

WHAT DO I WANT TO BE WHEN I GROW UP?
EXPLORING INFLUENCING FACTORS ON HIGH SCHOOL STUDENTS'
AGRICULTURAL CAREER CONSIDERATIONS

BY

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THESIS

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ABSTRACT

The U.S. workforce of today lacks qualified persons to fill the growing number of available jobs in agricultural fields. To address this problem, this study sought to examine the factors which contribute to a high school student's career considerations. A survey of 817 high school agriculture students in Illinois supplied data for the study. Researchers then evaluated the data through a series of hierarchical logistic regression analyses. The trends in the data coupled with a review of previous work, provides insights to enable educators and agricultural advocates to build action-oriented solutions to place qualified persons in agricultural roles. Emergent themes focusing on providing diverse opportunities, personal connections, and mastery experiences in agricultural careers could drive strategy development to increase high school students' attraction to agricultural careers.

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CHAPTER 1: INTRODUCTION

In the next decade, the demand for qualified candidates in agriculturally-related fields will continue to grow. A 2015 United States Department of Agriculture report on employment opportunities for college graduates predicts 57,900 annual job openings in food, agriculture, renewable natural resources, and environmental fields, with only 35,400 annual graduates with expertise in these fields. These prospects are promising for students aspiring to work in these fields, but projections also point to nearly 40% of the anticipated annual job openings in agricultural industries unfilled by qualified entry-level employees in the United States (Goecker, Smith, Fernandez, Ali, & Thaller, 2015). Ample employment opportunities in addressing food security, sustainable energy, and environmental efforts are available to college graduates with expertise in food, agriculture, and natural resources (Goecker et al., 2015). In spite of these promising career prospects, the gap between available agricultural jobs and qualified persons to fill them continues to widen.

Given the significance of agricultural careers in feeding, clothing, and fueling our world's population, a solution for unfilled positions in agriculturally-related fields is crucial. The world's ability to feed its growing population while using less of its diminishing resources depends on more people choosing careers in agriculture. To solve the problem of too few candidates to fill open agricultural roles, recruiters and stakeholders need to understand why high school students choose to pursue particular careers. Understanding the factors influencing a student's willingness to consider agriculturally-related careers can inform strategies to grow the pool of candidates to fill the predicted vacant positions.

Students' willingness to consider possible careers depends on a variety of factors. Prior studies have uncovered themes in the factors contributing to a student's career considerations.

These themes include at-home perceptions of the industry, practical applications of classroom materials, and the presence of a role model (Adedokun & Balschweid, 2008; Conroy, Kelsey & Scanlon, 1998; Helwig, 2004; Marx, Simonsen & Kitchel, 2014; Thieman, Rosch & Suarez, 2016). Industry perceptions have emerged as one of the most powerful influencers on students' career considerations. Perceptions of the agricultural industry as an exclusively rural enterprise have not kept pace with the industry's rapid evolution. It is likely that rural youth do not see their agricultural communities as places where they can succeed because their view of agriculture is limited to farming and farm production (Adedokun & Balschweid, 2008).

In the next decade, the agriculture industry faces a dramatic increase in demand for ag-related careers due to a growing population and an aging workforce. With a median age of 53, agricultural occupations held the highest percentage of workers aged 45 years or older in 1998 (Dohm, 2000). Replacing retiring Baby Boomers in agricultural roles depends on new individuals entering the agricultural workforce. The rates at which Baby Boomers retire and new young people enter agricultural fields are significantly mismatched. As the Baby Boomer generation retires, their roles are left vacant and unfilled (Dohm, 2000). Although young people with agricultural interests are specially positioned for prosperous careers, the numbers of high school students pursuing agricultural careers continue to decline. Understanding why fewer and fewer high school students are pursuing careers in agriculture will allow educators and agricultural advocates to begin building solutions to this generational challenge. As agriculture continues to grow and evolve, so must its workforce.

