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PERCEPTION OF ALUMNI OF THE DEPARTMENT OF AGRICULTURE AT STEPHEN F. AUSTIN STATE UNIVERSITY

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Abstract

University alumni surveys have served various purposes since they were introduced in the 1930s in the United States. The Department of Agriculture at Stephen F. Austin State University (SFASU) aimed to evaluate alumni perceptions between the Fall of 2010 and the Spring of 2022 to provide an opportunity to examine the relationship between degree fields and occupations and the agriculture curriculum, salaries, and demographic data for college graduates. This study's web-based survey was designed to include closed-ended and open-ended questions to collect individual opinions using Qualtrics Survey Software. The survey materials were made available on the alumni's social media accounts. The samples show the gender representation of this study to be 29.3% male, 69.8% female, and 1.0% other. Furthermore, the result indicated that 42.6% of respondents obtained their desired job before graduation and 15.3% within three months of graduation, and the educational field represented the major employer of respondents. Additionally, the study shows that 49.54% of respondents believe they are currently using their agriculture degree in their current career. The study indicates that the relationships between respondents and professors are the department's greatest strength. Facilities, curriculum and programs, staffing, and advising services need improvement in SFASU's Department of Agriculture. Alumni surveys are extremely valuable to colleges and universities, as alumni play essential roles in shaping and leading their institutions.

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Chapter I

Introduction

Evaluation is an essential managerial tool in an academic setting where evidence collection, assessment, and interpretation are valued tasks. Vital program planning, execution, and improvement are all built on the foundation of evaluation. Campus administrators can use an evaluation plan to determine whether a program or policy operates as intended and then decide whether it should be expanded, altered, or canceled. Because evaluation findings influence strategies for midcourse modifications, evaluation is essential to strategic planning.

The objectives of academic departments are to prepare highly qualified graduates (bachelor's or diploma) in the department's discipline, prepare graduates for lifelong learning, train graduates to communicate effectively, and work well in a team environment. Second, prepare master's and doctoral degree holders who can conduct research at the frontier of their field. Third, they want to expand the knowledge base in their disciplines to meet social needs. Finally, they provide professional development through workshops, seminars, and continuous education. Therefore, academic departments must have several inputs and processes available, monitored, and continuously improved to achieve the above objectives (Al Turki & Duffuaa, 2003).

Stephen F. Austin State University's Department of Agriculture (SFASU) strives to provide a vibrant, intellectual community that promotes academic learning and professional development for its students. A focus on effective teaching, research, and service offers opportunities to develop the critical thinking skills needed to compete in the diverse industry of agriculture, develop practical communication skills, and collaborate effectively within educational, cultural, economic, and professional environments to disseminate new and existing knowledge to agriculture's stakeholders (Department of Agriculture Mission Statement, 2009).

Colleges and universities routinely conduct surveys of their graduates to gather information about their subsequent education and careers and encourage charitable giving and volunteering. In addition, an alumni survey provides an opportunity to examine the relationship between degree fields, occupations, work activities, salaries, and demographic data for college graduates. Alumni surveys have served various purposes since they were introduced in the 1930s in the United States. To meet their multiple missions and advance their programs, colleges and universities in the United States rely on alumni support (Koral, 1998).

Collecting and analyzing alumni opinions via a survey has long been an accepted method for product evaluation (Pettit, 1991). In this study, data were collected and analyzed from program graduates, with the data collected in the areas of 1) demographic information, 2) college information, 3) career information, 4) academic experience, and

5) individual opinions concerning the perceived strengths and weaknesses of the department.

Objectives

College programs must change because of technological breakthroughs and growing businesses, necessitating curriculum examination and periodic enhancement. The objectives of this study are to:

- Describe the demographic data and college information of alumni from the SFASU Department of Agriculture between Fall 2010 and Spring 2022.
- Determine the employment status, salary range, and alumni employment fields from Fall 2010 to Spring 2022.
- Describe the personal perspectives of alumni concerning the agriculture curriculum, programs, and extracurricular activities they received during their college experience at SFASU.
- Compare the demographic information of alumni from the Department of Agriculture between Fall 2010 and Spring 2022 with the previous survey results conducted by D'Andre (2010), Vardeman (2001), and Hudson (1989), including their employment status, salary range, and field of employment, as well as their perspectives on the agriculture curriculum, programs, and extracurricular activities they received at SFASU between Spring 1981 and Spring 2010.

