.	1	2	3	4	5
FFA has a great image at our school.	1	2	3	4	5
I have been provided with a lot of information about FFA.	1	2	3	4	5
I think FFA is a cool organization.	1	2	3	4	5
A lot of my friends are FFA members.	1	2	3	4	5
The benefits I would receive in FFA are worth the cost of membership dues.	1	2	3	4	5
Our school has a lot of FFA activities.	1	2	3	4	5
Participation in FFA activities does not cost much.	1	2	3	4	5
My agriculture teacher encouraged me to join FFA.	1	2	3	4	5
FFA has activities for all students regardless of their race.	1	2	3	4	5

FFA has activities for all students regardless of gender.	1	2	3	4	5
FFA members at my school are nice and treat non-members with respect.	1	2	3	4	5
FFA is only for students who want to be farmers.	1	2	3	4	5

Part III: Perceptions of Agricultural Careers

The purpose of Part III of the survey is to find out your perceptions of agricultural careers. Please read the items below and circle the answer that most closely represents your thoughts. If you do not understand an item, please ask for help.

Example:

<i>ITEM</i>	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Undecided</i>	<i>Agree</i>	<i>Strongly Agree</i>
<i>There are not many opportunities.</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>

ITEM	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Employment opportunities in agriculture are declining.	1	2	3	4	5
Most people in agricultural careers work on farms.	1	2	3	4	5
Most people in agricultural careers live on farms.	1	2	3	4	5
Society has a negative image of agricultural careers.	1	2	3	4	5
There is a lack of minorities in agricultural careers.	1	2	3	4	5
There is a lack of mentors/role models to help pursue agricultural careers.	1	2	3	4	5
Careers in agriculture are for people who have an agriculture background.	1	2	3	4	5
Agriculture is a high-paying occupation.	1	2	3	4	5
There are no career opportunities for me in agriculture.	1	2	3	4	5

Part IV: Student Information

The purpose of Part IV of the survey is to find out more information about you. Please read the items below and circle the letter that corresponds to the number of each question. Answer each item as best you can. DO NOT leave any items blank. If you do not understand an item, please ask for help.

1. My age is_____.
 - a. 14 years old
 - b. 15 years old
 - c. 16 years old
 - d. 17 years old
 - e. 18 years old
2. My gender is_____.
 - a. Male
 - b. Female
3. I consider myself as _____.
 - a. African-American (Black)
 - b. American Indian
 - c. Hispanic (includes people of Mexican, Puerto Rican, Cuban, Central or South American descent)
 - d. Asian-American or Pacific Islander
 - e. White (Non-Hispanic)
 - f. Bi-Racial or other, please specify _____
4. How many agricultural courses have you taken (including any this semester).
 - a. None
 - b. 1 – 2
 - c. 3 – 4
 - d. 5 – 6
 - e. 7 or more
5. How much do you pay for school lunch?
 - a. \$0.00-\$1.00
 - b. \$1.01-\$2.00
 - c. \$2.01-\$3.00
6. What is the highest level of education your father/male guardian has completed?
 - a. Less than a high school diploma
 - b. A high school diploma or GED

- c. An associate degree (two-year college degree) or technical certification
 - d. A bachelor's degree (four-year college degree)
 - e. An advanced degree (master's degree, Ph.D., M.D., D.V.M., Etc.)
7. What is the highest level of education your mother/female guardian has completed?
- a. Less than a high school diploma
 - b. A high school diploma or GED
 - c. An associate degree (two-year college degree) or technical certification
 - d. A bachelor's degree (four-year college degree)
 - e. An advanced degree (master's degree, Ph.D., M.D., D.V.M., Etc.)
8. Are you now or have you ever been a member of 4-H?
- a. No
 - b. Yes
9. After you graduate from high school or college, do you see yourself employed in an agricultural career?
- a. Definitely not
 - b. Probably not
 - c. Unsure
 - d. Probably yes
 - e. Definitely yes
10. Do you live within the city limits of Winchester?
- a. No
 - b. Yes
11. Do your parents commute to Lexington for work?
- a. No
 - b. Yes
12. Did you grow up in Clark County?
- a. No
 - b. Yes

If you answered **No** to Question 12, did you move to Clark County from:

- a. A smaller populated county
- b. A larger populated county

APPENDIX B: IRB APPROVAL



Office of Research Integrity
IRB, IACUC, RDRC
315 Kinkead Hall
Lexington, KY 40506-0057
859 257-9428
fax 859 257-8995
www.research.uky.edu/ori/

TO: Rebekah Epps, PhD
Community & Leadership Development
708 Garrigus Bldg.
Campus 0215
(859) 257-3275

FROM: UK Office of Research Integrity

SUBJECT: Information for closed UK protocol 14-0226-P4S

DATE: July 27, 2016

Per the July 27, 2016, request for information made by your co-investigator, Rebecca Russell, regarding your closed, IRB approved protocol entitled:

High School Student Perceptions of Secondary Agriculture Education Programs, the National FFA Organization, and Agricultural Careers

Based on a review of our computer records, ORI can confirm that a protocol for Rebekah Epps, PhD, and Rebecca Russell with the above title was assigned the protocol number 14-0226-P4S and was initially approved by the UK IRB on May 14, 2014, using expedited review procedures. The protocol's approval expired on May 13, 2015.