This study looks to identify the factors that contribute to high school students' consideration of pursuing careers in agriculture. Identifying these contributors will provide

educators and agricultural advocates with additional data to aid in the development of action-oriented solutions to place qualified persons in agricultural roles.

CHAPTER 2: REVIEW OF LITERATURE AND PURPOSE

This study leans on the framework of past studies to direct its purpose. This review of literature focuses on the following themes: Demands for Diversity in Agricultural Careers, Personal Connections and Experiential Opportunities, Facilitating a Sense of Success.

DEMAND FOR DIVERSITY IN AGRICULTURAL CAREERS

The demand for careers in agriculture is linked to the growing demand for increased agricultural output. Although consolidation is a trend for many roles in agriculture due to improved technologies, other less traditional roles have emerged. These novel roles in agriculture indicate the need to shift away from viewing agriculture exclusively regarding farming. Science, technology, and math skills are necessary for continuing the technological evolution of agriculture. “The fundamental importance of agriculture to our culture, history, and economy, and the increasing awareness of the scientific nature of agricultural technology make agriculture the premier content vehicle to tie academic disciplines together” (Conroy et al., 1998, p. 36). Farmers are only a small, albeit important, faction of the agricultural workforce, alongside leaders, researchers, programmers, lobbyists, communicators, to name a few.

The agriculture industry needs global leaders to fill its vacant positions. “Graduates in [agricultural] professional specialties not only are expected to provide answers and leadership to meet the growing challenges in the United States, but they also must exert global leadership in providing sustainable food systems, adequate water resources, and renewable energy in a world of population growth and climate change” (Goecker et al., 2015, p. 1). A generational trend in the most recent group of college students and young professionals, known as Millennials, is an attraction to careers offering opportunities to make an impact rather than salary opportunities (Baker, Settle, Chiarelli, & Irani, 2013). Agricultural careers are positioned to provide its

workforce with purposeful, fulfilling careers. In a study commissioned to increase enrollment in agricultural academic programs, researchers discovered that “while participants desired to be happy and fulfilled, they also wanted to help others through their career, including messages about careers improving other people’s lives” (Baker et al., 2013, p. 58).

PERSONAL CONNECTIONS AND EXPERIENTIAL OPPORTUNITIES

Past research has pointed to opportunities such as Supervised Agricultural Experiences (SAEs) and development programs like FFA and 4-H as possible remedies to inaccurate perceptions of agricultural careers (Marx et al., 2014; Thieman et al., 2016). Agricultural education programs focusing on broader skills beyond production and farming can prepare students to work in a variety of agricultural occupations (Conroy et al., 1998). Additionally, experiential opportunities allow students to build a sense of self-efficacy. Involvement in career development events (CDEs) sharpens students’ abilities to evaluate their interests in agricultural topics. Students’ participation in CDEs has a strong relationship with their abilities to make career decisions (Marx et al., 2014). These experiential learning opportunities are supported by the three-circle model of agricultural education (Figure 1).

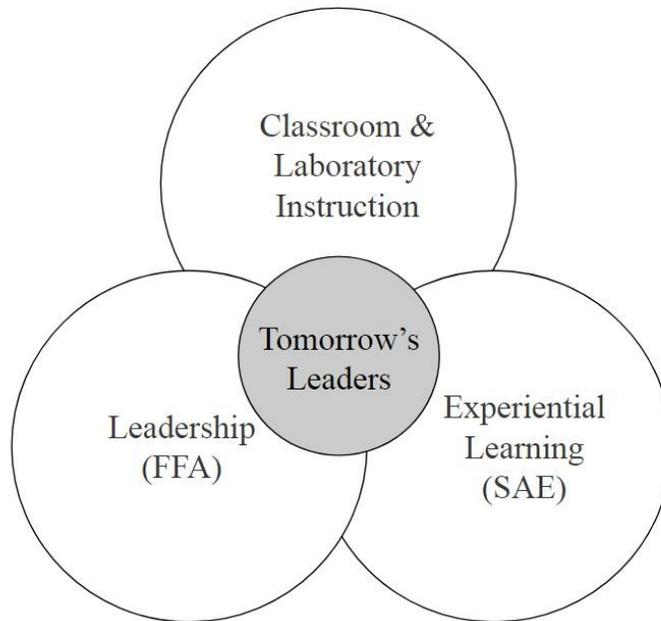


Figure 1. National Association of Agricultural Educators’ Three-circle model for Agricultural Education programs (NAAE, 2017).