Chapter II

Literature review

The economic, social, political, and environmental development of nations and the world depends on higher education institutions. Higher institutions provide qualified workers and support global development strategies. This responsibility necessitates the creation of a strategic plan with built-in monitoring, control, and adjustment (Al Turki & Duffuaa, 2003). Al Turki & Duffuaa (2003) discuss how the academic department affects the institution's success. The academic department's objectives are to prepare qualified graduates (bachelor's or diploma) in the department's discipline for lifelong learning, train graduates to communicate effectively, and work well in a team environment. Second, prepare master's and doctoral degree holders who can conduct research at the frontier of their field. Third, they expand the knowledge base in their disciplines to meet social needs. Finally, they provide professional development through workshops, seminars, and continuous education. It is crucial for academic departments to have several inputs and processes that are available, monitored, and continuously improved to achieve the above objectives. There are three significant outputs (outcomes) from academic departments. First, the outcome measures must reflect the quality of the output. The outcome measures group comprises graduates, research, scholarship, and services to the community, such as training, projects, and consultation. The quality of graduates is assessed by evaluating the graduates' ability to achieve educational objectives and outcomes. The research and

scholarship performance measures assess the quality of research conducted by the master's and doctoral students who graduate from the department.The performance measures of the quality of services allow for evaluating the ability of the department to deliver quality service to the community. A vital element of the mechanism is a set of performance measures used to measure the organization's performance and progress toward its goals. Regular curriculum assessment and enhancement are critical to preparing competent graduates. Alumni surveys provide an opportunity to examine the relationship between degree fields, occupations, work activities, salaries, and demographic data for college graduates. Alumni surveys have served various purposes since they were introduced in the 1930s in the United States. To meet their multiple missions and advance their programs, colleges, and universities in the United States rely on alumni support. Significant gifts from alumni have become the cornerstone of successful fundraising campaigns, and alumni who help public universities leverage state support for higher education have become increasingly important players in the state lobbying process (Koral, 1998).

Alumni surveys create a pathway to reform the curriculum to make it more responsive to employer requirements. Similarly, educational administration and business departments are using similar approaches to improve the quality of their programs and show their responsiveness to external audiences (Borden & Rajecki, 2000; James et al., 1997; Sheehan & Granrud, 1995; Ogletree, 1998).

Using an online assessment survey, Gaier (2005) researched the impact of alumni satisfaction with their undergraduate academic experience on alumni giving and participation. An updated version of the "Comprehensive Alumni Assessment Survey (CAAS): Four-Year Institutions" (National Center for Higher Education Management Systems, 1992) was given to State University alumni. Four emails were sent to alumni asking them to participate in the study. Alumni were informed and invited to participate in the survey in the first email. Three days after the initial email was received, a second one was issued with instructions for the research and a link to the website hosted by the CAAS. The third email was sent a week after the second. The third email was sent to alumni to remind them to participate in the study. For two and a half weeks, graduates could access the survey online. At the end of the trial, the fourth email was issued. Alumni were briefed on the outcomes and conclusions of the study.

Gaier (2005) reported how alumni are extremely valuable to colleges and universities as they play essential roles in shaping and leading their institutions. They are also a vital donation source for college and university budgets (Horton, 1995). In a review of the literature on alumni involvement, Johnson and Eckel (1998) observed that students' enrollment experiences were strongly related to their perceptions of the institution as alumni. As a result, graduates with a rewarding undergraduate experience are more likely to feel connected to their alma mater, become more involved, and contribute financially when they can. According to Pascarella & Terenzini (1991), undergraduate experiences comprise two core educational and social systems. The

research studied the relationship between alumni satisfaction with their undergraduate experiences in the academic system and alumni involvement. Moreover, Gaier (2005) studied the academic system to test thehypothesis that alumni who were highly satisfied with the educational system during their undergraduate experience are more likely to be involved. According to the findings of this study, there were significant increases in alumni giving and alumni participation based on alumni satisfaction with the undergraduate academic experience.

