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GEORGIA HIGH SCHOOL COUNSELOR PERCEPTIONS OF CAREERS IN THE AGRICULTURAL FIELD

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GEORGIA HIGH SCHOOL COUNSELOR PERCEPTIONS OF CAREERS IN THE AGRICULTURAL FIELD

By

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ABSTRACT

The word “farmer” somehow still evokes that stereotypical image of an old man in overalls wearing a straw hat and holding a pitchfork. Agriculture is our nation’s largest employer, but agriculture careers still have that stigma of being backbreaking manual labor that yields a low income and is reserved for those less educated or uneducated. At the secondary education level, this type of skewed perception by school counselors can impact their abilities to counsel students who are seeking college or career advice. To meet the demands of our growing population, agricultural careers have evolved to become highly scientific, and many require advanced degrees to obtain employment. Agriculture has a constant need for employees in the food, fiber, and forestry industries. Given the important role of guidance counselors in influencing the choices related to postsecondary options for students, a questionnaire was developed to determine whether the perceptions of agricultural careers are an accurate depiction of the opportunities available in the agricultural industry where we are now in the twenty-first century. Based on the data analysis, null hypothesis one was rejected, indicating a significant predictive relationship between the counselors' likelihood of recommending students to choose post-secondary studies in an agriculturally related field and counselor perceptions of agricultural careers. The null hypothesis two was rejected based on the data analysis stating a statistically significant relationship between counselor perceptions of agriculture careers and their physical location, rural versus metropolitan areas of Georgia.

Keywords: *Agricultural Careers, Agricultural Education, Perceptions, High School Counselor*

Dedication

This thesis is dedicated to my mother, Gail Richey Carey, who lost a long and hard-fought battle with breast cancer in April 2006. She always pushed me to excel academically and never settled for mediocrity. I would have never been able to complete this dissertation without the never-quit attitude that she instilled in me at a young age. Look, Mama, I graduated from college, not once or twice, but five times!

"Your life was a blessing, your memory a treasure…You are loved beyond words and missed beyond measure" –Renee Wood.

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Table of Contents

List of Tables

List of Figures

CHAPTER ONE: INTRODUCTION

Overview

As an agricultural education teacher and FFA advisor, I mentor students every year who wish to pursue a career in the agricultural industry. I am always excited to meet students who want to take an active role in our nation's most important industry. However, I have noticed an alarming trend: high school counselors often seem to lack knowledge regarding the diverse array of modern agriculture jobs and college majors available to students, and for this reason, they have discouraged students from pursuing post-secondary studies in agriculture. For example, two student members of the Georgia FFA Association who aspired to enter the medical field were told by their school counselors that they should not seek an undergraduate degree as a Poultry Science major through the University of Georgia College of Agriculture and instead should study Biology or Chemistry through the Franklin College of Arts and Sciences to gain a more respected undergraduate degree.

Statement of Problem

The word "farmer" somehow still evokes that stereotypical image of an old man in overalls wearing a straw hat and holding a pitchfork. When mainstream media portrays the American farmer, it is usually done in a less than picturesque light. The clichés of what it is like to live in a rural area are hard to escape when it comes to Hollywood. Farmers and agriculturalists are viewed as having a "simple" way of life, even though that is an extremely outdated way of thinking. Today's farmers are in tune with the local and global economy when buying and selling their commodities; they operate machinery that costs well over six figures, then work through meticulous math problems to balance feed rations and calibrate a 1,600 gallon 135-foot chemical sprayer. However, when it comes to the Hallmark movie portrayal of what it

is like to live on a farm, the enthusiastic young person of either gender farming the land just doesn't fit the bill (Krymowski, 2018).

In 2019 TIME Magazine published an article entitled, *'They're trying to wipe us off the map.' Small American farmers are nearing extinction,* highlighting the challenges that American farmers and American consumers face are detailed. Amidst the bankruptcies, loss of land in the family for generations, high divorce rate, and an alarming rate of suicide, the family farm, as we all love to see it on the front of a Christmas greeting card, has been in it almost ceased to exist. According to Alana Semuels and TIME Magazine, in 2019, farm debt was sitting at $416 billion, which was an all-time high. More than half of all farmers have lost money every year since 2019 and lost more than $1,644 in 2019. "Farm and ranch families are facing a great extinction," says Al Davis, a Nebraska cattle producer, and former state senator. "If we lose that rural lifestyle, we have really lost a big part of what made this country great." (Semuels, 2019)

According to the American Farm Bureau Federation, a mere 2% of Americans are involved in production agriculture, and the agriculture industry is our nation's largest employer. The following statistics are provided through the United States Department of Agriculture Website. "In 2020, 19.7 million full- and part-time jobs were related to the agricultural and food sectors—10.3 percent of total U.S. employment. Direct on-farm employment accounted for about 2.6 million of these jobs or 1.4 percent of U.S. employment. Employment in agriculture- and food-related industries supported another 17.1 million jobs. Of this, food service, eating, and drinking places accounted for the largest share—10.5 million jobs—and food/beverage stores supported 3.3 million jobs. Together, the remaining agriculture-related industries added another 3.3 million jobs" (USDA, 2021).

Despite the wide array of employment opportunities and the vast expansion of exceedingly science-based and specialized fields of study, agriculture careers still have that stigma of being backbreaking manual labor that yields a low income. Many feel that the career opportunities in agriculture are reserved for those who are less or uneducated. At the secondary education level, this type of skewed perception by school counselors can impact their abilities to counsel students who are seeking college or career advice. To meet the demands of our growing population, agricultural careers have evolved to become highly scientific, and many require advanced degrees to obtain employment. Agriculture has a constant need for employees in the food, fiber, and forestry industries. Given the important role of school counselors in influencing the choices related to postsecondary options for students, a study is needed to determine if the perceptions of agricultural careers accurately depict the career opportunities available in the agricultural industry where we are now in the twenty-first century.

Purpose of Study

The Georgia Agricultural Education department, whose mission is to deliver agricultural, environmental, and leadership education programs and services in Georgia public schools, is working on expanding its reach into the state's metropolitan areas to remedy the skewed perception of careers in agriculture. In an effort to dispel common myths and stereotypes, Georgia Agricultural Education is in the beginning stages of developing "Ag Trade Talks" to distribute to school counselors across the state. In cooperation with other state commodity organizations like the Georgia Beef Board and the Georgia Peanut Commission, "Ag Trade Talks" develop informative videos showcasing various agricultural commodities and career opportunities within agriculture. The data collected in this dissertation will be shared with the "Ag Trade Talks" committee to address perceptions of agricultural careers.

The Impetus for Study

The idea for this study was brought on by two high school students who have been active members of the National FFA Organization and whose families have a background in agriculture. These young ladies were applying to the College of Agriculture at the University of Georgia in the fall of 2021. They both are interested in the medical field and plan to major in their undergraduate studies in poultry science. The poultry science degree requirements closely follow the pre-medicine course tract. The poultry science advisor at the University of Georgia has a one hundred percent acceptance rate to medical school. These students are interested in agriculture and have had numerous scholarship opportunities offered to them through the College of Agriculture based on their grade point averages and extensive participation in FFA and 4-H. On both occasions, their school counselor encouraged these young ladies to apply to the Franklin College of Arts and Sciences rather than going through the College of Agriculture. This was concerning, and it prompted these questions: How many other students have received this advice from their school counselors? Are school counselors influencing the decisions of students based on their perceptions of careers in the field of agriculture? Have there been any measures taken to educate school counselors about the opportunities available through colleges of agriculture?

Significance of Study

According to the U.S. Department of Agriculture data from 2018 to 2019, the percentage of agriculture graduates entering the workforce increased by only 3.33%, from 531,117 to 548,799 (USDA, 2021). The majority of these graduates entered the workforce as farmers, ranchers, and other types of agricultural managers; however, it is worth noting that this majority is only 5.63% of all 2019 agriculture graduates and out of over 100 career categories in agriculture. Other major agriculture career categories are higher education and secondary

education institutions, veterinary services, landscaping, sales and manufacturing, law and legislation, economic programs, and space research programs. Also worth noting is that the average agriculture employee age is 44.5 years (USDA, 2021). This data highlights the small number of young employees entering agriculture with agriculture degrees. It also highlights the wide array of career choices in agriculture that many graduates may not be aware of. How is this happening in an industry we cannot live without? As a high school agriculture teacher, I am aware of school counselors' lack of knowledge regarding the diversity of modern agriculture jobs and majors, even in such an agriculturally significant state as Georgia. In at least two recent instances, counselors have discouraged students from majoring in agriculture for these reasons. This could be why more young people are not pursuing degrees in agriculture.

This study aims to bring awareness to the perceptions of agricultural careers and the agricultural industry held by high school counselors. By identifying these perceptions, “Ag Trade Talks” and other professional development opportunities can be specifically created to educate counselors and inform them of not only the available career opportunities and the advantages of studying agriculture in college.

Research Questions

RQ1: What are the perceptions of high school counselors concerning careers in the agriculture industry?

RQ2: Does the perception of agricultural careers differ among metropolitan versus rural populations of school counselors?

Definitions

1. ***Agricultural Education-*** Program, which prepares students for careers in all areas of agriculture utilizing three components; classroom/lab, FFA involvement, and Supervised Agricultural Experience program. (National FFA, 2019)
2. ***Carl D. Perkins Career and Technical Education Act-*** also referred to as Perkins or Perkins V, is the main federal funding source for high school and postsecondary CTE programs. (Xello, 2021)
3. ***Career, Technical, and Agriculture Education*** (CTAE) integrates core academic knowledge with technical and occupational skills to prepare students for postsecondary education and the workforce.
4. ***CTE-*** Career and technical education is the practice of teaching specific career skills to students in middle school, high school, and postsecondary institutions. CTE is made up of 16 career clusters which are each related to careers in specific industries. (Stauffer, 2021)
5. ***CTSO-*** A career and technical student organization (CTSO) is an extracurricular club for students enrolled in middle school or high school CTE pathways to further their knowledge and skills by participating in activities, events, and competitions. (Stauffer, 2021)
6. ***Land-Grant College Act of 1862*** *or* ***Morrill Act***- Act of the U.S. Congress (1862) provided grants of land to each of the states for the establishment of colleges to specialize in "agriculture and the mechanical arts." Named for its sponsor, Vermont Congressman Justin Smith Morrill (1810–98). (Encyclopedia Britannica, 2019)

7. ***National FFA Organization***-A Career Technical Student Organization, formerly known as Future Farmers of America, that develops premier leadership, personal growth, and career success through agricultural education. (National FFA, 2019)
8. ***School counselor***- A school system employee who designs and delivers school counseling programs that improve student outcomes. They lead, advocate and collaborate to promote equity and access for all students by connecting their school counseling program to the school's academic mission and school improvement plan. (American School Counselor Association (ASCA, 2022)
9. ***Second Morrill Act of 1890-***A second Morrill Act was passed in 1890, aimed at the former Confederate states. This act required each state to show that race was not an admissions criterion or designate a separate land-grant institution for persons of color. (Lee & Keys, 2013)
10. ***Smith Hughes Act-*** Smith-Hughes Act, formally National Vocational Education Act, U.S. legislation adopted in 1917, provided federal aid to the states to promote pre-collegiate vocational education in agricultural and related trades. (Steffes, 2020)

Summary

Career Technical and Agricultural Education courses are known for being innovative in their instructional methods by implementing technology and a hands-on approach to learning. Further, Career Technical Student Organizations promotes leadership among middle school and high school students through an interactive approach to career readiness. Expanding knowledge of agricultural careers and diversifying the reach of agricultural literacy to include metropolitan areas will certainly help implement change in the widely accepted but obsolete perspective of agriculture. The collaborative efforts to improve communities and tailor

education for the workforce will continue to gain popularity as our society recovers from a global pandemic. These are unprecedented times in the agriculture industry and education, but there is no doubt that agriculturists and agriculture educators will all rise to the challenge.

CHAPTER TWO: LITERATURE REVIEW

Overview

This research aims to determine if high school counselors reflect a bias toward persuading students to pursue post-secondary studies in agriculture-related fields and if these biases are present in both rural and metropolitan schools. Production agriculture is necessary for our nation's food security, and it has a tremendous economic impact on the global economy and maintains the average American's quality of life. It has taken centuries of educational reform, decades of research, and tremendous governmental support for America to have the safest and most plentiful food supply in the world. This is not a feat taken lightly among agriculturalists and agricultural education teachers.

The *Harvard Business Review* predicts that global food demand will increase by nearly 70% by 2050 (Elferink & Schierhorn, 2019). To ensure the workforce in agricultural communities worldwide continues to grow and the food supply continues to meet the population's demand, it is of utmost importance that all hands involved in influencing America's youth see the vitally important role of agriculture in our daily lives. One way to do this is by allocating information about modern agricultural careers to students and those who have meaningful interactions with students, such as high school counselors, to change the outdated perceptions regarding those who feed and clothe our society.