Agricultural education programs which successfully leverage the SAE and FFA pillars alongside effective classroom and laboratory instruction are more able to facilitate growth. Participation in an agricultural education program’s classroom instruction, SAE, and FFA experiences can enhance a student’s behavioral, symbolic, affective, and perceptual complexity (Baker, Robinson & Kolb, 2012). Because self-efficacy is supported by these increases, exposure to agricultural learning opportunities leads to students considering agricultural careers.

Additionally, the presence of an active mentor or role model significantly impacts students’ considerations of careers. Career decisions can be highly influenced by a personal connection with model professionals within career interest areas (Marx et al., 2014). Often, students find this role model in an invested instructor. In a 2004 study, by the time students reached 12th grade, they reported their teachers as having the most impact on their career

interests (Helwig, 2004). Agriculture teachers are slated to leverage their role as mentor and their agricultural expertise to attract students to agricultural careers. Teacher development must emphasize interpersonal skill-building the need for teachers to build positive, impactful relationships with students to elicit a consideration of agricultural careers (Thieman et al., 2016).

FACILITATING A SENSE OF SUCCESS

To attract young people to agricultural careers, educators and agricultural advocates must provide ways for students to be able to see rural communities as places to succeed. “It is very possible that some [rural] students do not see their communities as places to achieve their dreams because they think agriculture is all about farming and farm production” (Adedokun & Balschweid, 2008, p. 8).

Perceived barriers to success can be linked to social cognitive theory. As students mature, they become increasingly conscious of their abilities and begin selecting activities based on their perceived competencies. Helwig’s (2004) 10-year study found the following:

With maturity, [students] increased their self-awareness and knowledge of their academic and vocational strengths and weaknesses. This affected their self-efficacy and confidence for particular educational and vocational possibilities. Consequently, by the end of their high school careers, these students chose occupations they felt more confident about, and fewer of these were professional, technical, and managerial in nature (p. 55).

Agricultural education opportunities allowing students to sharpen their skills set students up to succeed. When students feel as though they are capable of succeeding in agricultural pursuits, their likelihood of considering agricultural careers will increase (Marx, et al., 2014).

THEORETICAL FRAMEWORK

This study used the theoretical framework of Eccles, Wigfield and colleagues' expectancy-value model of achievement (Eccles, 1984; Eccles et al., 1983; Wigfield, 1994; Wigfield & Eccles, 1992, 2000). This framework, consistent with how Kitchel and Ball (2014) describe the appropriate use of theoretical models for non-experimental designs, explains achievement-related choices, such as a high school student's career choice. The expectancy-value model of achievement provides the rationale for the relationship between students' stated career decisions and the factors that support or detract from their choice. Expectancy-value theory models the consideration of individuals, events, and experiences leading to increased consideration of an agriculturally-related a career.