Cabrera et al. (2005) researched three applications of alumni surveys. The limitations and benefits of alumni surveys focus on measuring alumni outcomes, engagement, competencies, and giving. Cabrera et al. (2005) also discuss how they can reach critical audiences to positively impact higher education institutions' public policy, planning, and advancement. It also discusses the benefits of alumni surveys that measure alumni outcomes, engagement, competencies, and giving. The alumni outcomes approach asks graduates about their perspectives on job satisfaction, how their college major relates to their careers, and how they transitioned to the workforce. The engagement and competencies approach focuses on alumni engagement with the institution. At the same time, it also links to teaching, learning, and outside-the-classroom activities that shape a graduate's current skills and abilities and finally, alumni giving focuses on understanding the factors that lead alumni to support their alma mater. Colleges and universities customarily survey their graduates to collect information about their subsequent education and careers and cultivate charitable giving and volunteering. The review's

findings show that alumni surveys are most effective when they are based on research and appropriate conceptual frameworks. Furthermore, when communicating results to a diverse audience, the methodological concerns of each approach must be carefully addressed. Alumni surveys may have the most significant impact if they are part of a comprehensive data collection strategy that includes everyone from pre-college students to alumni. Under this philosophy, surveying alumni should be part of a total enrollment management strategy.

Leading colleges have been surveying alumni since the 1930s to track their professional degrees and collect workforce data (Pace, 1979). In the subsequent decades, the purpose and scope of alumni research increased and became more prevalent across the full range of institutional types (Pettit, 1991). According to Volkwein (2010), using a survey instrument to collect alumni information can be inexpensive compared to many other methods of gathering data. External and internal stakeholders respect the opinions of alumni and employers. Internally, alumni studies can assess important outcomes and provide information for enhancing academic curricula, support programs, and administrative policy.

Externally, alumni studies can support accreditation, accountability, recruitment, and fundraising. Such studies provide faculty and administrative collaboration opportunities because faculty and staff interests in alumni outcomes coincide. Alumni surveys typically have space for institutional and departmental questions to serve

multiple purposes in one data collection. Alumni studies are at their best when characterized by centralized data collection and decentralized data use. Volkwein (2010) also discusses the challenges of alumni surveys. The purpose of alumni surveys differs, as do the populations and contents of the surveys. Recent graduates' feedback is essential to curriculum and program improvement. A student's experience and the academic program should be evaluated while still fresh in the student's mind. To assess educational attainment in graduate or professional school, alumni must have completed at least four years of undergraduate study. An assessment to evaluate career outcomes requires even more time. A significant career accomplishment, honor, award, civic engagement, or leadership role may accumulate over thirty or forty years. In addition, Volkwein (2010) stated that a survey of two pages offers too little information. A survey of three pages is ideal; a survey of four pages is okay; and a survey of five pages will dampen responses.

Kelsey et al. (2002) researched student satisfaction with Texas A&M and Texas Tech University's joint Doc-at-a-Distance (D@D) program. The program is a specialized, high-quality learning course designed specifically for agricultural professionals. It offers a learning environment that encourages discovery, integration, and application of knowledge, experts from two nationally recognized universities in agricultural education, and the skills necessary for agricultural professionals to advance themselves in the field. Qualitative methods were used for data collection, analysis, and interpretation. The data were collected via telephone interviews with all participants. The study included all students who completed the inaugural year of the D@D program. The interviews were

recorded and transcribed verbatim. The transcripts were mailed back to participants for accuracy verification. Study results show that the D@D program effectively reached time- or place-bound students and offered them a highly satisfying experience. Students were thrilled with the program's instructional design and the support provided by faculty, family members, and employers. There was also significant dissatisfaction with the program, as evidenced by the literature. Students were frustrated by outdated technology and inaccessible educational resources and materials.

Using a descriptive survey of graduates of the University of Florida's agricultural communications programs, Irani & Scherler (2002) explored the relationship between facets of job satisfaction and perceptions of the effectiveness of their educational preparation. According to Irani & Scherler (2002), work satisfaction may serve as a gauge of program efficacy that can provide valuable information about how to continue to meet the educational needs of students in this profession and pointers for the future development of curricula and programs. Therefore, the study examines the relationship between the job satisfaction of university agricultural communication graduates and their perceptions of their educational preparation and their specific views about the focus of an agricultural communication graduate program. The objectives of the study were as follows: describe respondents in terms of demographic factors, current occupational status, and job title; assess respondents' perceptions of their level of job satisfaction in their current positions; explore the relationship between job satisfaction and respondents' perceptions of their educational experiences, including how adequately they believed