Due to its mild climate and fertile soils, Georgia is widely centered on agriculture. The production and marketing of agricultural products and services contribute approximately $73.3 billion to Georgia's economy on an annual basis, according to the UGA Center for Agribusiness & Economic Development on the Georgia Farm Bureau's webpage, *About Georgia Agriculture.* Agriculture is not only the oldest industry in Georgia; it is also the state's largest

employer, with almost one in seven Georgians working in agriculture-related industries involving production agriculture and forestry. Georgia is the number one state in the nation for the production of peanuts, broilers (chickens harvested for meat), spring onions, blueberries, and pecans (Georgia Farm Bureau, 2022). For instance, the poultry industry is the top producer and major economic contributor to communities across Georgia. Poultry accounts for 47% of Georgia's agriculture production, with crops accounting for 44% and livestock and dairy accounting for 9%. The Georgia poultry industry has grown from approximately 1.5 billion pounds per year in the 1970s to a staggering 7.5 billion pounds per year in the 2000s to meet the population's demand (Bishop, 2016). As a result, those communities to which the poultry industry is highly visible, such as communities with processing plants, feed mills, and hatcheries, are likely to look more favorably on agricultural careers because they immediately recognize the countless career opportunities and importance of modern agriculture close to home. However, not all individuals witness these job opportunities and modern agriculture at work. Sometimes, these individuals play an important role in guiding Georgia high school students in college majors and careers. Sometimes, these individuals can discourage students from majoring in agricultural fields or pursuing agriculturally related employment opportunities.

This research aims to examine the perceptions of high school counselors regarding agriculture careers. Comparisons will be made to examine the discrepancies between those counselors who work in a rural setting versus those who work in a metropolitan area of the state. The belief is that many high school counselors still associate agriculture with field-based careers centered on basic crop and livestock production, and this stereotypical belief propagates an outdated stigma. Online surveys will be distributed to collect detailed reasoning and further

the examination of the origins of such perceptions. The validity of this study could be questioned because only school counselors who work in Georgia schools will be the focus.

Agricultural Education

The United States has a long, rich history of agricultural education. Even before the Morrill Land Grant Act of 1890, students across the country were enrolled in courses centered on agriculture. With the enactment of the Morrill Land Grant Act to establish colleges for the purpose of studying agriculture, agricultural education started to expand even further. The Smith–Hughes National Vocational Education Act of 1917 was vital for secondary schools' agricultural colleges, and agricultural education. Smith-Hughes authorized funding for agricultural teacher training, methodology, and a separate, specific agriculture curriculum in the public school systems (True, 1929).

Public schools across Georgia and the United States have well-established agricultural education programs, especially in rural areas. To ensure the most vulnerable populations receive accurate information regarding the food, fiber, and forestry industries, more emphasis is needed on urban agriculture and expanding the reach of agricultural education courses into metropolitan areas. During the 2020-2021 school year, Georgia FFA Association chartered its first FFA chapter in the Atlanta Public School System at Booker T. Washington High School. This is a turning point for agricultural education in Georgia. Further, agricultural colleges have heavily invested in recruitment efforts to excite students about agricultural majors because of a lack of exposure to agriculture as a way of life (Esters & Bowen, 2004). Special efforts are focused on minority students to diversify the workforce more closely to that of the population of the United States (Fraze et al., 2011).

Many families in metropolitan areas are trapped in a food desert, meaning there is little to no access to affordable, nutritious foods like fresh fruits and vegetables. For these areas to thrive, it is important to increase postsecondary enrollment for students in agricultural education or one of the many other facets of the agricultural industry. The number of students taking both vocational and college preparatory courses has increased, suggesting that students can integrate vocational learning alongside academia into their high-tech and business-centered interests (Roe et al., 2021).

Background on the National FFA Organization

In the early 1900s, more organized agricultural clubs or groups were designed specifically for education and social interaction among young farmers; these clubs included corn, tomato, cotton, and poultry clubs, school agricultural clubs, farmers' institutes, the 4-H, the Boy Scouts, and secondary education classes (Tummons, 2017). There was a growing need for more youth-oriented agricultural fairs or exhibitions and livestock shows, which have been an American staple since the early colonies, originating from England. Because livestock judging has always been popular among farmers, it also became popular at agricultural colleges. Many of these institutions hosted competitive fairs and built judging pavilions on their grounds. The agricultural colleges prepared the livestock for exhibitions and fairs, and the students' success in representing these schools, "notably at the International Livestock Show at Chicago, undoubtedly increased the prestige of the colleges among farmers and greatly stimulated the interest of students in animal husbandry" (True, 1929, p. 250). The overwhelming success of the 1926 Kansas City American Royal exemplified this.

The American Royal livestock contest was specifically for vocational agriculture students, and "more than 900 vocational agriculture students and 400 4-H club members from

across the nation" competed (Tummons, 2017, p. 237). Other events soon followed, boasting large turnouts for student livestock judging and recognition from other agricultural students and programs across the country, relying on agricultural business and industry partnerships that were necessary for the continued operational success of these national judging contests. For example, at the American Royal, "Kansas City businesses provided agricultural tours, speakers, livestock expositions, awards, and meal sponsorships" for the participating students, mostly boys from rural farming communities (Tummons, 2017, p. 246). As a result of such success and the need for a national-level organization created by young farmers, in 1927, the Third National Congress of Vocational Agriculture Students created the Future Farmers of America (FFA).

Since its inception, the National FFA Organization has become a vital part of agricultural education, preparing young students for careers in agriculture, agribusiness, and other agriculture-related jobs. FFA operates on three levels: local, state, and national. During their year of service, both local FFA chapter officers and national officers represent the body of members and steer the organization throughout the year. The FFA elects a president, secretary, and four regional vice-presidents at the National FFA Convention & Expo ("About FFA," 2020). FFA gives young people a sense of ownership, preparedness, and the confidence needed for their future careers, which we want to see across P-20 education.

According to the FFA website, ffa.org, the FFA Vision is to "provide the next generation of leaders who will change the world," and the FFA Mission is that it "makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth, and career success through agricultural education." The FFA's eight-page constitution addresses its objectives, procedures, membership, officers, meetings, and committees. The organization's motto is: Learning to Do, Doing to Learn, Earning to Live, Living to Serve

("About FFA," 2020). Adopted at the 1952 National FFA Convention and revised at the 1995 National FFA Convention, the FFA Code of Ethics requires that its members pledge to do the following ("About FFA," 2020):

1. Develop my potential for premier leadership, personal growth, and career success.
2. Make a positive difference in the lives of others.
3. Dress neatly and appropriately for the occasion.
4. Respect the rights of others and their property.
5. Be courteous, honest, and fair with others.
6. Communicate in an appropriate, purposeful, and positive manner.
7. Demonstrate good sportsmanship by being modest in winning and generous in defeat.
8. Make myself aware of FFA programs and activities and be an active participant.
9. Conduct and value a supervised agricultural experience program.
10. Strive to establish and enhance my skills through agricultural education in order to enter a successful career.
11. Appreciate and promote diversity in our organization.

These ethical guidelines inspire young people to succeed. FFA provides its members with the iconic blue corduroy jacket along with an ethical code. This jacket, introduced in 1933 and still worn by FFA members today, "unifies members in a long-standing tradition and reminds them that they are part of something larger than themselves" ("History of the Blue FFA Jacket," 2019). The idea behind the FFA jacket reminds young farmers that they are not alone and that a strong support system is in place to help them into adulthood. This is essentially what P-20 is outlined to do. FFA instills marketable skills through hands-on and competition-based experience in agriculture.

Almost since its formation, FFA has been forward-thinking in promoting diversity, including desegregation and women's rights. For example, The New Farmers of America (NFA) was established for African-American farm youth in 1935 to "promote agricultural leadership, character, thrift, scholarship, cooperation, and citizenship" (New Farmers of America Records, 2016). As a result of the Civil Rights Movement in the sixties, the NFA, with over 50,000 members in 12 states, joined the FFA in 1965 to create a unified front. In 1969, women were officially allowed membership into the National FFA. Since then, women have become an important part of the organization. Anita Decker Wright was the first female state officer in 1970. Women have continued to contribute to the agriculture industry and break barriers for women in farming. FFA is an enormous resource for students in preparing and networking for their future careers and for agricultural education.

More recently, The Carl Perkins Vocational and Technical Education Act of 1984 (and updated in 1998, 2006, and 2018) has been designed to increase the quality and equity of technical education in the U.S. to help the economy. In 2018, President Trump renewed the act, now referred to as the Strengthening Career and Technical Education for the 21st Century (Perkins V) Act. The 2018 amendment changed the terminology from "vocational" to "career and technical" education, including agricultural education, with separate federal funding set at 5% of each state's allotment. One of the most promising aspects of the updated law incorporates requirements for programs of study connecting academic and technical subjects across secondary schools and colleges. This act is the main source of federal funding for career and technical education (CTE) programs in high school, college, and university CTE, preparing youth and adults for a career in their local and regional economies. The benefits of CTE for America's youth prepare them for the real world, providing them with the necessary technical, academic,

and employability skills to succeed on the job. Furthermore, CTE shows students how these hard and soft skills translate into the workforce ("Why Career and Technical Education?", 2020).

These organizations and legislations have enabled young, often disadvantaged Americans to learn and obtain hands-on experience in agriculture, allowing them to become active, productive citizens, thus building equity in their education. Agricultural education has always evolved to adapt to the needs of the agricultural industry in our country, and it will continue to do so. From a P-20 standpoint, agricultural education exemplifies the P-20 initiative, with a secondary, postsecondary, and community pipeline already in place and honed over the centuries through grassroots movements.

If agricultural education has fallen short in any P-20 category, it is at the elementary level. However, states like Georgia, South Dakota, Iowa, West Virginia, and Hawaii have recognized this shortcoming. They are actively working to implement agricultural programs in elementary schools across their state, such as planning field trips to local farms, designing activity workbooks and kits that meet core standards, and providing learning stations in classrooms that give a hands-on experience using various farming tools and samples, such as ear tags, calf bottles, and crop samples.

Whether it starts with field trips to farms or activity workbooks, school systems and agricultural organizations across the country are moving toward a more grounded, defined curriculum for elementary schools to meet P-20 standards. Georgia FFA, for instance, has already created an elementary curriculum posted on their web page. The Farm Bureau has been and continues to be a great resource for schools when assistance is needed in bringing agriculture into the classroom. Abraham Baldwin Agricultural College in Georgia is developing the first program in the nation for college students "to teach agriculture classes at the pre-kindergarten

through the fifth-grade level, adding to its agriculture teacher certification program for grades 6 through 12" ("ABAC First Program," 2020). Because agriculture is the main business in Georgia, I am proud to see the leaps my state is making to design a complete P-20 Agricultural Education experience for all ages, and I hope all states eventually follow in this direction. When looking at the history of agriculture education in our country and at all that, our farmers, farming organizations, schools, and legislators have done to promote and protect this industry.

Perceptions of the National FFA Organization

The National FFA Organization (FFA) is America's largest student-led youth organization. The FFA currently has over 760,000 members across the nation in 8,739 FFA chapters that cover all 50 states and the U.S. Virgin Islands and Puerto Rico. In 1928, when the Future Farmers of America was founded, only white males were allowed to become FFA members. As a result, the New Farmers of America (NFA) was founded in 1935 to provide African-American males the opportunity to join an agriculture organization that closely mirrored the FFA in its mission and skill development. The organizations merged in 1965 (*Our Membership*, 2021). In 1988 the Future Farmers of America changed its name to the National FFA Organization to encompass the transformations across the agriculture industry and reflect the diversity within the organization. FFA wanted to be inclusive of the many careers available through agriculture, not just students interested in production agriculture. FFA has opened doors for its members to become doctors, lawyers, scientists, teachers, and the owners of small businesses or large corporations ("What is FFA," 2019).

Career and Technical Student Organizations (CTSOs) are important in the secondary setting to guide students along a positive path as they develop and learn life skills. These organizations serve to reiterate what is being taught in the classroom and offer tangible results to

developing leadership qualities and experiencing personal growth while expanding one's knowledge in a wide variety of interest areas. The National FFA Organization, Croom and Flowers point out in their research *Factors influencing a student's perception of the image of a Career and Technical Education Student Organization* (2000), the image of the FFA depends on the mental picture that comes to mind when certain characteristics of the organization are discussed or brought to one's attention. The image can be either positive or negative, depending on the facts that one knows in relation to the organization or what one would speculate from interactions with the organization. The value of the National FFA Organization or any member-led organization is in the minds of its members and those who interact with its members. While the organization's value can be placed on tangible items, such as an award or the notorious blue corduroy FFA jacket, much of the value placed on membership is from intangible things. The sense of pride or feeling of belonging one has when they wear their blue corduroy jacket or if they are actively involved in the FFA. If the organization promotes a positive image, its members are more likely to feel a sense of accomplishment and that this organization has positively impacted their lives. In turn, this makes recruitment for the organization much easier.

In the results of their research, Croom and Flowers determined that gender, grade level, and ethnicity have little effect on a high school student's perception of FFA and their agricultural education class. However, whether or not a student becomes a member of their school's FFA chapter is influenced by the perception of the image portrayed by the FFA organization in their particular school setting. Generally speaking, those students who were FFA members had a significantly more positive response to items related to the organization than the responses of non-members (Croom & Flowers, 2000).

Perceptions of Women in Agricultural Careers

"If you teach a man to farm, his family will eat. If you teach a woman to farm, the whole community will eat." This quote of unknown origin underscores the importance of women's roles in agriculture and how women can become the change they wish to see, taking proactive steps in their education and careers to help feed not only their community but their state, country, and even the world. Globally, the majority of farmers in the least-developed countries are women. In the United States, over 30% of farmers are women. However, American women face major obstacles in gaining agricultural employment and thriving in their chosen careers. According to Maryellen Kennedy Duckett in her 2019 *National Geographic* travel article, *Empowering Female Farmers to Feed the World*, some of the barriers that women around the world face in agriculture are: "lack of access to land, financing, markets, agricultural training and education, suitable working conditions, and equal treatment."