This letter is an acknowledgment of the information contained in the ORI computer records. The physical file is no longer housed at UK and was sent to permanent storage after the closure of the project.

If you have any questions, please contact Andrew Hedrick at the UK Office of Research Integrity at 859-257-1639.

Cc: Norman Van Tubergen, PhD, Non-medical IRB Chairperson
Helene Lake-Bullock, PhD, JD, ORI Interim Director

APPENDIX C: PARENTAL CONSENT

To Parents of Students:

Your child has been asked to participate in a research project on their perceptions of secondary agricultural education programs, the National FFA Organization, and agricultural careers. We are hoping to learn more about why students choose to, or not to, participate in these programs. Although your child will not get personal benefit from taking part in this research study, your child's responses may help us understand more about program changes that can affect the agricultural education program. This study from the University of Kentucky will require your child to complete a questionnaire over their perceptions of these programs.

We hope to receive completed questionnaires from about 300 people, so your child's answers are important to us. Of course, you have a choice about whether or not to allow your child to complete the survey/questionnaire, but if you do allow them to participate, they are free to skip any questions or discontinue at any time.

The survey/questionnaire will take about 15 minutes to complete. There are no known risks to participating in this study. Your child's responses are anonymous which means no names will appear or be used on research documents, or be used in presentations. The research team will not know that any information he/she provided came from your child. The research team will not know that your child even participated in the study.

If you have questions about the study, please feel free to ask; my contact information is given below. If you have complaints, suggestions, or questions about your rights as a research volunteer, contact the staff in the University of Kentucky Office of Research Integrity at 859-257-9428 or toll-free at 1-866-400-9428.

Thank you in advance for your assistance with this important project.
Sincerely,

Rebekah B. Epps
Community and Leadership Development Department
University of Kentucky
PHONE: 859-257-3275
E-MAIL: Rebekah.epps@uky.edu

My child has permission to participate in the research study conducted by the University of Kentucky to determine the perceptions of secondary agricultural education programs, the National FFA Organization, and agricultural careers.

Parent Signature Date

Printed Parent Name Date

APPENDIX E: ASSENT FORM

ASSENT FORM

Evaluating Perceptions of Secondary Agricultural Education Programs, the National FFA Organization and Agricultural Careers

You are invited to be in a research study being done by Dr. Rebekah Epps and Rebecca Russell from the University of Kentucky. You are invited because you are not enrolled in an agricultural education class.

If you agree to be in the study, you will be asked to complete a four section questionnaire about your perceptions of secondary agricultural education programs, the National FFA Organization, and Agricultural Careers. It is completely confidential and your answers will not affect you, your grade, or your school in any way.

You will not be paid or compensated for participating in this study.

Your family will know that you are in the study. If anyone else is given information about you, they will not know your name.

If something makes you feel bad while you are in the study, please tell Dr. Rebekah Epps or Rebecca Russell. If you decide at any time you do not want to finish the study, you may stop whenever you want.

You can ask Dr. Rebekah Epps or Rebecca Russell questions at any time about anything in this study. You can also ask your parent, Dr. Rebekah Epps, or Rebecca Russell any questions you might have about this study.

Signing this paper means that you have read this or had it read to you, and that you want to be in the study. If you do not want to be in the study, do not sign the paper. Being in the study is up to you, and no one will be mad if you do not sign this paper or even if you change your mind later. You agree that you have been told about this study and why it is being done and what to do.

Signature of Person Agreeing to be in the Study

Date Signed

APPENDIX F: PRE-SURVEY SCRIPT

Survey Script

Survey administrator to potential participant:

Thank you for taking the time to participate in this research project. You will be completing a four-part survey as a part of this research. Part one of the survey will ask questions about your perceptions of secondary agricultural education programs. Secondary agriculture education programs provide high school students the opportunity to take a variety of classes that relate to agriculture. Part two of the survey will ask questions about your perceptions of the National FFA Organization. The FFA is an organization available to students who take a secondary agricultural education class. The Organization focuses on premier leadership, personal growth, and career success. Part three of the survey will ask questions about your perceptions of agricultural careers. Part four are general demographic questions.