their educational experiences had prepared them for their careers; and determine the likelihood of their pursuing additional advanced coursework in agricultural communications. The method was a two-part questionnaire administered to a population (N = 38) of recent agricultural communications alumni from the University of Florida. Two scale instruments, the Job Descriptive Index (JDI) (Smith et al., 1969) and the Job in General (JIG) (Ironson et al., 1989), were chosen to measure job satisfaction because of their perceived relevance to the employee group under investigation (University of Florida agricultural communication alumni). The JDI covers work, pay, promotions, supervision, and co-workers' aspects. The respondent indicates whether the adjectives or short phrases describe their job. The JDI scales evaluate five distinct areas, with items relating to the same topic but differing in specificity. They are also only moderately correlated and contain at least five variables. As a result, the JDI scales are inadequate for measuring a single unitary construct.

In comparison, JIG uses scales to assess a respondent's overall job satisfaction to predict specific behaviors, such as quitting or not showing up to work. The JDI is a facet scale with 72 items and subscales of either 9 or 19 items each (Spector, 1997, p. 12). Five job characteristics were intended to be described by a collection of evaluative adjectives or short phrases that are part of each subscale. The scale's five components were: work on the current position, current compensation, potential for advancement, supervision, and co-workers. The JIG survey is used to measure overall satisfaction with respondents' jobs. The JIG consisted of 18 evaluative adjectives and was answered and scored the

same way as the JDI. The JIG survey is used to measure overall satisfaction with respondents' jobs. The JIG consisted of 18 evaluative adjectives and was answered and scored the same way as the JDI. The JIG survey is typically used to measure overall satisfaction with respondents' jobs. The JIG consisted of 18 evaluative adjectives and was answered and scored the same way as the JDI. The second part of the survey was a demographic instrument designed to collect demographic information, including employment history, educational experiences at the University of Florida, gender, age, and marital status. The study results indicated that the responding agricultural communications alumni in this study were employed and satisfied with their positions as measured by the JIG and JDI indices. Based on the results of this study, graduates were most interested in taking advanced courses that focused on a mix of communication strategy and skills coursework and more general professional development. The study also gave the department insight into alumni suggestions that academic programs may want to ensure that agricultural communications graduate curricula include courses focusing on communication, strategy, and application (Irani & Scherler, 2002).

McIntosh & Strand (1983) examined the characteristics of University of Maryland College of Agriculture alumni associated with job satisfaction. Therefore, the University of Maryland's agriculture alumni were surveyed concerning their demographic background, employment, and educational experiences. This study described and related the characteristics of agronomy and agriculture alumni from the University of Maryland to their job satisfaction. A survey regarding employment, educational experiences, and

personal background was attached to the newsletter sent to all University of Maryland agriculture alumni. There were 158 responses to this mailing. In addition, the same survey was mailed separately to 700 randomly selected alumni who graduated from 1976 to 1980, and 280 responses were received. Ninety-seven had been agronomy majors, and 341 had majored in other agricultural disciplines.

Most (81%) agriculture alumni were satisfied with their jobs. However, recent graduates were less satisfied than those who graduated before 1975. As income increased, the percentage of satisfied alumni increased, and postgraduates were more satisfied with increasing revenue. Only 17% of graduates before 1975 earned less than $15,000, compared to 57% after 1975. Over 90% of respondents working in agricultural business and education were satisfied with their jobs, regardless of when they graduated. The author also discussed that advisors are essential in selecting majors, and informed advisors offer better guidance for rational decisions. It would be helpful for an academic advisor to know how satisfied agriculture alumni are with their jobs and the characteristics of the most satisfied alumni. This information could help the student decide whether a degree in agriculture would be suitable and which career opportunities would be most satisfying. Finally, the paper recommends changing curricula to prepare students for future employment.