It is important to note that these barriers are not limited to developing countries. For example, in Duckett's article, a 33-year-old female farmer who manages Magna Vista Farm in Bristol, Tennessee, states that because she is a woman, it is often easier for her husband to negotiate in-person business deals and phone calls. Although she runs the farm and makes the business decisions, "[male farmers] don't want to talk to [her] about when to cut hay, or when to sell cattle, or how much rain [they've] gotten. They want to talk to a man." Another example mentioned in Duckett's article is a 62-year-old female farmer in Crumpler, North Carolina, who owns Heritage Homestead Goat Dairy and who finds more success selling cheese at farmer's markets because most vendors and buyers are female. Her husband assists with the retail aspect of the business and on the farm, making cheese and raising their goats. She believes that women farmers are good for the community because they are "community-oriented," but whether

communities embrace women farmers as true businesswomen and primary producers is another story (Duckett, 2019). American women farmers are usually more accepted in organic and sustainable agriculture roles that focus on community and holistic well-being, not in primary agriculture roles in large-scale agribusinesses that focus on crop yields, research, farming environments, marketing, and access to social resources (Glazebrook and Noll, 2021). Only recently did the USDA change its census to allow more than one primary producer of an agribusiness, such as women contributors, to be reported.

The Food and Agriculture Organization of the United Nations (FAO) believes that eradicating gender bias in agriculture will empower women in agricultural careers and help feed the world, which is what agriculture is ultimately all about (Duckett, 2019). Initiatives to end global hunger, such as the U.S. government's 2010 global hunger and food-security proposal, Feed the Future, helped nearly 2.4 million women in 2016 to improve their agricultural skills, and more than 420,000 women obtain agriculture-related credit (Duckett, 2019).

Globally, approximately 820 million people are undernourished. If women had access to the same resources and education as males, it could increase worldwide food production by up to 30%. This would be the equivalent of feeding about 150 million starving people worldwide (Duckett, 2019). The key for American women, especially our young female students entering postsecondary education, is having access to the same resources and educational opportunities as male students. This is the crucial point in young women's lives when our high school counselors may be failing them. Americans, in general, can have inaccurate perceptions regarding agriculture and how important it is to society and the environment, especially in urban and metropolitan areas that are more disconnected from agriculture. Moreover, young female agriculture students may lack role models (although more women are moving into prominent

teaching positions in agriculture education) and may also have to endure stereotyping and bias. For instance, it may be more acceptable for a female student to consider majoring in Horticulture. Still, she may face adversity if she considers the agribusiness field, even though women now make up over 50% of U.S. agricultural students. Suppose female students who want to major in agriculture struggle with the socio-cultural beliefs and stereotypes before even graduating high school. In that case, they may wonder how they can ever hope to find empowerment in a college agriculture program and career.

Extension service programs, like the University of Maryland's and University of Georgia's Women in Agriculture, are created to expand networking, create a better understanding of agricultural work, and promote collaboration for women who are agriculture majors and employed in agriculture. But the hurdle for many young female students interested in a future in agriculture may not be college and beyond but high school. When a female high school student's school counselor discourages her from majoring in agriculture at the University of Georgia, which sponsors a program like Women in Agriculture to foster the acceptance and empowerment of its female agriculture majors, what are the ramifications?

Perceptions of Minorities in Agricultural Careers

The lack of minority representation in agriculture education programs has become a national issue at the secondary school level. Steps are being taken to recruit more minorities into these programs. Still, it has not been an easy task. In a study published by Jayaratne et al. (2019), the authors, who are faculty members in the Agricultural and Human Sciences department at North Carolina State University, interviewed 20 North Carolina secondary agriculture education teachers who had previous success in recruiting minorities into their agricultural education programs "to determine the barriers and challenges of recruiting minority

students into secondary school-based agriculture education programs and alternatives to overcome those barriers and challenges." The study was limited to North Carolina educators, and only 20 were on the panel, so the validity of this study could certainly be debated. Nine of the teachers on this panel were White, one teacher was African American, and two teachers were identified as "others." Eight teachers were male, and four were female, with teaching experience ranging from 4 to 45 years. The number of students in their agriculture programs ranged from 26 to 300 students, and the percentage of minority students in their programs ranged from 7% to 90%. Using an online questionnaire, the selected panel members answered the following four open-ended questions about their agricultural education programs at their respective schools:

> What do you consider as major barriers preventing minorities [enrolling] in secondary school agricultural education programs (courses and FFA)? What do you consider as real challenges when recruiting minorities into secondary school agricultural education programs? What do you consider strategies effective in recruiting minorities into secondary school agricultural education programs? If minority students are placed in your courses due to reasons such as student overflow, which strategies are effective in recruiting them into another agriculture course or FFA? (para. 12).

Panel results showed that, as part of the minority recruitment process, agriculture teachers have to persuade potential students and parents, school administrators, and counselors who could influence minority students to enroll in agricultural education and understand the benefits of studying agriculture in their secondary and postsecondary education. Some strategies the panel members suggested to recruit minorities into agricultural education were: "using minority students to recruit other minority students" (Jayaratne et al., 2019, p.4) by featuring minorities who are excelling in programs like FFA, using "minority professionals as role models, and

[enhancing] teacher communication with the parents of minority students." (Jayaratne, et al., 2019, p.12) This includes using outreach strategies where minority students gather, such as at sporting events, concerts, churches, and community functions (Jayaratne, et al., 2019).

Even with these recommended recruitment methods, panel members stated that secondary agriculture teachers still face challenges recruiting minorities into their programs. As previously stated, one challenge listed was the lack of minority role models in agriculture education. Another challenge was overcoming minority students' mindset of agriculture as being solely a manual labor job because they are unaware of other types of agricultural careers available to them. A third challenge presented by the panel was that minority students and parents prioritize athletic programs over agriculture programs because they view athletic programs as a pathway to higher earning potential as a professional athlete, regardless of the odds of this happening (Jayaratne, Park, and Davis, 2019). Perhaps if minority students are more aware of the diverse agriculture career opportunities and programs available to them in high school, said panel members, they would be more receptive to a career in agriculture. Still, teachers cannot undertake such major recruitment projects alone. Teachers need the support of others, including outreach and extension programs and school staff members such as administrators and school counselors. Most importantly, minority students need to see how agriculture makes positive changes to empower minorities. We have come a long way, but we still have a long way to go.

As recently as 2012–2014, U.S. White farmers earned roughly 98% of all farm-related income from land ownership and 97% of all income from farm ownership. On the other hand, minority farmers (African American, Asian American, Native American, Hawaiian, Pacific Islander, and Hispanic) made up less than 4% of landowners and earned less farm-related income

than White farmers. Minorities, in particular Hispanic minorities at 80%, were also more likely to be employees or laborers instead of owners (Horst and Marion, 2018). Although the American population is becoming more racially and ethnically diverse, this data shows that agriculture may seem to young minorities as segregated as it was a century ago in their American History textbooks. Throughout U.S. history, minority farmers have faced obstacles in building a successful farm, such as "inadequate access to capital for starting operations, discrimination within the private loan sector, and historical discrimination from USDA" (*Racial Equity in the Farm Bill*, 2018).

The Farm Bill, enacted in 1933 and updated by Congress every five years, is the federal bill designed to provide relief and support for all farmers, regardless of race or ethnicity, to ensure the country's food supply, such as by funding agricultural production, nutrition, conservation, insurance, and rural development, to name a few. In 1999, in the landmark civil rights class-action case of *Pigford vs. Glickman*, black farmers were awarded over $2 billion in settlements when the USDA, which manages farm bill funding, formally acknowledged that it had racially discriminated against black farmers for decades, especially in regards to malpractices regarding farm loans and land access. Because black farmers were denied these government loans and other aid, many black farmers lost their farms and homes. More recently, in 2011, in the lawsuit *Keepseagle vs. Vilsack*, the USDA settled with American Indian farmers and ranchers when they accused the USDA of denying them credit in its Farm Loan Program between 1981-1999. The evidence from these court cases demonstrates a long history of deeply rooted, systemic discrimination against minority farmers, especially in terms of loans, aid, and land.

In June 2021, U.S. Representative Bobby Rush and U.S. Senator Cory Booker introduced the Farm Subsidy Transparency Act of 2021, which, according to the proposed bill, would direct the Secretary of Agriculture to track the USDA's distribution of all farm subsidies by race, gender, and size of the farm operation, and to make such information about farm subsidies available to the public. In other words, the bill would show where and to whom the money is going. At this point, it is unclear if such a bill will or should gain traction; however, it is not unreasonable to expect the government to give the American people access to where their money is being spent.

While it is evident that minority farm owners have faced systemic discrimination, there is also evidence of White employer discrimination of minority employees working on White farms. For instance, in 2013, American minority laborers at Southern Valley Farm in Moultrie, Georgia, accused the owner(s) of firing them because of their race and national origin and that while they were employed on the farm, they were assigned the more unpleasant jobs and provided with fewer work opportunities than Mexican laborers who were here as part of a guest-worker program. Infighting on larger farming operations like Southern Valley Farm is common across the country, and cultural and racial undertones influence it. Large farms like Southern Valley Farm want cheap, hard-working labor, and migrant workers provide that. This is American capitalism at work. Farmers have to do what they can to save money and make money. According to American minority farmhands and farm employees, the problem is that migrant workers are taking their jobs. It is not always easy to say who is right and who is wrong in these situations. Still, one thing is apparent: minorities are involved in all aspects of agriculture and have been for centuries, and the system as a whole has failed them more often than not since their grade school education. There is no trickle-down effect in agriculture.

However, help is available for American minorities in agriculture more now than ever before, and young students of all backgrounds and cultures need to be encouraged to pursue degrees and careers in agriculture. Like Women in Agriculture, extension services and college programs like UGA's Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS) were created to promote academic and professional advancement by empowering minorities in agriculture, natural resources, and related sciences and by promoting diversity and inclusion for minority students and professionals in agriculture. Also, non-profit organizations have been created to represent American minority farmers and their families, like the National Black Farmers Association (NBFA), founded in 1995 by a fourth-generation Black farmer who advocates for Black farmworkers and farm owners throughout the country, and the National Latino Farmers and Ranchers Trade Association (NLFRTA) founded in 2004 that advocates for Hispanic farmworkers and farm owners throughout the country. With these and other organizations, assistance and advocacy are available to minorities who hope to make a living in agriculture. Still, young people need a connection, such as through role models who look like them and through inclusive protocols, to show them that they are needed and accepted in the agriculture community.

Perceptions of Agriculture in the Media

Urbanization of the population in the United States has contributed to inaccurate perceptions and ignorance about agriculture. D. D. Sorenson stated in his article, *How to Keep 'em up on the Farm and Farming*, that as the U.S. population continues to shift to cities, fewer Americans are likely to have contact with production agriculture. Most people in this country do not have to be concerned with the supply of high-quality food and fiber, and as a result, many fail to understand its societal benefits (USDA, 1983).

Traditional media outlets and social media platforms play a major role in how people view the agricultural industry. The media can make the industry an easy target for activists and consumer groups that can negatively impact the industry. For example, the 2012 lean finely textured beef (LFTB) debacle, also known erroneously as *pink slime* by ABC News, caused mass outrage. Consumers demanded the product be removed from schools and commercial sales without having all the facts. This was prior to what is now known as "cancel culture," but the media, with its misinformed consumers, basically canceled the beef industry. In 1976, communications researchers Sandra Ball-Rokeach and Melvin DeFleur devised the Media Dependency Theory (MDT). Basically, MDT means the more dependent an individual is on the media for having his or her needs fulfilled, the more important the media will be to that person. But it is unlikely that Ball-Rokeach and DeFleur could have predicted the extent to which MDT would relate to the 21st century.

Millennials, Generation Z, and Generation Alpha are the most technology- and social media-driven demographics, and this type of negative attention and media deception impacts how they view agriculture. Paradoxically, these are the young people we need working in agriculture. The agriculture industry knows how important it is to have an online presence and how devastating misinformation can be to public perception, so how can agriculture improve its image?

Perhaps agriculture needs an image overhaul. In 1870, nearly half of Americans worked in agriculture, with men, women, and children laboring in the fields six days a week. The Industrial Revolution brought more mechanized farming methods, such as the steam-powered plow and irrigation, and in turn, more and more Americans migrated to cities for higher-paying jobs. Today, farmers are struggling with issues like "volatile crop prices and declining profit

margins" and "the impact of climate change on crop yields, chronic labor shortages, and increasing debt" (Manhas, 2019). On top of this, agriculture still carries the stigma of being unsophisticated, backbreaking, and undesirable work. Karn Manhas, the founder and CEO of Terramera, an agriculture biotechnology company focused on improving the sustainability of farming, has witnessed firsthand how these misconceptions surrounding agriculture can prevent young people from pursuing careers in the field. Manhas states in his 2019 article, *Farming Is the World's Most Important Career - That's Why It Needs a New Image*, "It seems to me that what's needed is a rebrand of sorts — a concerted effort to separate myth from fact and promote the potential farming holds for fulfilling, impactful careers" (2019).