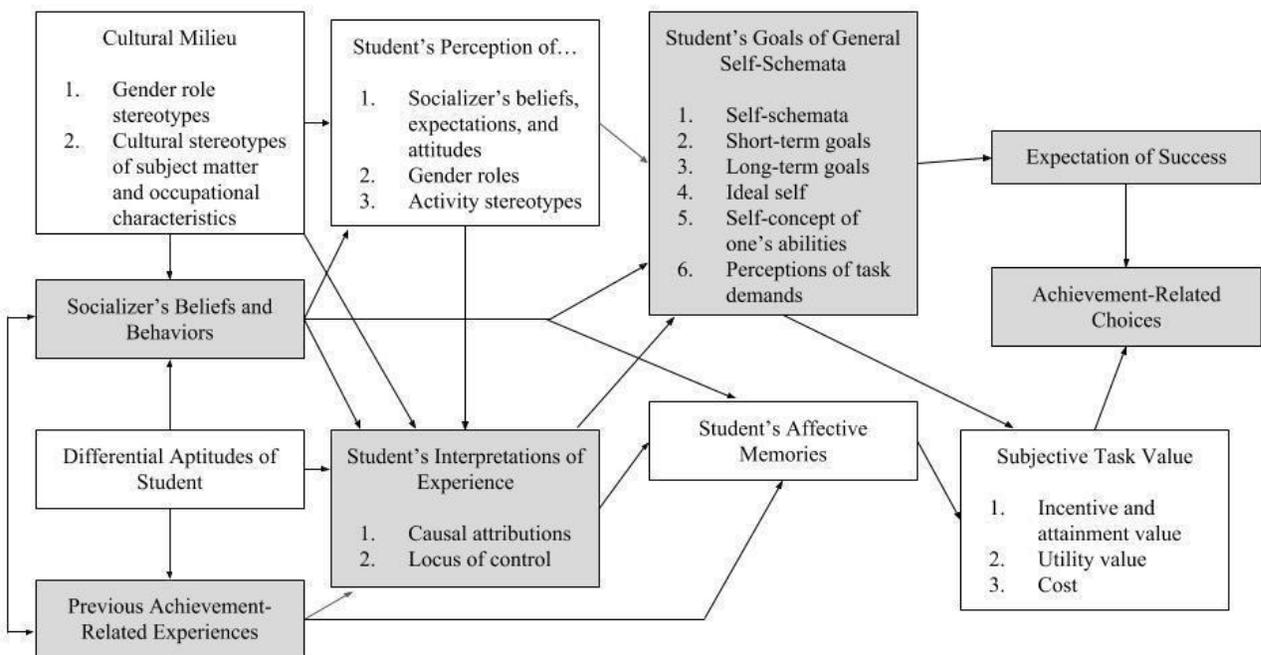


Figure 2. Eccles, Wigfield, and colleagues' expectancy-value model of achievement motivation (Wigfield & Eccles, 2000).

Figure 2 shows the expectancy-value theory of achievement characterized by the influence of personal beliefs regarding expected success and value of activities and one's context on an individual's choice, persistence, and performance related to a particular decision (Eccles, et al., 1983; Wigfield & Eccles, 2000). The current version of the model displays the direct impact of expectations and values on an individual's achievement-related choices. The individual's perceptions of cultural influences and interpretations of previous experiences influence expectations of success and task value.

Factors studied in consideration of agriculturally-related career choice for the current study are highlighted in gray on the model in Figure 2. These included students' level of involvement in FFA, gender, parent's career choice, involvement in other agriculturally-related activities in addition to FFA, and perception of their agriculture teacher as a role model. The decision to consider agriculturally-related careers represents the achievement-related choice for this study. A student's involvement level in FFA activities corresponds to "Previous Achievement-Related Experiences" and served as precursors to "Student's Interpretations of Experience."

Parents and agricultural educators represent "Socializers" within the model for the current study. The actions and beliefs of these socializers affect a student's perceptions of their beliefs, expectations, and attitudes related to the agricultural career choices in addition to gender roles and activity stereotypes. These beliefs also influence the degree to which students begin to develop their schemata of an ideal self, connected to their expectations of success, and construct their self-concept of abilities unique to roles in agricultural career fields while setting short- and long-term goals consistent with this identity. Through an application of the expectancy-value model of achievement motivation (Wigfield & Eccles, 2000) in addressing the anticipated

unfilled agricultural careers, we define particular areas of study to examine the motivations of students in considering agricultural careers.