Sprecker & Rudd (1996) discussed the University of Florida's agricultural communication program from 1990 to 1996. The curriculum had yet to be evaluated to

determine whether it prepared graduates for their careers in agriculture. Therefore, the study aimed to determine the skills and knowledge needed by graduates of the University of Florida's agricultural communication program for successful professional service in fields related to agricultural communication. Four Department of Agriculture Science Education and Communication instructors taught required agricultural communication courses. Six instructors from the College of Journalism and Communications taught required communication courses. All were interviewed in person. Six of the 18 alumni of the University of Florida's agricultural communication program worked in the field. Only graduates could identify the strengths and weaknesses of the curriculum in the field, so the researcher sought their opinions. All six participated in the study; half were interviewed in person and half by telephone. Students thought they were qualified only to be agricultural writers, not versatile communicators who could shoot and edit videotape, write, produce a newsletter or magazine, or do advertising or public relations. Students need to be as competitive for positions in communications as graduates from the College of Journalism and Communications. The faculty wanted students to take in-depth communication courses where projects run from inception to completion. Alumni said communication ability would get them a job, not agricultural knowledge.

As a result of Florida agriculture's diversity, agricultural communication instructors, practitioners, and alumni stressed the importance of food, agriculture, and natural resource knowledge. Instructors of agricultural communication thought agricultural issues, economics, and politics should be added to the technical requirements.

Many practitioners emphasized international trade, issue management, economics, politics, and U.S. food and agricultural policy. They also strongly recommended a general overview course on Florida agriculture. Alumni believe the current food, agriculture, and natural resource offerings should be modified to better prepare them for their careers. They also desired a comprehensive look at Florida agriculture in every aspect. The University of Florida prepares its agricultural communication students only to be agricultural writers rather than communicators. Instructors, practitioners, and alumni agreed that students need in-depth training in all aspects of communication beyond introductory classes (Sprecker & Rudd, 1996).

Graduate unemployment in Africa is a challenging issue, according to Ouraich et al. (2017). Many factors contribute to this problem, including population growth, mismatches between curriculum and employer needs, and a need for more evidence-based policymaking. In this research, the objectives were twofold. First, it aimed to identify critical characteristics influencing labor market participation among Guinean graduates of agricultural higher education. The second objective pinpoints the qualifications and personas employers seek in the farm labor market. The study relied on telephone surveys of recent graduates from Guinean higher education institutions in agricultural disciplines and key informant interviews with agrarian employers. The author also informed readers that alumni surveys are cost-effective and efficient for higher education institutions to collect labor market data cheaply by using student volunteers' alumni and conducting key informant interviews with potential employers. Data on

graduates was collected from all the major agricultural higher education institutions in Guinea: the Agricultural and Veterinary Science Institute Valéry Giscard d'Estaing (ISAV) at Faranah, the National Schools for Agriculture and Livestock Production (ENAE) at Macenta, Tolo, Koba, and Kankan, and the National School for Water and Forestry Technicians (ENATEF) at Mamou. The second objective involved a field investigation of historical and potential employers of ISAV, ENAE, and ENATEF graduates in all four regions of Guinea.

The data collection was based on personal interviews with representatives of the identified institutions using a questionnaire developed by the technical supervision team at Purdue University. The analysis showed that most employers wanted university graduates and technicians, especially in animal science, agricultural machinery, and rural economics. In addition, most employers expressed a particular interest in graduates with strong skills in agricultural production, oral and written communication, and a willingness to work in rural areas. However, current and potential employers were heterogeneous. Employers often need specific technical skills and expertise relevant to their industry. In conclusion, field trips and internships were suggested to help students develop those particular technical skills (Ouraich et al., 2017).

According to the study by Watson et al. (2019), the University of Florida (UF) Agricultural Operations Management (AOM) Task Force in the Department of Agriculture Science and Biological Engineering (ABE) was formed with the overall goal

of enriching the AOM program through curriculum enhancement, course revisions, and program of study development. Through alumni, faculty, and employer feedback, the AOM Task Force identified skills and knowledge necessary for future AOM graduates to thrive. They surveyed 438 alumni, interviewed 38 ABE faculty members, and interviewed five industry representatives. Information was collected from surveys and phone discussions with industry stakeholders. In addition, the AOM Task Force hosted phone discussions with five representatives from several agricultural sectors that employ individuals with skillsets common to AOM graduates. This group was named the UF AOM Industry Think Group. In the results section, excerpts from the qualitative responses were provided. Responses from the alumni and faculty survey and the industry think group discussions provided valuable insights for overall curriculum enhancement, new course offerings, and general student counseling. Alumni and faculty identified computers and software as the most important topic for future AOM graduates. From the findings, alumni indicated that the AOM program prepared them in several areas, particularly effective communication, working effectively in teams, functioning independently, and thinking analytically. Although alumni and faculty agreed on the importance of exceptional skills, there were statistical differences in the perceived importance of decision-making and flexibility.