Using Elon Musk as an example, Manhas believes that agriculture could be rebranded similarly to how Musk rebranded Tesla by reimagining it as a refined and innovative field. It would not be difficult to do this type of rebranding with agriculture, Manhas argues, because agriculture has been associated with leading-edge technologies for centuries, from machination used in the field, such as with tractors and combines, to the complex chemistry used in fertilizers and pesticides. The future of agriculture is here, with its steady advancements in "robotics, artificial intelligence,...autonomous vehicles,...regenerative agriculture, and biomimetics" (Manhas, 2019).

Beyond needing food to survive, food also significantly impacts our cultural identity. We used to pass along handwritten recipes significant to our history and family, and many of us still do that. Still, we also have immediate access to recipes and cuisines from anywhere around the world on the endless number of food apps, blogs, and television shows. However, regardless of all the food available at the touch of a finger, a disconnect still exists between the food on our table (or on the screen) and how it got there for many Americans. Karn Manhas emphasizes the

importance of modern agriculture education at a young age, such as those programs that help children "understand the food journey – from farm to table – and [teach] them about healthy eating, sustainable farming practices, and the fragility of our ecosystem" (2019, para. 13). For young people who are looking to make a positive impact on the world, there is no better field than agriculture, and young people must be taught that farmers and other people who work in agriculture-related fields "are the original experimenters, hackers, makers, and problem-solvers; they're biologists, chemists, engineers, entrepreneurs and inventors" (Manhas, 2019). In other words, agriculture is cool.

Background Experiences

Two of the main goals for secondary educators and school counselors are to help high school students achieve high school graduation and to prepare them for their chosen career. With its hands-on approach to learning, agricultural education can significantly keep students engaged and reduce the dropout rate. However, for students to remain engaged in school, students need to witness their academic achievement in relation to what they value and to see the results of their hard work.

The majority of the 110 high school students enrolled in the Production Agriculture/Agricultural Business program who were interviewed in Warren Agner's study, *Perceptions Held About Agricultural Education by Coronado High School Students, El Paso, Texas*, overall believed that the three general reasons that students remain enrolled in an agricultural education program are: "family involvement, personal interest, and suggestions by a school counselor" (2012). The student participants were tasked with answering questions related to:

> (a) Their decision to enroll in agriculture classes, (b)the perceptions of family and friends, (c) the perceptions of other teachers, (d) feelings of acceptance while participating in activities, and (e) ways to make everyone feel more accepted in Agricultural Education (p. ii).

Agner's study and question topics, while informative, do have limitations. His study was limited to Coronado High School students, who are mostly Hispanic (74%), and not all students in the agriculture program were interviewed. Also, multiple interviewers were used, and they could have influenced the study and data in some unforeseen way. That being said, Agner does make perceptive observations regarding students in more at-risk environments like Coronado High School. Citing scholarly sources to support his argument, Agner emphasizes that "school systems, school programs, and organizational and institutional features of the school environment contribute to the conditions that influence students' academic success or failure" (p. 20). This is not groundbreaking information; most school systems are aware of this. But Agner uses his study and multiple sources to confirm this further.

In one section of Agner's study, students were asked what led them to enroll in agricultural education classes. Along with family and personal interests, one of the reasons was

that they were placed there by school counselors. Some students said they did not have an interest in agriculture, but when choosing courses, their school counselor was highly influential in their decision-making. Agner states that a large portion of students in the study were unclear as to why their counselors enrolled them in the agricultural education classes. Agner points out that it was a "common response that [the students] had just been told to take the classes, or that they were enrolled without them even knowing what the classes were or where they were held" (p. 40).

High school students need guidance, including what courses to take, what career paths to explore, what colleges to attend, and how to cope with physical and mental health issues. Like the counselors at Coronado High, school counselors play a major role in these areas and should always have their students' interests in mind when helping them make decisions about their classes and future. But the reality is that school counselors in public schools are often overworked and lack the requisite knowledge in all subject areas to advise all students properly. However, they usually have the best of intentions. The American School Counselor Association reported that the national average of students to school counselors was 424:1 during the 2019–2020 school year. The recommended ratio is 250:1. Also, overworked school counselors cannot get to know all of their students on a personal level. For this reason, counselors like the ones at Coronado High may not know enough about each student's interests and ambitions to properly counsel them regarding what courses they should take and what degrees they should pursue in college, instead of giving students canned or even incorrect advice, or in Coronado's case, just sticking students in classes with available seats instead of considering their individual interests and future.

School counselors must have a Master's degree before counseling in most public schools. However, most graduate programs for school counselors do not offer classes in college planning. With hundreds of Master's programs for school counselors across the country, "only two dozen or so offer a college counseling class" (O'Shaughnessy, 2012). Without proper education and training, school counselors must rely on colleagues, such as other counselors, administrators, faculty, and staff, to help guide them before relying on uninformed, cookie-cutter advice for all students who unquestioningly follow their advice.

Role of the High School Counselor in the Secondary Setting

Deciding to attend college, enlist in the military, or enter the workforce is a daunting task that approximately 3.7 million U.S. high school seniors attending public schools will face at the end of the 2022 school year (Bouchrika, 2020). When most students enter their senior year, they eagerly plan for their future. Students, along with their parents or guardians, rely on individuals within the school to advise them on which college would be a good fit for their child, provide them with resources on how to pay for college, and even suggest a major they should study.

In 2009, Public Agenda conducted a survey. They published it as a report for the Bill and Melinda Gates Foundation titled, *With Their Whole Lives ahead of them: Myths and Realities About Why So Many Students Fail to Finish College*. The organization surveyed 600 students aged 22 and 30 who had begun their postsecondary post-secondary had not finished, asking them why they believed so many students leave college without finishing. Their responses pointed out that the school counseling system could certainly benefit from reform and implementing more innovative techniques when it comes to their interactions with students at such a vulnerable and impressionable time in their lives. Researchers were surprised to find that 6 out of 10

respondents gave their high school counselors a rating of "fair" or "poor" when it came to helping them brainstorm and explore different career interests they had considered pursuing.

Summary

In 2010, Public Agenda conducted another survey and published a report for the Bill and Melinda Gates Foundation titled, *Can I Get A Little Advice Here? How an Overstretched High School Guidance System Is Undermining Students' College Aspirations* concluded that perhaps counselors in the secondary setting are spread a little too thin. Not only that, but their college coursework does not reflect the necessary training to assist students in making informed decisions about postsecondary education based on their interests or career aspirations. Across the United States, the average number of students assigned to each counselor is a staggering 424 to 1, compared to the recommendation of the American School Counselor Association of 250 to 1. Some states, like California, were reported to have as many as 5,000 students to every high school counselor. The report also pointed out that school systems may expect their counseling department to coordinate the standardized testing for the schools, handle discipline or scheduling concerns, or even serve as substitute teachers when they are short-staffed (Johnson & Rochkind, 2010, p.3). This, in turn, has a negative impact on the student's and their counselors' ability to get to know them on a personal level.

Much research has been conducted that points to the success of students who have a positive relationship with educators in a school setting. In their book, *Teacher-student relationships: Toward personalized education: New directions for youth development, number 137*, Bernstein-Yamashiro, and Noam point out several factors that influence student success as far as educators building relationships are concerned. Simple things like knowing students' names and staying after school to meet with them are ways to show one cares. When school

personnel shows an investment in students, this tends to motivate them towards success. The students start to feel they "owe" their mentors a reward for their investment. Students' efforts in school depend upon their feelings of encouragement, trust, care, and investment (2013, p. 27-35). Without the ability to truly connect with their students personally and build that foundational relationship, the counselors and students are both getting shortchanged. School systems that value the success of their students will need to invest in this concept and increase the number of counselors they place in their high schools. To better gauge the counselors' workload and the number of students they are expected to advise, a question will be formulated into the research survey to better draw specific statistical data for Georgia.

A solution to this problem is increasing the prevalence of counselors in high schools and thus allowing them more time to get to know their students on a more personal level, but this is easier said than done. Unfortunately, this may not be enough if the training that school counselors receive does not reflect the necessary practices to educate and inform students on the offerings of today's higher education system. Many states and local school districts require teachers and administrators to attend professional development sessions to stay in tune with the progression and learn the up-to-date information within their desired field. This is just not required of school counselors in most instances. The wide array of schools and degree programs offered can be intimidating without considering the ever-changing information for financial aid and student loans (Johnson & Rochkind, 2010, p.4). The amount of information counselors are expected to process and disseminate without special training, or up-to-date workshops is almost impossible. Suppose the goal is to increase their knowledge and understanding of career counseling in our ever-changing society. In that case, change must also be implemented in school

counseling degree programs and the offering of professional development for ongoing training opportunities.

At one time, a high school diploma opened many opportunities and was seen as a gateway to success. Today, it is often perceived as the bare minimum requirement for a student to show they possess a basic level of competency. With postsecondary education becoming more significant than it was in the past (Johnson & Rochkind, 2010, p.4), it is becoming more important for those involved in guiding high school students toward postsecondary studies to be in tune with the available job opportunities and the industries that are prevalent and thriving in their state. It is the sincere hope of this research to determine the biases, if any, among high school counselors in relation to their perception of agricultural careers. In Georgia and across our great nation, none of us can afford for there to be a shortage of food, clothing, or shelter due to an outdated perception of America's largest and most essential employer, causing an insufficient amount of employees in the agricultural industry.

CHAPTER THREE: METHODS

Overview

This research aims to examine the perceptions of school counselors when careers in the field of agriculture are concerned. The validity of this study could be questioned because the focus will be on schools in Georgia. When compared to some states, Georgia is widely centered on agriculture, and the poultry industry is a major economic contributor in certain communities across the state. Those communities are likely to be more in favor of agricultural careers since there are local career opportunities within reach.

Research Design

This study used a quantitative, predictive correlational design. This correlational study will determine if a relationship exists between the likelihood of a counselor recommending students pursue a career in an agriculturally related field and the agricultural perception of the high school counselor. A correlational design was chosen for this research because the researcher seeks to evaluate the extent of the relationship between high school counselors' perceptions of agriculturally related careers and how this perception influences recommendations for postsecondary study. For this study, a cross-sectional design was used, counselors were surveyed at one time, and no experiments will be conducted on those surveyed.

Research Questions

In an effort to understand the perceptions that Georgia high school counselors may have about careers in the agricultural field and the contributing factors that are related to those perceptions, two research questions were developed.

RQ1: What are the perceptions of high school counselors concerning careers in the agriculture industry?

RQ2: Does the perception of agricultural careers differ among metropolitan versus rural populations of school counselors?

Hypotheses

H_o1: There is no statistically significant relationship between the counselors' likelihood of recommending students to choose post-secondary studies in an agriculturally related field and counselor perceptions of agricultural careers.

H_o2: There is no statistically significant relationship between counselor perceptions of agriculture careers and their physical location, rural versus metropolitan areas of Georgia.

Alternative:

1: There is a relationship between the counselors' likelihood of recommending students to choose post-secondary studies in an agriculturally related field and counselor perceptions of agricultural careers.

2: There is a relationship between counselor perceptions of agriculture careers and their physical location, rural versus metropolitan areas of Georgia.

Variables

Predictor: The geographical location and perception of agricultural careers.

Criterion: High school counselors' likelihood to recommend students pursue postsecondary education in agriculturally related fields.

Population

The participants for the study were drawn from a convenience sample of high school counselors located across the state of Georgia during the spring semester of the 2021-2022 school year. The counselors had varying years of experience and demographics. They work in different geographic areas of varying school populations that span the entire state of

Georgia. The demographics of the state counselor population are as follows: Total:1590, Hispanic:33, American Indian:3, Asian: 14, Black:668, White: 839, Multiracial:33. The gender breakdowns are as follows: Female:1336 and Male: 254.

Participants

During the survey period, 102 participants volunteered to participate in the survey. 92(90.2%) of the participants were female, and 10(9.8%) were male. These are close to the state population of counselors (84% female and 16% male). The ethnicity of the participants is as follows: Hispanic:0, American Indian:0, Asian:0, Black:16 (15.7%), White: 81 (79.4%), multiracial:4 (3.9%), withheld:1.

Description of Instrument

A questionnaire was developed based on a series of statements regarding the perceptions of agriculture careers (See appendix A). Some of the survey questions were modified from research performed by Dr. James Woodard and Dr. Ray Herren's *Perceptions and Practices of Georgia Guidance Counselors Regarding Agricultural Education Programs* (1995). The survey is divided into four sections. The first set of questions was designed to collect demographic data on the school counselor and the school itself. Then there are questions on the background of the school counselor to see if their upbringing has an impact on their perception of the agriculture industry. The following set of questions deals with the perceptions of careers in agricultural-related fields. Finally, the counselors are asked questions on their tendencies to advise students regarding a field in the agriculture industry. The response choices will be assigned to a 5 point Likert-scale using numerical values: Strongly Agree = 4, Agree = 3, Neutral = 2, Disagree = 1, and Do Not Know = 0. The midpoint of this scale is 2.5, and all mean scores above 2.5 will be interpreted as agreeing with the item. All mean scores below 2.5 will be interpreted as

disagreement with the item, and items with a mean score of 2.5 will be interpreted as neutral. Three demographic questions will be added to the survey to obtain information regarding gender, ethnicity, and school setting; this will allow the researcher to ensure the sample gathered reflects the demographics of the counselor population in Georgia. School setting data will be used to identify rural and metropolitan residencies of the counselor.