PURPOSE AND RESEARCH QUESTIONS

The purpose of this survey study is to examine the factors which contribute to a high school student's agricultural career considerations. This study looks to identify the factors contributing to students pursuing careers in agriculture. Identifying these contributors will provide educators and agricultural advocates with additional data to aid in the development of action-oriented solutions to place qualified persons in agricultural roles. Specific questions the researcher seeks to answer the questions of how and to what degree do specific factors affect students' willingness to consider a career in an agricultural field. The study's research questions include:

1. How does parent career participation in agriculture impact students' choice to pursue a career in agriculture?
2. How does a student's perception of their agricultural educator and/or FFA adviser impact a student's choice to pursue a career in agriculture?
3. Does participation in other agricultural student organizations impact a student's choice to pursue a career in agriculture?
4. Does a student's level of involvement in FFA influence their choice to pursue a career in agriculture?

CHAPTER 3: METHODS

INSTRUMENTATION

This study was part of a larger study that collected data related to factors impacting Illinois high school agriculture students' career aspirations. The larger study was commissioned by the Illinois Agricultural Education administrative body to address the current shortage of agricultural educators. The goal of the larger study was to provide a framework and recommendations for future efforts and funding to recruit high school students to pursue careers as agricultural educators. A panel of experts ($N = 8$) including university faculty, graduate students, high school agriculture teachers, and first-year undergraduate agricultural education students who were FFA members evaluated the questionnaire instrument for content validity and accuracy. The instrument was administered electronically through Qualtrics in April of 2015 and included demographic questions to establish gender, ethnicity, grade level, and high school. Participants anonymously completed the questionnaire.

For this study, we analyzed data to correlate high school students' intention of pursuing careers in agriculture. The questionnaire provided a text box for students to identify the career path they intended to follow. These responses were coded as either "agriculturally-related careers" or "not agriculturally-related careers" for data analysis. Examples of the responses coded as "not agriculturally-related careers" include career intentions in corporate business, medicine, engineering, and law enforcement. Examples of the responses coded as "agriculturally-related careers" include career intentions in crop science, agricultural economics, welding, and veterinary medicine. Participants also identified items related to their parents' careers and educational backgrounds. Respondents identified their parents' career in one of four

Parent Career text boxes provided. These responses were coded similarly to the student responses as either “agriculturally-related careers” or “not agriculturally-related careers.”

Students were also asked questions related to their view of their high school agriculture teacher, using a Likert scale ranging from “strongly agree” to “strongly disagree.” Participant’s responses to the item “My ag teacher is a role model” comprised the “Ag Teacher is a Role Model” item for data analysis. Students also completed a checklist of FFA activities in which they had participated from a selected list of 18 items, creating an “FFA Activity Number” with data values ranging from 0 to 18. Each activity only had one opportunity for response, so the FFA Activity Number only accounts for unique activities as opposed to absolute number of activities participated in where events such as State and National Conventions would be counted more than once. The choice was made to look at unique activity numbers to account for breadth of involvement and reduce the compounding impact of years of participation through repeated attendance to the same activities. Additionally, students were asked if they participate in other organizations or activities than the FFA and were provided a text box to list these activities. These “Other activities” were coded as either “agriculturally-related activities” or “not agriculturally-related activities” to supply the data to answer yes or no to “Is the student involved in other agriculturally-related activities?” Examples of agriculturally-related activities included 4-H youth clubs, archery clubs, sportsmen's clubs, and 4-H Federations. Data collected, but not included in the current study, included questions specifically related to careers in educational fields, impressions of agricultural education as a career field, and post-high school education plans.

The FFA activities listed in the analysis were selected purposively based on high frequencies of student attendance and guidance from stakeholders in agricultural education

including current high school agriculture teachers, state agricultural education employees, and university-level agriculture teacher educators. Activities considered include Chapter FFA Officer, Section FFA Officer, Illinois State FFA Convention, National FFA Convention, FFA Leadership Camp, 212 Conference, Farm Bureau Youth Conference, Farm Bureau Acquaintance Day, Washington Leadership Conference, STAR Conference, ELITE Conference, FFA Legislative Awareness Day, Chapter FFA Meetings, FFA Week activities, Proficiency Award Interview/Competition, State Degree Interview, FFA Contest/Career Development Event/CDE. Each of these items are available to all high school FFA chapter members through their enrollment in agricultural education classes.