According to the industry think tank, communication and other people skills are crucial to the employability of AOM graduates. These findings led to changes in several AOM courses, including adding assignments emphasizing communication, decision-

making, and interpersonal communication skills and modifying courses to include more computer skills (e.g., geographic information system software, spreadsheet software). The paper also noted limitations given the lack of diversity in a male and Caucasian program. It was not surprising to find out that this was a shortcoming of the program. The consensus among alumni is that student preparation to identify moral and ethical issues needs to be revised, presenting opportunities for further development in the program. Many faculty members included topics on ethics and morals, and the first-year graduate course was developed, focusing on ethics (e.g., research, data collection, privacy, dissemination, and policy).

Schneider and Niederjohn (1995) surveyed the Department of Electrical and Computer Engineering's graduating seniors and alumni from 1992, 1988, 1984, and 1980. In the spring of 1995, these surveys were distributed to alumni from 1993, 1989, 1985, and 1981 and students enrolled in senior engineering design courses. There were 60 questions about the available facilities and other academic concerns on the prescribed electrical engineering questionnaire for the graduate survey. The survey found that 69.7% recommended that the design process could be increased, 69.2% recommended an increased emphasis on business-related factors, and 69.2% recommended increased electrical engineering laboratory work.

Furthermore, 65.1% of their alumni recommended that the current emphasis on electrical engineering coursework (non-laboratory) remain the same, while 30.1%

recommended or strongly recommended increasing the coursework. The information collected from the surveys about curricular issues led to immediate action on the department's part. In the paper, graduates and alumni expressed a desire to emphasize laboratory work, which was communicated to the undergraduate committee. The committee wants to increase this emphasis by increasing the hours devoted to formal laboratory work in their curriculum, including some first-year laboratories. Additionally, the author discussed how alumni research would be a continuous way to improve their institutional system (Schneider & Niederjohn, 1995).

Hoey & Gardner (1999) informed us that in an era when institutions are under increasing pressure to live a more contemplative life, finding valid and reliable institutional performance indicators has never been more critical. North Carolina State University has been conducting alumni and employer surveys since 1993. The survey was designed to measure similarities between undergraduate academic preparation and the world of work and assess the extent of agreement between various rates. A program of alums, employers, and graduating seniors' survey research was developed through a highly participatory process at North Carolina State University. Fifty-nine faculty members and academic administrators attended a morning of faculty focus groups to identify overall issues, topics of interest, and methodological concerns.

Using focus group findings, researchers in University Planning and Analysis (UPA) created and tested several survey instruments, then used them to complete a

questionnaire for graduating seniors and alumni. The alumni included questions about technical skills, communication skills, workplace skills, and professional traits and attitudes. The instruments also asked questions about current employment, further education status, and suggestions for improvement. The institution surveyed baccalaureate degree recipients who graduated between December 1990 and August 1993 to produce a sample of 7,491 alumni. The alumni survey results were disseminated to the campus community, including reports to administrators, deans, associate deans, department heads, and unit heads. The North Carolina State University (NCSU) survey research program was evaluated based on how well it enabled units to assess their performance, realign, change, or improve performance, and use information from external sources to maintain and improve their programs. Alumni and employer surveys were most helpful in determining essential program and service features. They were also valuable in developing or revising strategic plans. Survey results were used to realign, change, or improve department units in three ways: curriculum revision, student advising, and improving planning processes, including planning for re-accreditation. NCSU incorporates alumni and employer survey data into its strategic and action plans. It uses the information to create new courses, curricula, and services (Hoey & Gardner, 1999).

Hudson (1989) completed a study of Stephen F. Austin State University (SFASU) Department of Agriculture graduates from Spring 1981 to Spring 1988. The study used demographic information to pinpoint tendencies that could help with curriculum improvement and change. The study's objectives included determining graduates'