You will answer each item using a numerical scale of 1-5. 1= Strongly Disagree, 2=Disagree, 3= Undecided, 4=Agree, 5=Strongly Agree. Please do not skip any items. If you have a question about any of the items, please raise your hand to ask the research assistant. If at any time you are uncomfortable, you may stop taking the survey. You will not be penalized if you do not complete the survey. All surveys will be kept confidential. Do not put your name on the survey. Once you are done, please turn your survey over and lay your pencil down.

If you have questions about the study, please feel free to ask; my contact information is given below. If you have complaints, suggestions, or questions about your rights as a research volunteer, contact the staff in the University of Kentucky Office of Research Integrity at 859-257-9428 or toll-free at 1-866-400-9428.

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VITA

REBECCA ANN RUSSELL

ACADEMIC RECORD

Master of Science, Projected graduation August 2016

University of Kentucky; Lexington, KY

Career and Technical Leadership Education

GPA: 4.0

Thesis: Perceptions of secondary agricultural education programs, the National FFA Organization, and agricultural careers of students not enrolled in a high school agricultural program

Bachelor of Science May 2011

University of Kentucky; Lexington, KY

Career and Technical Education

Major GPA: 3.39

RESEARCH

Publications

Peer Reviewed Journal Articles:

Russell, R.A., & Bewley, J.M. (2011). Producer Assessment of Dairy Extension. *Journal of Dairy Science*, 94 (5), 2637-2647.

Russell, R.A., & Bewley, J.M. (2013). Characterization of the Decision Making Behavior of Kentucky Dairy Producers. *Journal of Dairy Science*, 96 (7), 4751-4758.

Editor Reviewed Publications:

Bewley, J.M., & Russell, R.A. (May 25, 2010). Dairy Farming 3.0. *Hoard's Dairyman*.

Poster Abstracts

State:

Russell, R.A., & Bewley, J.M. (2009). "A survey of the management practices, educational needs, and decision making behavior of Kentucky dairy producers." *Posters-at-the-Capitol*. Frankfort, KY.(February)

Russell, R.A., & Bewley, J.M. (2009). " A survey of the management practices, educational needs, and decision making behavior of Kentucky dairy producers." *Showcase for Undergraduate Scholars*. University of Kentucky, Lexington, KY. (April)

Regional:

Russell, R.A., Epps, R.B., & Headrick, J. (2014). Life choice: Examining factors influencing degree choice of college of agriculture freshmen. *Regional American Association of Agricultural Education Conference*. Dallas, TX. (January)

National:

Russell, R.A., & Bewley, J.M. (2009). "Characterization of Kentucky dairy managers' decision making behavior." *National American Dairy Science Association Conference*. Montreal, Canada. (July)

Russell, R.A., & Bewley, J.M. (2009). "Description of Kentucky dairy management systems and producer demographics." *National American Dairy Science Association Conference*. Montreal, Canada. (July)

Presentations

Research Presentations:

Regional:

Russell, R.A., & Bewley, J.M. (2009). "Producer Assessment of Dairy Extension Programming in Kentucky." *Regional American Dairy Science Association Conference*. Clemson, S.C. (February)

National:

Russell, R.A., & Bewley, J.M. (2009). "Producer Assessment of Dairy Extension Programming in Kentucky." *National American Dairy Science Association Conference*. Montreal, Canada. (July)

Informational Presentations:

Regional:

Russell, R.A., & Thompson, C. (2010). "Understanding the Ropy Milk Test." *Regional American Dairy Science Association Conference*. Montgomery, AL. (February)

National:

Russell, R.A., & Thompson, C. (2010). "Understanding the Ropy Milk Test." *National American Dairy Science Association Conference*. Denver, CO. (July)

PROFESSIONAL DEVELOPMENT

Kentucky Association of Agricultural Educators (KAAE): 2011-2013, 2014-2016
National Association of Agricultural Educators (NAAE): 2011-2013, 2014-2016

LICENSE AND CERTIFICATION

Kentucky Professional Certificate for Teaching Agriculture, Grades 5-12

INSTRUCTION

Harrison County High School

Courses taught during Fall 2013-Spring 2016

Introduction to Agriculture (CASE), 9-10 grades
Greenhouse Business Technology, 10-12 grades
Agricultural Construction, 11-12 grades
Floral Design, 10-12 grades
Plant/Crop Science, 10-12 grades
Small Animal Science, 10-12 grades

Locust Trace Agriscience Farm

Courses taught during Fall 2011-Spring 2013

Introduction to Horticulture, 10-12 grades
Floral Design, 10-12 grades
Food Science, 10-12 grades

Professional Development

Kentucky Association of Agricultural Educators (KAAE): 2011-2013, 2014-2016

National Association of Agricultural Educators (NAAE): 2011-2013, 2014-2016

License and Certification

Kentucky Professional Certificate for Teaching Agriculture, Grades 5-12