Data Security

Data was collected anonymously utilizing Qualtrics. All information and data was kept on the researcher's computer, which is password protected. There was no personal or identifying information collected from the participants. Information will be maintained for five years before it is destroyed.

Data Analysis

The data was collected in an online platform through Qualtrics and analyzed using the Statistical Package for Social Science Personal Computer version (SPSS v. 26). Both research objectives will be analyzed based on the data collected. Any survey that is more than 10 percent incomplete or missing was excluded from the calculation. The research objective was aimed to determine if there is a correlation between counselor perceptions of agricultural careers and the counselors' likelihood of recommending students to choose post-secondary studies in an agriculturally related field. Research objective two seeks to find if there is a correlation between the location of the school counselor, for example, in rural or metropolitan areas, and their perception of careers in the agriculture field.

A multiple regression analysis was used in the research to determine if there is a predictive relationship among the criterion variable school counselor likelihood to recommend students pursue postsecondary education in agriculturally related fields and the predictor variable

the geographical location. An additional multiple regression analysis was used to determine the predictive relationship between the criterion variable school counselor likelihood to recommend students pursue postsecondary education in agriculturally related fields and the predictor variable perception of agricultural careers. Multiple regression is the most appropriate test since there are two or more predictor variables, and one criterion variable is measured on a continuous scale. A scattergram will be used to examine the assumptions of bivariate normal distribution and linearity (Ravid, 2010). The use of a scattergram allows the researcher to create a visual representation of data and draw the line of best fit, which represents the regression line (Ravid, 2010).

Summary

Through centuries of educational reform and decades of research, America is known to have the safest and most plentiful food supply in the world. This is not a feat taken lightly among agricultural education teachers. To ensure the workforce in the agricultural community continues to grow and the food supply is able to meet the demand of the ever-increasing population, it is of utmost importance that all hands involved in influencing America's youth see the vital importance that agriculture has in our daily lives. Information relating to agricultural careers must be allocated to our youth and to those who interact with students to change the outdated perception of those who feed and clothe our society.

CHAPTER FOUR: FINDINGS

Overview

This quantitative, predictive correlational design will determine if a relationship exists between the likelihood of a counselor recommending students pursue a career in an agriculturally related field and the agricultural perception of the high school counselor.

Chapter Four includes the sample population, survey results, data analysis, and a summary of the study results. A multiple regression analysis was conducted to analyze the predictive relationship between the criterion variable, high school counselors' likelihood to recommend students pursue postsecondary education in agriculturally related fields and the predictor variables of the geographical location of the counselor and their perception of agricultural careers.

Research Questions

RQ1: What are the perceptions of high school counselors concerning careers in the agriculture industry?

RQ2: Does the perception of agricultural careers differ among metropolitan versus rural populations of school counselors?

Hypotheses

H1: There is no statistically significant relationship between the counselors' likelihood of recommending students to choose post-secondary studies in an agriculturally related field and counselor perceptions of agricultural careers.

H2: There is no statistically significant relationship between counselor perceptions of agriculture careers and their physical location, rural versus metropolitan areas of Georgia.

Alternative:

1: There is a relationship between the counselors' likelihood of recommending students to choose post-secondary studies in an agriculturally related field and counselor perceptions of agricultural careers.

2: There is a relationship between counselor perceptions of agriculture careers and their physical location, rural versus metropolitan areas of Georgia.

Descriptive Statistics

The sample population included all counselors for Georgia. One hundred two participants responded to this survey. Table 1 shows the demographics of respondents. The final sample population included ten males and 92 females.

Table 1

Demographics of Respondents

Variable		*n*	%
Gender	Male	10	9.8
	Female	92	90.2
Years of Experience	0-5	31	30.4
	6-10	31	30.4
	11-15	15	14.7
	16-20	10	9.8
	21-25	11	10.8
	More than 25	4	3.9

School Enrollment Size	Less than 500	7	6.9
	500-700	6	5.9
	700-1000	7	6.9
	1000-1500	20	19.6
	1500-2000	23	22.5
	2000-2500	14	13.7
	2500 +	25	24.5

The descriptive statistics to determine the mean and standard deviation for each variable; high school counselors' likelihood to recommend students pursue postsecondary education in agriculturally related fields, geographical location of the counselor, and their perception of agricultural careers.

Table 2

Descriptive Statistics

	N	*M*	*SD*
Likelihood to Recommend	102	1.4	.302
Geographical Location	102	2.07	.35
Perception of Agricultural Careers	102	3.0	.65

Results

Before the statistical analysis, data was visually screened for missing information and inaccurate entries. The data analyzed was the criterion variable, high school counselors'

likelihood to recommend students pursue postsecondary education in agriculturally related fields, and the predictor variables of the geographical location of the counselor and their perception of agricultural careers. Data were analyzed using SPSS version 26. To test the null hypothesis, multiple regression analysis and bivariate regression analysis were computed at the 95% confidence level.

Null Hypothesis One

The first null hypothesis stated that there is no statistically significant relationship between the counselors' likelihood of recommending students to choose post-secondary studies in an agriculturally related field and counselor perceptions of agricultural careers. An exploratory data analysis was conducted to determine whether the null hypothesis was accepted or rejected. The histograms in Figures 1 & 2 show the frequency of those three variables. All three variables showed a reasonable, normal distribution of frequencies.

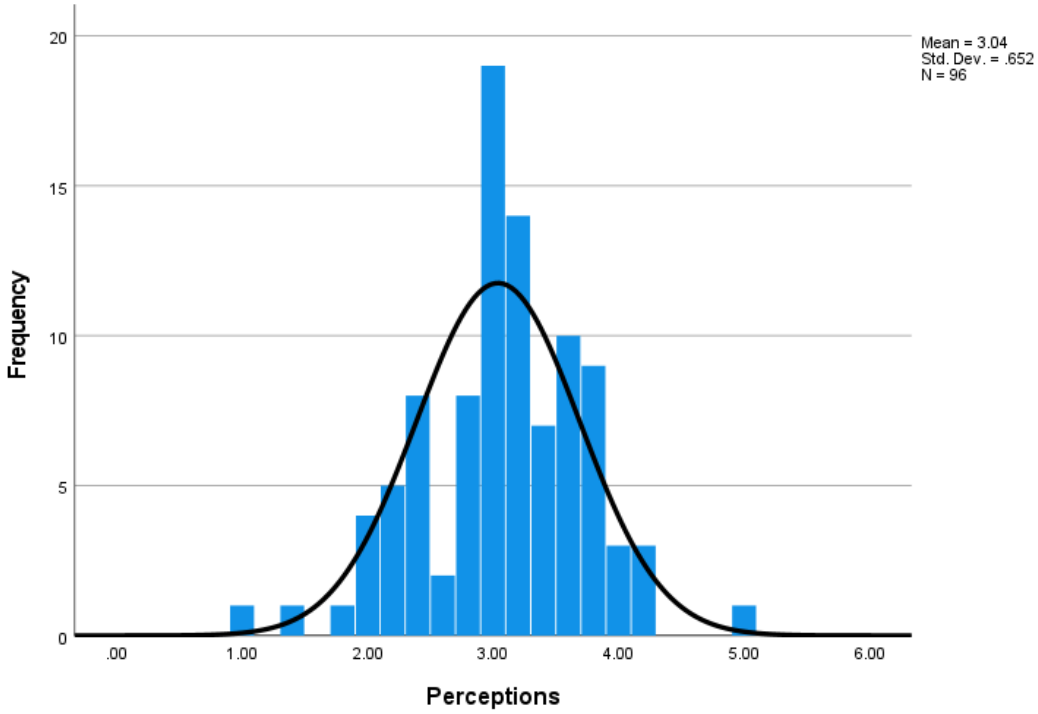

Figure 1. Histogram of Counselor Perceptions toward Agricultural Careers

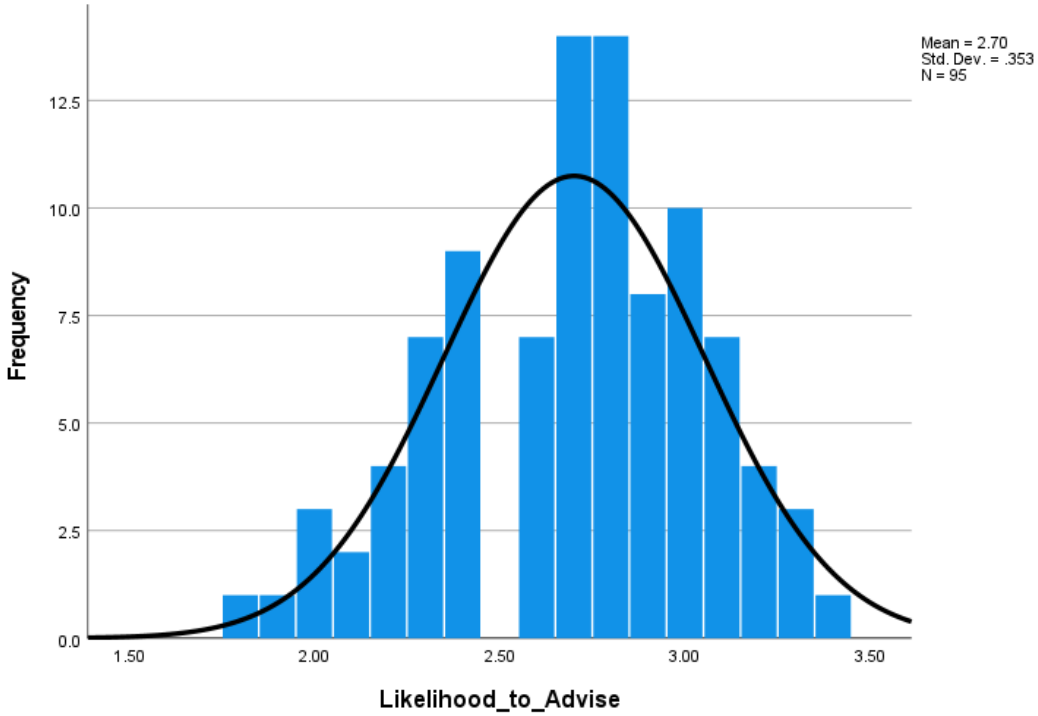

Figure 2. Histogram of Counselors Likelihood to Advise toward Agricultural Career

Assumption. To test for multiple regression, an assumption must be met. This assumption is bivariate normal distribution and linearity.

A scatterplot was used to examine the assumption of bivariate normal distribution and linearity. The predictor variables (x), perceptions of careers, and the criterion variable (y), likelihood to advise toward an agricultural career. This is displayed in Figure 3 and demonstrates that the assumption of bivariate outliers was met.

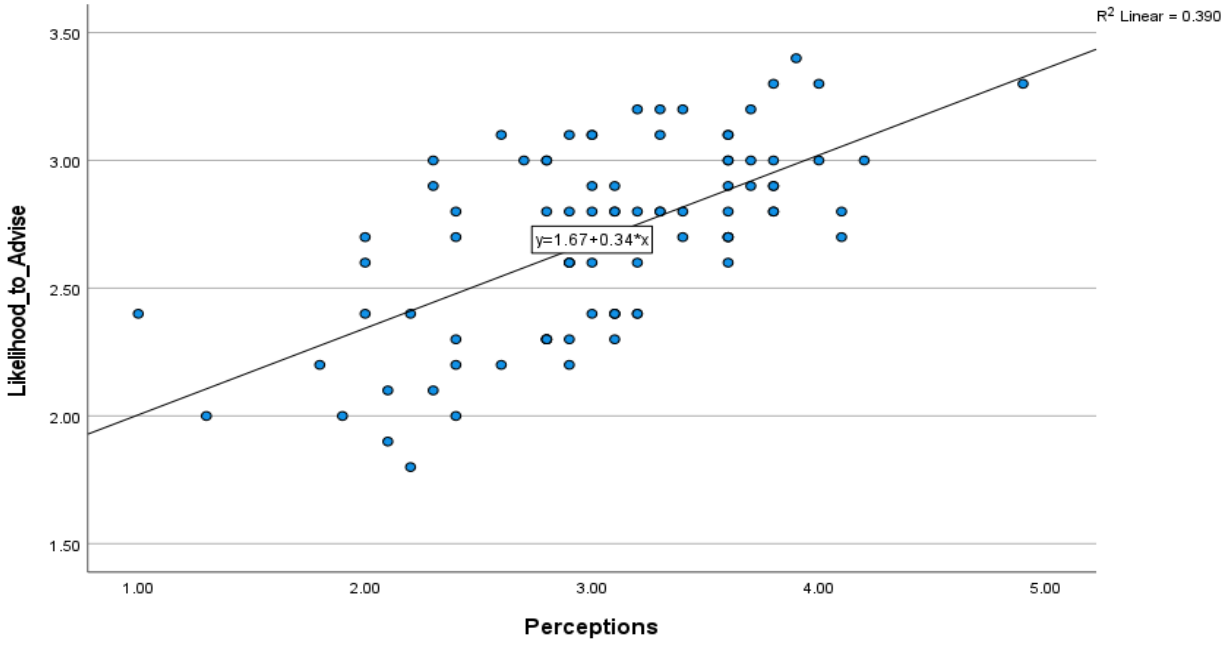

Figure 3. Linear scatter plot of Counselor Perceptions (x) and likelihood to advise (y).