DATA COLLECTION

A link to the questionnaire was distributed to all agricultural educators in the state of Illinois via email from the locally assigned state supervisor. Researchers sent an initial informational email the first week of May in 2014 to all high school agricultural educators including parental informational forms. The parental informational forms provided parents the opportunity to deny their students' participation in the study. The initial invitation informational email detailed the goals of the study and described the incentives for participation (each school with at least ten completed questionnaires received an entry into a random drawing for one of four \$120 gift cards to MyCAERT). Agricultural educators received a shortened URL link for the anonymous Qualtrics survey one week following the initial invitation informational email to distribute to students who did not have a parent disallowing participation. The survey link closed three weeks following the initial invitation email.

PARTICIPANTS AND SAMPLING

Participation in the study was available to all 321 high school agricultural education programs in Illinois, yielding participation from 56 different programs. Overall, 18% of agricultural education programs in Illinois had students complete a questionnaire. A total of 817 students in grades 9 through 12 responded to the questionnaire. An additional 30 students identified as junior high school students and were not included in this study. Researchers examined the responding sample of students for a diversity of sample including factors such as geographic location, the size of the program, and the setting of the school (rural, suburban, urban). The sample was found to be representative of the state based on these characteristics. Within this sample, 53.5% ($n = 437$) identified as male. While all respondents are enrolled in agricultural education programs, approximately 13% ($n = 110$) are not FFA members.

For this study, we were interested in understanding the degrees to which certain factors, including parents' careers and involvement in industry-focused organizations, contribute to high school career decision-making, particularly related to whether or not they consider pursuing an agriculturally-related career. Approximately 79% of respondents ($n = 647$) provided one or more parents' occupation on the questionnaire and the responses were coded as either "agriculturally-related careers" or "not agriculturally-related careers." The majority ($n = 412$) do not have any parent employed in an agriculturally-related career, while approximately 29% ($n = 235$) have at least one parent employed in an agriculturally-related career. The majority of respondents ($n = 692$) indicated involvement in activities that are not agriculturally-related, while approximately 15% ($n = 125$) listed involvement in at least one other activity with an agricultural focus. Indicated examples of agriculturally-related activities include 4-H youth clubs, archery clubs, sportsmen's clubs, and 4-H Federations. Respondents ($n = 817$) completed the FFA activities

checklist prompt, yielding an FFA activity number ranging from 0 to 18. The FFA activity number was calculated as a sum of all activities selected on each respondent's checklist prompt with each activity counting for one point. An FFA activity number of 0 was assigned to the 23.3% of respondents ($n = 190$) who did not provide information regarding their participation in specific FFA activities on the checklist prompt. Approximately 75% ($n = 610$) had an FFA activity number of 5 or below, while less than 2% ($n = 16$) had an FFA activity number of 15 or higher.

To measure our central variable of interest, participants were asked to enter their career aspirations into a provided text box. Approximately 86% of the questionnaire respondents ($n = 707$) supplied their career goals in the open-ended text box, which were then manually coded as either "agriculturally-related career choice" or "not agriculturally-related career choice." Responses coded as an "agriculturally-related career choice" included career aspirations in fields like crop sciences, agricultural economics, welding trades, and veterinary medicine. "Not agriculturally-related career choice" responses included career aspirations in fields like corporate business (not specified as agribusiness), medicine, law enforcement, cosmetology, and engineering (not specified as agricultural). Of these responses, approximately 43% ($n = 305$) indicated an aspiration for agriculturally-related career and 57% indicated career choice in non-agricultural fields. 14% of the overall study participants ($n = 110$) did not provide any answer for this questionnaire item or responded with some variation of the phrase "I do not know."