Results for Null Hypothesis One. A multiple linear regression analysis was conducted to predict the counselors' likelihood of recommending students to choose post-secondary studies in an agriculturally related field and counselor perceptions of agricultural careers. Tables 3 and 4 display the multiple linear regression analysis for Null Hypothesis One. Table 3 provides the *R, R^2, adjusted R^2*, and the standard error of the estimate. A value of R^2=0.384. Table 4 displays the ANOVA analysis for null hypothesis one. The analysis of the ANOVA shows the significance value of $p<0.001$, which is below 0.05. A significant regression was found F (1, 92) =58.854, with an R^2=0.384 at a 95% confidence level. The R^2 coefficient represents a medium effect size. Therefore, there is a statistically significant relationship between counselor perceptions and the likelihood to advise.

Based on the analysis of the data, null hypothesis one was rejected, indicating that there is a significant predictive relationship between the counselors' likelihood of recommending

students to choose post-secondary studies in an agriculturally related field and counselor perceptions of agricultural careers.

Table 3

Multiple Regression Model Summary for H_o1

Model	*R*	R^2	*Adjusted* R^2	*SEM*
1	.625[a]	.390	.384	.51232

a. Predictors: (Constant), Likelihood to Advise

Table 4

ANOVA Analysis for H_o1

Model	*SS*	*Df*	*MS*	*F*	*Sig*
1 Regression	15.448	1	15.448	58.854	<.001[b]
Residual	24.147	92	.262		
Total	39.595	93			

a. Dependent Variable: Perceptions

b. Predictors: (Constant), Likelihood to Advise

Null Hypothesis Two

The second null hypothesis stated that there is no statistically significant relationship between counselor perceptions of agriculture careers and their physical location, rural versus metropolitan areas of Georgia. An exploratory data analysis was conducted to determine whether the null hypothesis was accepted or rejected. The histograms in figures 4 & 5 show the frequency of those three variables. All three variables showed a reasonable, normal distribution of frequencies.

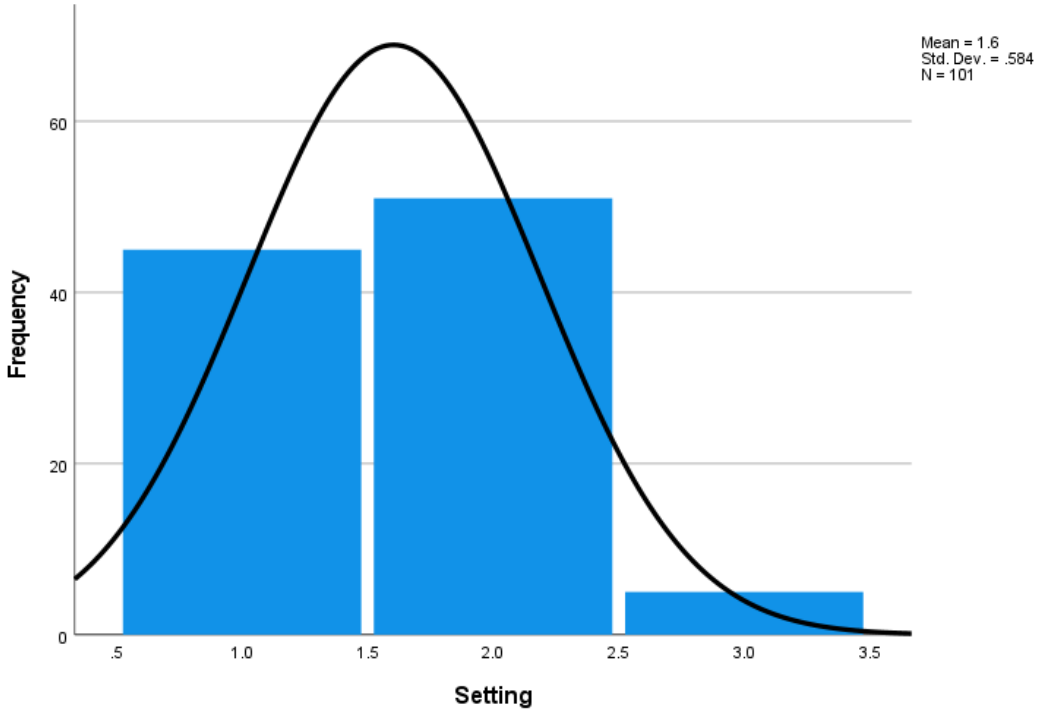

Figure 4. Histogram of Counselor School Setting

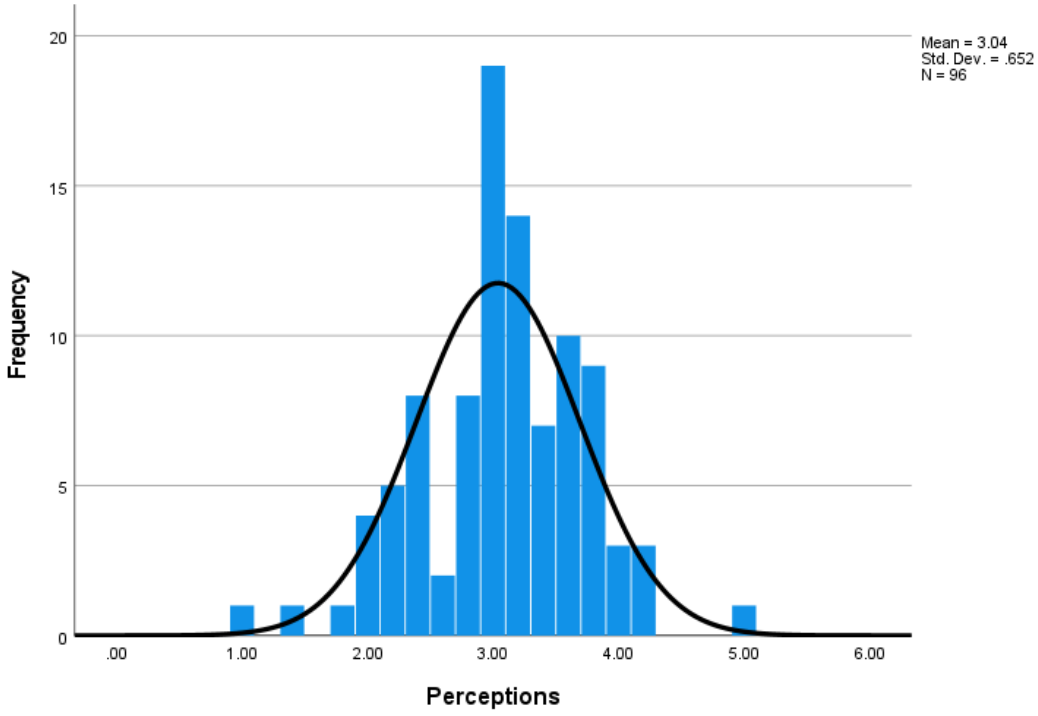

Figure 5. Histogram of Counselors Perceptions of Agricultural Careers

Assumption. To test for multiple regression, an assumption must be met. This assumption is bivariate normal distribution and linearity.

A scatterplot was used to examine the assumption of bivariate normal distribution and linearity. The predictor variables (x); are perceptions of careers, and the criterion variable (y); is the likelihood to advise toward an agricultural career. This is displayed in Figure 6 and demonstrates that the assumption of bivariate outliers was met.

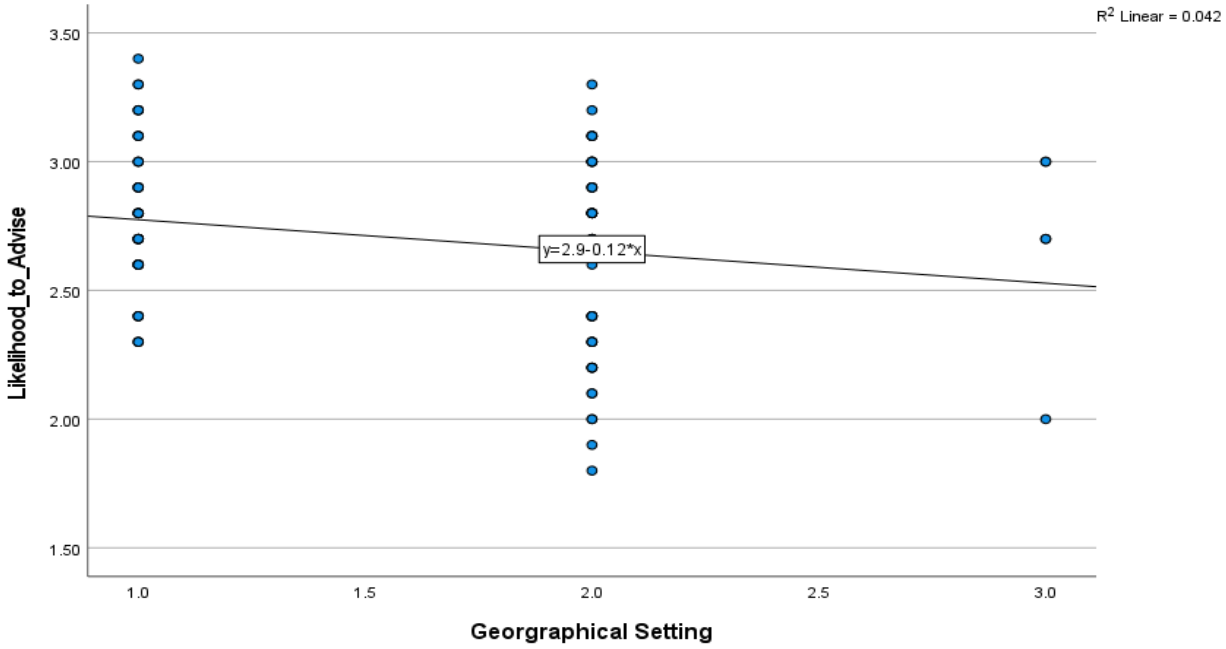

Figure 6. Linear scatter plot of Counselor Background (x), and the likelihood of advise (y)

Results for Null Hypothesis Two. A multiple linear regression analysis was conducted to predict the counselors' likelihood of recommending students to choose post-secondary studies in an agriculturally related field and counselor perceptions of agricultural careers. Tables 5 and 6 display the multiple linear regression analysis for Null Hypothesis Two. Table 5 provides the *R*, R^2, *adjusted* $R^{2,}$ and the standard error of the estimate. A value of R^2=0.042. Table 6 displays the ANOVA analysis for null hypothesis one. The analysis of the ANOVA shows the significant

value of *p=0.047*, which is below 0.05. A significant regression was found *F* (1, 92) =4.057, with a R^2=0.042 at a 95% confidence level. The R^2 coefficient represents a small-medium effect size. Therefore, there is a statistically significant relationship between geographic location and likelihood to advise.

Based on the data analysis, null hypothesis two was rejected, indicating that there is a statistically significant relationship between counselor perceptions of agriculture careers and their physical location, rural versus metropolitan areas of Georgia.

Table 5

Multiple Regression Model Summary for H_o2

Model	*R*	R^2	*Adjusted* R^2	*SEM*
1	.206[a]	.042	.032	.581

a. Predictors: (Constant), Likelihood to advise

Table 6

ANOVA Analysis for H_o2

Model	*SS*	*Df*	*MS*	*F*	*Sig*
1 Regression	1.370	1	1.370	4.057	.047[b]
Residual	31.066	92	.338		
Total	32.436	93			

a. Dependent Variable: Geographical Setting

b. Predictors: (Constant), Likelihood to Advise

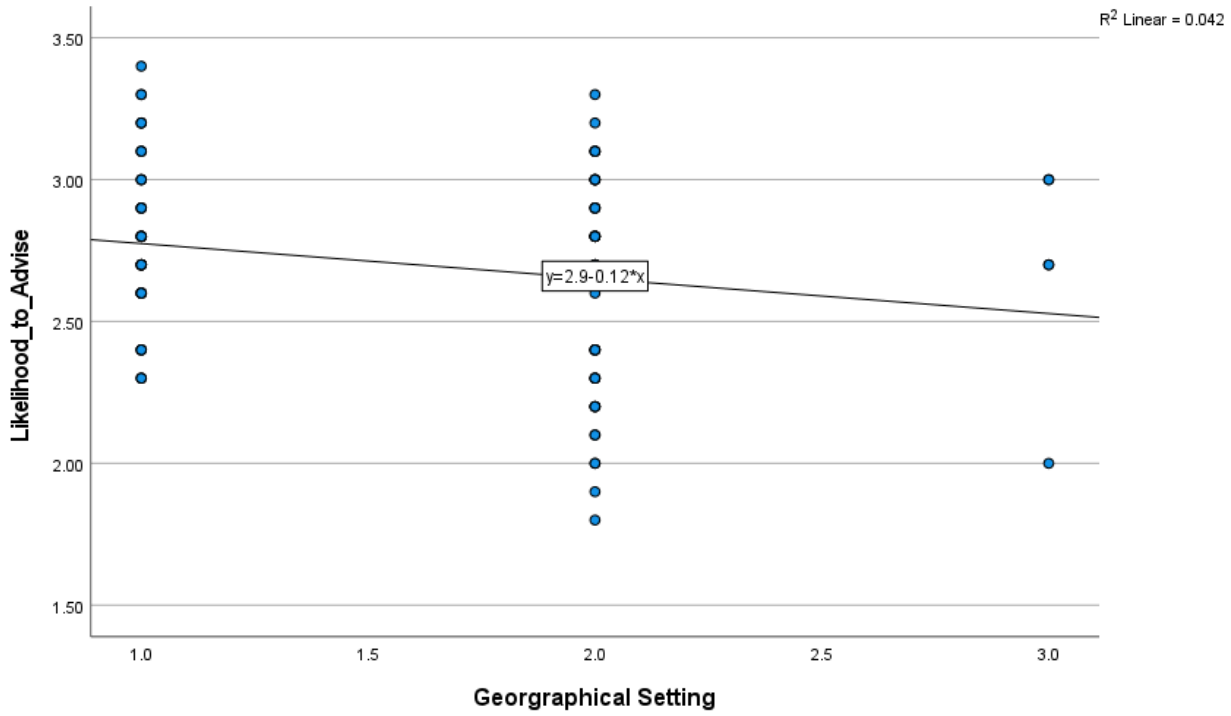

Figure 7. Linear scatter plot of Counselor Background (x), and likelihood of advise (y)

CHAPTER FIVE: CONCLUSIONS

Summary

This study sought to determine if a relationship exists between a high school counselor's likelihood of recommending students to choose post-secondary studies in an agriculturally related field and the counselor's perception of agricultural careers. In addition, the relationship between a counselor's perception of agriculture and their physical location in the state of Georgia was examined. Agriculture careers are available across the state of Georgia, and the opportunities span a wide variety of interests. Careers are available in anything from poultry nutrition to agricultural equipment sales and biosecurity to agriculture lending agencies. According to the Georgia Farm Bureau website, agriculture contributes more than $73 billion annually to Georgia's economy. With such a substantial amount of money generated by the agriculture industry, one would assume that Georgians were aware of the opportunities available through postsecondary studies in agriculturally related fields. However, the outdated perceptions of agriculture and agriculture-related careers seem to be a huge obstacle.

Discussion

This quantitative, predictive correlational design will determine if a relationship exists between the likelihood of a counselor recommending students pursue a career in an agriculturally related field and the agricultural perception of the high school counselor. The data was collected using a convenience sample. A survey was designed using Qualtrics, and results were analyzed using SPSS version 26. The sample population included all counselors for Georgia, and 102 participants responded to this survey. To test the null hypothesis, multiple regression analysis and bivariate regression analysis were computed at the 95% confidence level.

A multiple linear regression analysis was conducted to predict the counselors' likelihood of recommending students to choose post-secondary studies in an agriculturally related field and counselor perceptions of agricultural careers. The analysis of the ANOVA shows the significance value of $p<0.001$, which is below 0.05. A significant regression was found F (1, 92) =58.854, with an R^2=0.384 at a 95% confidence level. The R^2 coefficient represents a medium effect size. Therefore, there is a statistically significant relationship between counselor perceptions and the likelihood to advise.

The second null hypothesis stated that there is no statistically significant relationship between counselor perceptions of agriculture careers and their physical location, rural versus metropolitan areas of Georgia. An exploratory data analysis was conducted to determine whether the null hypothesis was accepted or rejected. Based on the data analysis, null hypothesis two was rejected, indicating that there is a statistically significant relationship between counselor perceptions of agriculture careers and their physical location, rural versus metropolitan areas of Georgia.

Practical Significance

During the 2020- 2021 school year, the Georgia Agricultural Education state staff, in cooperation with the agricultural commodity organizations, developed a series of “Agriculture Trade Talks” to share with the High School Counselors in Georgia. This program has continued through the current 2021-2022 school year and plans to continue through the 2022-2023 school year. The goal is to feature all the major agricultural commodities in Georgia. The “Ag Trade Talks” program was established after two students reported their high school counselor attempted to deter them from majoring in an agriculturally related field while attending the University of Georgia, which is one of Georgia's Land Grant Colleges. Their reasoning was that

those jobs were considered “less successful” and did not provide a livable wage. One of these encounters even took place in an area that some consider being an “agriculture epicenter” in Georgia. The “Ag Trade Talks” take place in a virtual interactive setting and in person. The high school counselors can tour agriculture facilities and are taught about the job opportunities available through the featured commodity. Thus far, there have been approximately 30 counselors in attendance for each session, and the sessions are open for any high school counselor in Georgia to attend.

The results of this study will be shared with the Georgia Agriculture Education state staff, commodity organizations across the state of Georgia, and the Georgia Department of Education school counselor department. The goal is to increase the effectiveness of the “AgTradetalks” to the target audience.

Another area of concern and topic of conversation is the way that both the Georgia Department of Labor and the United States Department of Labor reports their statistics on jobs in agriculture, as this can be misleading and causes confusion when students, parents, and high school counselors are researching the job outlook for agriculturally related careers. For example, plant nurseries fall under the retail category, and the numerous poultry processing facilities in Gainesville, Georgia, are categorized as manufacturing and processing. On both websites, there is a category labeled as “farming, fishing and forestry occupations,” and underneath the subheading of agriculture workers, the following are listed: Agricultural Inspectors, Animal Breeders, Graders and Sorters, Agricultural Products, Miscellaneous Agricultural Workers. Before agriculture can receive the credit that is due for keeping Georgia and many other economies afloat, maybe there needs to be a “rebranding effort” on the part of agriculture

enthusiasts to enlighten not only Georgians but Americans in general about the impact agriculture has on local, state and our great nation's economic standing.

P-20 Implications

Thomas Jefferson once said that "Agriculture is our wisest pursuit because it will, in the end, contribute most to real wealth, good morals and happiness." Those who are involved in the agricultural industry know firsthand how important agricultural awareness is to every aspect of the agriculture community. Agriculture is the backbone of our great country. Agriculture is essential to not only feed and clothe the world, but agriculture leaves a huge impact on the local and global economy, and the same can be said for education. Nelson Mandela once said, "Education is the most powerful weapon which you can use to change the world." In those communities where the majority of the residents are educated above a high school diploma level, their local economy thrives.

As important as it is for Americans to eat, it is just as important for Americans to be educated. Looking ahead to the year 2050, for agriculture to thrive as we approach the world population increase to 9 billion, there must be collaborative efforts from P-20 to include agriculture in their education and outreach. Among agriculture enthusiasts, it is common knowledge that there is an outdated stereotype of farmers. Somehow, that has to change. Or we are all in trouble. Although many Americans do have a formal education, those same Americans are not formally educated on where their food, forestry, and fiber resources originate from. In Georgia, State School Superintendent Richard Woods recently signed a bill to extend state funding for agricultural education to K-5 schools. In 2019, Georgia started a three-year pilot program for elementary agriculture education (Whittaker, 2019). This program was highly successful, and schools across the state gained interest. Agriculture is an excellent avenue to

reiterate STEM learning and incorporate hands-on activities that elementary students love. According to the UGA Center for Agribusiness and Economic Development, agriculture contributes approximately $7.3 billion to Georgia's economy annually, and one in seven Georgians is employed in an agriculture or forestry-related field (Georgia Farm Bureau, 2022). The bill's signing to award state funding to elementary agriculture programs reiterates how important lawmakers think it is to educate young students about agriculture to the future of Georgia's economy and expands the impact of agriculture education to encompass more of the P-20 realm.

While attending college, most students are required to take a course, or two, in fine arts, whether it be art or theater, or music appreciation. Why are college students not required to take a course in agriculture education or agriculture appreciation? One would think that appreciating those who feed and clothe our society would be just as important as appreciating the various areas of fine arts.

Limitations of Study

This study was limited to high school counselors within the state of Georgia. The results of this study cannot be generalized to high school counselors outside the state of Georgia or counselors outside of the high school level.

Distributing the survey directly proved to be a challenge. The counseling department at the Georgia Department of Education was not willing to distribute the survey via their state-wide listserv. They were also willing to provide the counselor's personal or school email addresses. The professional organization for school counselors in Georgia, Georgia School Counselor Association (GHSCA), was also unwilling to distribute the survey via email. The GSCA, however, did post the link to the survey on their website. The school counselor contact

information for those counselors who are members of the GSCA is only accessible by other members and requires a member log-in. The only contact information accessible to the general public is for those members who serve on the executive board.

Recommendations for Future Research

In the future, one should work to increase participation responses among Georgia's high school counselors. This could be through contacting the school counselors directly via email or possibly attending a conference or professional development or training where numerous high school counselors will be present. With the COVID-19 guidelines starting to dissipate around the United States, one may be able to get the most participation from attending a conference or convention for Georgia’s high school counselors to gain participation.

The survey should be expanded outside the state of Georgia and outside the southeastern region of the United States and include high school counselors from other states to evaluate whether perceptions of agricultural careers are specific to a certain region in the United States. The southeastern United States, and in particular Georgia, has a rich heritage of agricultural-based enterprises. Although most agriculturalists like to think that this is a positive to living in the south, unfortunately, there are some negative connotations associated with agriculture in the southeastern region of the United States. In other states, overall agriculture may be perceived differently than here in the southeastern United States. A study of the comparison of results across various states and different regions would certainly assist in tracking the origin of such perceptions.

Question 22 states: If a college bound student expresses interest in an agriculturally related field, the counseling department tends to advise him/her to pursue a degree in agriculture. The deletion or rewording of this particular question is recommended in the future. This question

has the potential to lead to bias as it leads the counselor towards a certain response. This suggestion could help in the removal of outliers. This question causes a significant shift in the bell curve (see Figure 8).

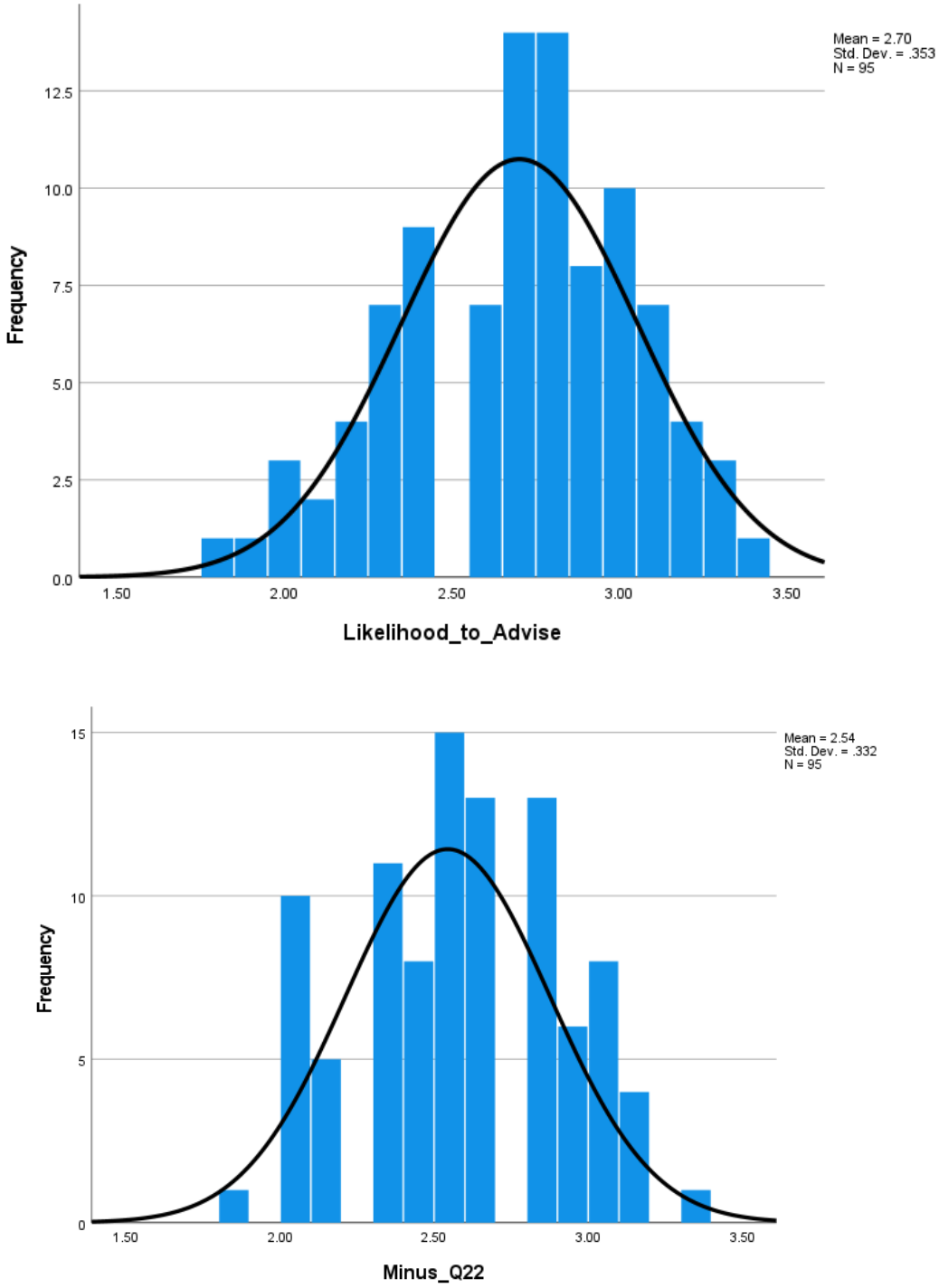

Figure 8. Histogram of comparison of Counselor Personal Background with question 22 omitted.