DATA ANALYSIS

The primary goal of this study survey was to predict which factors most strongly influence a high school student's decision to pursue or not to pursue a career in agriculture. We conducted a logistic regression analysis with the dependent variable being the dichotomous

nominal variable coded as “Agricultural Career Choice,” where participants responded to the open-ended text box survey item “What do you hope to do for a job/career after graduation?” The responses to this item were manually coded as “agriculturally-related career choice” or as “not agriculturally related career choice.” 37% of respondents ($n = 305$) provided answers classified as an “agriculturally-related career choice,” including crop science, agricultural economics, welding, and veterinary medicine. Careers coded as “not agriculturally-related career choices” included roles in corporate business, medicine, engineering, and law enforcement. We included gender, involvement in other agriculturally-related activities, parental career(s), FFA involvement, and view of the agriculture teacher as predictive variables in the data analysis block.

CHAPTER 4: RESULTS

FACTORS THAT SIGNIFICANTLY PREDICT HIGH SCHOOL STUDENTS’ CONSIDERATION OF AGRICULTURALLY-RELATED CAREERS

We conducted a logistic regression analysis to examine several variables serving as predictors for a high school student choosing to pursue a career in agriculture. Variables considered included gender, involvement in other agriculturally-related activities, parental career(s), FFA involvement, and view of the agriculture teacher as a role model serve as predictors of whether or not a high school student enrolled in an agricultural education course will consider a pursuing an agriculturally-related career. Overall results are displayed in Table 1. Gender, other agriculturally-related activities, parental career, FFA involvement, and view of the agriculture teacher as a role model predicted approximately 20% of the variance (Nagelkerke’s R-Square = .200) in students’ consideration of pursuing an agricultural career. A Hosmer and Lemeshow Test resulted in a non-significant p-value (.588), indicating a good model fit for the analysis.

Table 1. Logistic Regression for Sample

	β	SE β	Wald’s χ^2	df	p	e^β
Block 1						
Gender	.542	.190	8.143	1	.004	1.719
Other Ag Activities	.917	.251	13.372	1	.000	2.501
FFA Activity Number	.184	.028	42.440	1	.000	1.203
Ag Teacher as a Role Model	.075	.085	.775	1	.379	1.078
Parent Ag Career	.325	.191	2.925	1	.087	1.386

Within the model, gender, FFA involvement level (FFA activity number), and involvement in other agriculturally-related activities significantly predicted students' agriculturally-related career aspirations. Whether or not a student's parents worked in an agricultural career emerged as a slightly significant predictor (p-value = .087), which might warrant further investigation. However, the p-value for this factor is outside of the significant value qualifiers for social sciences, meaning this factor is too weak to qualify as a significant predicting factor in this study. Whether or not a student views their agriculture as a role model did not emerge as a significant predicting factor. Involvement in other agriculturally-related clubs and FFA involvement level (FFA Activity Number) emerged as the most powerful predictors (i.e. Wald statistic) within the model.

For students involved in agriculturally-related activities in addition to FFA, the likelihood they would consider an agriculturally-related career is 250% higher than students just not involved in agriculturally-related activities in addition to FFA. For every single step increase in the most powerful predictor, FFA Activity Number (a 0-18 score range), a student's odds they would consider an agriculturally-related career increased 120%. Views of the agriculture teacher as a role model resulted in a 108% increase in students' odds to consider agricultural careers. Students with any parent in an agriculturally-related career resulted in a 137% increase in students' likelihood to consider an agriculturally-related career. However, these two predictors were not nearly as powerful within the model, resulting in smaller Wald statistics.