Cronbach's Alpha test was run on questions 22-30 to evaluate the internal reliability between the questions. This section has an alpha of .646; with the removal of question 22, the new alpha is .611. This suggests that the question can either be reworded or removed entirely. This researcher suggests the complete removal of this question as this section intends to evaluate the counselors' perceptions. Not to have their perceptions influenced by the researcher's questions.

Table 7

Reliability Statistics

Cronbach's Alpha	*Cronbach's Alpha based on Standardized items*	*N*
1	.500[a]	.250

Table 8

Coefficients. Item-Total Statistics

	Scale mean if Item deleted	Scale Variance of Item Deleted	Corrected-Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
If a college bound student expresses interest in an agriculturally related field, the counseling department tends to advise him/her to pursue a degree in agriculture.	20.26	7.004	.377	.313	.611
The counseling department tends to advise students, regardless of future college or work plans, to consider pursuing a career in an agriculturally related field.	21.69	7.287	.486	.370	.574
Our guidance department tends to advise female students away from agriculturally related fields	22.19	9.751	.051	.655	.658
Our guidance department tends to advise female students toward agriculturally related fields.	21.51	7.168	.641	.899	.539
Our guidance department tends to advise male students away from agriculturally related fields	22.20	9.715	.075	.838	.656
Our guidance department tends to advise male students toward agriculturally related fields.	21.47	7.316	.613	.894	.549
Our guidance department tends to advise students of color away from agriculturally related fields	22.19	9.538	.131	.827	.650
Our guidance department tends to advise students toward agriculturally related fields only if there is a history of agriculture work in the student's family	22.07	9.620	.161	.371	.648
I am confident in my ability to advise a student to pursue a college degree in an agriculturally related field.	20.77	7.052	.320	.317	.636

A qualitative study among high school counselors could be used to examine further the perceptions they may have of agriculture careers and gain a deeper insight into the background knowledge and origin of such perceptions. Gaining a deeper understanding of "why" high school counselors have a certain perception of careers in the agricultural industry and "how" these outdated perceptions keep circling can assist in the development of programs or professional development that will assist in dispelling the myths associated with careers in the agricultural industry.

Another quantitative research study can be performed by surveying first-year college students, or college students in general, pursuing a degree that will lead to an agricultural career. Examining the percentage of agriculture majors at a particular university or junior college who have had an experience where their high school counselor has attempted to deter them from pursuing an agriculture career will help gauge where and how often these particular instances occur, even though the counselor may not have realized they were not being supportive of the student's choice to pursue a career in agriculture, from the college student's perspective, they may have, in fact, tried to persuade them into a different career field.

Another potential need for further research would be to survey high school counselors to assess their need and/or interest in professional development opportunities to learn about careers in agriculture. The participation thus far in the "Ag Trade Talks" has been a small percentage of Georgia counselors. There is a possibility that part of the issue is that the high school counselors are unaccepting of professional development when the professional development pertains to agriculture. There is the possibility that they do not see a need to participate. Perhaps, in their minds, agriculture is a dying industry. A thing of the past, and therefore they are not interested in learning about the agriculture industry through professional development avenues. This could be

performed in either a quantitative or qualitative study.

The use of externships or job shadowing experience in the agricultural industry would allow counselors to gain "real world" experience in an agriculturally related industry. This can also prove to be a beneficial tool in the quest to enlighten counselors on the variety of career opportunities and the true scope of the agricultural industry. These experiences would require minimal investment and a short time commitment, but the knowledge and skills gained would be priceless. One of the only ways to influence the perceptions of agriculture that others have would be to immerse them in the culture of the agriculture industry.

Conclusion

The agricultural education community in Georgia is very close-knit, as is the state's community of high school student counselors. The agricultural education community across the state has discovered a trend involving high school counselors attempting to deter students, especially high achieving students, from pursuing a career in agriculture. Perhaps agricultural education teachers in Georgia should include their school counselors in more FFA and agriculturally related activities to break this trend. Also, perhaps the Georgia FFA Association should invite those school counselors in leadership roles within the GHSCA to serve as judges during the State FFA Convention when the best of Georgia FFA is on display. Further, agricultural education teachers and FFA Members could present information at conventions and conferences where high school counselors are present. In turn, representatives of major agricultural commodities or employers in the agriculture industry should attend high school counseling conferences or conventions, showcasing to counselors the vast array of career opportunities agriculture offers. Another solution is for Georgia's agricultural education teachers to be well-informed about the "Ag Trade Talks" or similar professional development

opportunities centered on agriculture. They should encourage their schools' counselors to participate. Positive exposure of the agriculture industry is the key to changing perceptions across the state. The more positive experiences high school counselors share with their agriculture educators and their local FFA Chapter and foster stronger connections with the agriculture community as a whole to build meaningful and progressive relationships, the better informed they will be when advising their students about their future.

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APPENDIX I

MURRAY STATE UNIVERSITY

Institutional Review Board

328 Wells Hall
Murray, KY 42071-3318
270-809-2916• msu.irb@murraystate.edu

TO: Brian Bourke, Educational Studies Leadership and Counseling

FROM: Jonathan Baskin, IRB Coordinator JB

DATE: 1/31/2022

RE: Human Subjects Protocol I.D. – IRB # 22-118

The IRB has completed its review of your student's Level 1 protocol entitled *School Counselor Perceptions of Careers in the Agricultural Industry*. After review and consideration, the IRB has determined that the research, as described in the protocol form, will be conducted in compliance with Murray State University guidelines for the protection of human participants.

The forms and materials that have been approved for use in this research study are attached to the email containing this letter. These are the forms and materials that must be presented to the subjects. Use of any process or forms other than those approved by the IRB will be considered misconduct in research as stated in the MSU IRB Procedures and Guidelines section 20.3.

Your stated data collection period is from 1/31/2022 to 4/1/2022.

If data collection extends beyond this period, please submit an Amendment to an Approved Protocol form detailing the new data collection period and the reason for the change.

This Level 1 approval is valid until 1/30/2023.

If data collection and analysis extends beyond this date, the research project must be reviewed as a continuation project by the IRB prior to the end of the approval period, 1/30/2023. You must reapply for IRB approval by submitting a Project Update and Closure form (available at murraystate.edu/irb). You must allow ample time for IRB processing and decision prior to your expiration date, or your research must stop until such time that IRB approval is received. If the research project is completed by the end of the approval period, then a Project Update and Closure form must be submitted for IRB review so that your protocol may be closed. It is your responsibility to submit the appropriate paperwork in a timely manner.

The protocol is approved. You may begin data collection now.

APPENDIX II

Informed Consent

MURRAY STATE UNIVERSITY

Online Research Participation Consent

Study Title: High School Counselor Perceptions of Careers in the Agriculture Industry
Primary Investigator: Meredith Arrington, Educational Studies, Leadership and Counseling **Faculty Sponsor Contact**: Dr. Brian Bourke, (270)809-3588, bbourke@murraystate.edu

You are being invited to participate in an online research study conducted through Murray State University. This document contains information you will need to help you decide whether to be in this research study or not. Please read the form carefully and ask the study team member(s) questions about anything that is not clear. You should print a copy of this document for your records.

1. **Nature and Purpose of Project:** The purpose of this study is to determine the perceptions that high school counselors have of careers in the agriculture industry. This is a research project being conducted by Murray State University as part of a student dissertation.
2. **Participant Selection**: You are invited to participate in this research project because you are a high school counselor in Georgia.
3. **Explanation of Procedures**: The study activities include completing an online survey and background information questionnaire. The online survey and questionnaire will take approximately 20 minutes to complete. 4. **Discomfort and Risks**: There are no anticipated risks and/or discomforts for participants. 5. **Benefits**: We do not know if you will benefit from being in this study. However, you may benefit by being able to reflect on your knowledge of the agriculture industry.
6. **Confidentiality**: Your participation in this study is anonymous. Neither the researcher nor anyone else will know if you have participated or how you responded. Your responses will be confidential and we do not collect identifying information such as your name, email address or IP address. The

results of this study will be used for scholarly purposes only and may be shared with Murray State University representatives.

7. **Refusal/Withdrawal:** Your participation in this research study is voluntary and you are free to withdraw/stop participating at any time with absolutely no penalty. You are free to skip any questions that you would prefer not to answer.

8. **Contact Information:** Any questions about the procedures or conduct of this research should be brought to the attention of Dr. Brian Bourke at (270)809-3588 or bbourke@murraystate.edu. If you would like to know the results of this study, please contact Dr. Brian Bourke.

Clicking the Continue button below indicates that this study has been explained to you, that your questions have been answered, and that you agree to take part in this study.

This project has been reviewed and approved by the Murray State University Institutional Review Board (IRB) for the Protection of Human Subjects. If you have any questions about your rights as a research participant, you should contact the MSU IRB Coordinator at (270)809-2916 or msu.irb@murraystate.edu.

Demographics

1. How many years of experience do you have as a high school counselor?

   0-5

   6-10

   11-15

   16-20

   21-25

   More than 25

2. Prior to this position, were you involved, in any way, with agricultural education?

   No

   Yes

3. Gender

   Male

   Female

   Prefer not to say

4. Race

   American Indian or Alaska Native

   Asian

   Black or African American

   Native Hawaiian or Other Pacific Islander

   White

   Two or more races

   Withheld

Hispanic

5. Approximately how many students do you advise?

Less than 100

100-200

200-300

300+

6. Approximately how many students are enrolled in your school?

Less than 500

500-700

700-1,000

1,000-1,500

1,500-2,000

2,000-2,500

2,500+

7. What are the racial demographics of your school? (enter a percentage)

Click to write percentage

_____ % American Indian or Alaska Native

_____ % Asian

_____ % Black or African American

Click to write percentage

_____ % Native Hawaiian or Other Pacific Islander

_____ % White

_____ % Two or more races

_____ % Withheld

_____ % Hispanic

8. Do you teach at a Title I school?

No

Yes

9. How would you describe the setting in which your school is located?

Rural

Suburban

Urban

Background questions

The questions in this section are about your background and how that may have influenced your perceptions about agricultural education.

10. Is there a history of agriculture in your family?

No

Yes

11. Were you a member of the National FFA Organization when you were a middle school or high school student?

No

Yes

12. Does your current school have an Agricultural Education Program that includes a National FFA Organization (FFA) chapter?

- No
- Yes

13. I am familiar with the opportunities available to students through the National FFA Chapter at a local, state and/or national level.

- Do not know
- Neutral
- Agree
- Disagree
- Strongly Agree

14. I am knowledgeable about the salary ranges in agriculturally related career fields.

- Do not know
- Neutral
- Agree
- Disagree
- Strongly Agree

15. I am knowledgeable about the future job outlook in agriculturally related career fields

- Do not know
- Neutral
- Agree
- Disagree
- Strongly Agree

Block 3

The questions in this section are about your perceptions of agriculturally related career fields.

16. Students who are interested in agriculturally related career fields tend to be less academically able.

- Do not know
- Neutral
- Agree
- Disagree
- Strongly Agree

17. Students who are interested in agriculturally related career fields tend to be more academically able.

- Do not know
- Neutral
- Agree
- Disagree
- Strongly Agree

18. Careers in the agriculture field are centered around manual labor

- Do not know
- Neutral
- Agree
- Disagree
- Strongly Agree

19. Careers in the agriculture field require a college or advanced degree

Do not know

Neutral

Agree

Disagree

Strongly Agree

20. Agriculture generates a significant amount of money for Georgia's economy

Do not know

Neutral

Agree

Disagree

Strongly Agree

21. There is a high demand for qualified applicants in agriculturally related fields

Do not know

Neutral

Agree

Disagree

Strongly Agree

Block 4

The questions in this section relate to your perceptions of advising students toward agriculturally related fields.

22. If a college bound student expresses interest in an agriculturally related field, the counseling department tends to advise him/her to pursue a degree in agriculture.

- Do not know
- Neutral
- Agree
- Disagree
- Strongly Agree

23. The counseling department tends to advise students, regardless of future college or work plans, to consider pursuing a career in an agriculturally related field

- Do not know
- Neutral
- Agree
- Disagree
- Strongly Agree

24. Our guidance department tends to advise female students away from agriculturally related fields.

- Do not know
- Neutral
- Agree
- Disagree
- Strongly Agree

25. Our guidance department tends to advise female students toward agriculturally related fields.

- Do not know
- Neutral
- Agree
- Disagree
- Strongly Agree

26. Our guidance department tends to advise male students away from agriculturally related fields.

- Do not know
- Neutral
- Agree
- Disagree
- Strongly Agree

27. Our guidance department tends to advise male students toward agriculturally related fields.

- Do not know
- Neutral
- Agree
- Disagree
- Strongly Agree

28. Our guidance department tends to advise students of color away from agriculturally related fields.

- Do not know
- Neutral
- Agree
- Disagree
- Strongly Agree

29. Our guidance department tends to advise students toward agriculturally related fields only if there is a history of agriculture work in the student's family.

- Do not know
- Neutral
- Agree
- Disagree
- Strongly Agree

30. I am confident in my ability to advise a student to pursue a college degree in an agriculturally related field.

- Do not know
- Neutral
- Agree
- Disagree
- Strongly Agree