CHAPTER 5: DISCUSSION AND IMPLICATIONS

Our goal with this study was to determine the factors influencing high school students to pursue agricultural careers to serve as a tool in developing solutions to meet the demand for qualified professionals in agricultural fields. This research focused on the factors that were most strongly predictive of whether or not a high school student will consider pursuing an agriculturally-related career. We looked at students' level of involvement in FFA, whether or not they were involved in additional agriculturally-related activities outside of FFA, whether or not one or more of their parents worked in an agricultural career, and whether or not the student viewed their agriculture teacher as a role model. Our findings support the expectation that students' level of involvement in FFA and their involvement in additional agriculturally-related activities would impact their consideration of an agricultural career. However, our findings did not support our expected outcomes that the students' perception of their agricultural teacher as a role model and their parents' connection to an agricultural career were contributing factors to students' agricultural career considerations. These findings suggest providing more agricultural opportunities to more students will increase interest in pursuing agricultural careers.

Agricultural education's three-circle model provides a wide variety of opportunities for student involvement (Baker et al., 2012). Expectancy-value theory posits these experiences are essential in how a student develops a positive affect toward a career as they consider their options (Wigfield & Eccles, 2000). A review of where to allocate resources and time should consider increasing FFA activities available for more students, at the chapter, state, and National levels. Although this study looked at FFA involvement as an aggregate score rather than evaluating the influence of individual activities, career development events were previously identified as a powerful influence on career decision-making (Marx et al., 2014). Given these

findings, “agriculture teachers should structure their career development event selection system to include as many students as possible, rather than as closed systems wherein only a small number of students participate” (Thieman et al., 2016, p. 41). Maximizing the number of students to participate in career development events, leadership development events, and service events has the potential to positively influence more students’ willingness to consider agricultural-related careers.

Previous studies indicate the benefits of involvement in FFA activities are more positively influential on students’ career considerations early in their high school career (Thieman et al., 2016). Our study supports this finding and reveals a step-increase in a student's likelihood to consider an agricultural career correlated with higher FFA involvement scores. Thus, opening involvement opportunities to freshmen and sophomores can positively impact their consideration of an agricultural career by allowing them to participate in more FFA activities during their tenure in high school.

In addition to a student’s level of FFA activity, their participation in additional agriculturally-related activities serves as a powerful influence on their consideration of an agricultural career. 4-H club was the most common agricultural activity students participated in outside of FFA. Our data reveals that students who participate in additional agricultural activities outside of FFA are more likely to consider pursuing an agricultural career. This does present a “chicken versus egg” dilemma in examining if the students who are more inclined to pursue agricultural careers also pursue more opportunities to be involved in agricultural experiences through organized activities, or if the increased participation leads to career pursuit. Further study which would tease out the causal nature of this relationship could be beneficial. However, it still stands that given these findings, agricultural educators should evaluate their partnership

with local agricultural organizations and clubs. Supporting extracurricular activities like 4-H in the agriculture classroom can provide additional experiential opportunities for students which can positively impact their consideration of an agricultural career. These activities, paired with FFA involvement, can enhance a student's expectation of success, an essential piece of the expectancy-value model (Eccles & Wigfield, 2000).

Overall, our findings support that higher levels of involvement in agriculturally-related development activities, both in FFA and in other organizations, significantly impact whether or not a high school student will consider a career in agriculture as a profession. These findings suggest a need for an increased focus on allowing and encouraging more youth to participate in more activities. Agricultural educators should open experiential opportunities to as many students as their resources allow. In cases where resources limit the number of students who can participate, advisors should select students with the least previous experiences to participate as the payoff will be greater from the respect of impacting the pipeline of future professionals in agriculture. Increasing experiential exposure to agricultural opportunities will allow for more students to picture themselves in an agricultural career.

LIMITATIONS AND FUTURE RESEARCH

This study evaluated responses from the state of Illinois. Larger regional and national studies might reveal additional data to support solutions to meet the demand for qualified candidates to fill agricultural job openings. The ability of the United States to feed, clothe, and fuel its population depends on the agriculture industry, and the industry needs innovative, solutions-oriented individuals to fill its open roles. The industry cannot function to its optimum levels with less than 60% of its workforce filled. Additional studies are needed to further

investigate why fewer high school students are considering careers in agriculturally-related fields.

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