employment status and salary ranges, determining how specific curriculum areas affected graduates' success, and determining how student organizations were perceived to affect graduates' success. The study was conducted as a descriptive survey with a random sample of all the agriculture majors who completed degrees at SFASU between 1981 and 1988. This study used departmental graduation records to determine the number and names of graduates. Three hundred and twenty graduates were identified as program completers between the Spring of 1981 and the Fall of 1988. The study population, which consisted of 175 graduates, was determined using a table of random numbers. Follow-up questionnaires were mailed to a random sample of graduates chosen for the study, and 114 usable survey instruments were returned, representing a 65% response rate. The data collected in the survey were reported and analyzed using descriptive and inferential statistics. The study results revealed the gender ratio of the study population. Descriptive and inferential statistics were used to report and analyze the data collected in the study. Study results gave insight into the gender ratio of the study population: 72.3% of the respondents were males, and 27.7% were females. The result of the study indicates that about 60.0% of graduates were employed in a job related to their majors. The respondent stated that the agriculture curriculum was well-rounded but needed more field experiences and information on real-job market-oriented lectures, sections, and laboratories. The perceived weaknesses were the insufficient placement opportunities and the agriculture business faculty needing more members to complement the existing programs. Hudson (1989) recommends that the research be repeated every ten years.

In 2003, Vardeman studied the Department of Agriculture (SFASU) graduates from 1995 to 2001. According to Vardeman (2003), a follow-up study of graduates from the Department of Agriculture is a valuable tool for staying up-to-date on needed changes to university curricula. The study aimed to assess and evaluate the perspectives of SFASU graduates who graduated between 1995 and 2001. The study was meant to facilitate short- and long-range curriculum planning. The study was conducted using descriptive survey research; the researcher modified an existing survey instrument to address the study's objectives.

A total of 333 alumni were selected to receive the survey. One hundred fifty-four surveys were completed, with a response rate of 56.4%. The survey instrument was mailed to each member of the population with a cover letter attached to explain the importance of the study and assure respondents of confidentiality, along with a self-addressed return envelope accompanying each instrument. Data analysis was done using descriptive statistics. The research shows that 62% of respondents were male and 38% were female. The result gave insight into the employment status of alums: 25.5% of the graduates were in management positions. The USDA report supported the data describing career opportunities for agriculture graduates between 2000 and 2005. The research shows that agronomy and agriculture development were the two most prosperous areas in which graduates were employed. The professor-to-student ratio, followed by faculty, was the most common response to how people perceived the department's strength. Facilities were noted as giving students the ability to have hands-on experiences, leading to a more

beneficial learning environment. The alumni mentioned that courses, departmental technologies, up-to-date facilities, and career placement for graduates were perceived as departmental weaknesses. D'Andrea (2010) studied graduates of the Department of Agriculture at SFASU to assess the quality of their educational experiences and provide input into developing innovative programs. According to the survey results, respondents were classified according to their ethnic background, high school, grade point average, and highest degree earned. A web-based survey developed from an older paper-based survey measured the perceived importance of various components of the overall curriculum within the Department of Agriculture at SFASU. A survey preview was created and piloted with current students in the Department of Agriculture. The study population consisted of all undergraduate and graduate students from Spring 2002 to Spring 2010 in the Department of Agriculture at Stephen F. Austin State University. A total of 252 alumni with verifiable email addresses were identified. The sampled graduates from the Department of Agriculture were emailed the survey instrument.

The collected data were analyzed using descriptive statistics, categorized into open-ended responses, and arranged in spreadsheets. Developing quality programs requires the department to focus on a specific mission and regularly evaluate its products. For short- and long-term curriculum planning, this survey assessed alumni opinions. Between 2002 and 2010, demographic data from Department of Agriculture graduates revealed that 43.3% of survey respondents were male and 57.0% were female. Eighty-five percent of survey respondents were involved in a departmental student organization

at some level, and 26 percent had little-to-no involvement. According to the study, 78.4% of respondents have had one or two full-time jobs since graduation, and approximately 55% found the ideal opportunity within one month of, if not before, graduation. Most respondents' first job after graduation was in education (16%), a technician position (14.7%), or management (13.5%). More than half of those polled had personal contact within the companies they work for, and 51% believe they are currently using their agriculture degrees and working as trained employees. The lowest salary range for respondents was under $30,000, which was 30.2% of respondents. There were 28.4% of alumni in the $31,000 to $40,000 salary range and 22.2% in the $41,000 to $50,000 salary range. About 3.7% have a salary of $91,000 or more.

Based on respondents' ratings of the perceived importance of identified curricular areas within the Department of Agriculture at SFASU, a ten-point Likert-type scale, with one being of no benefit and 10 being extremely beneficial, was used to rate the perceived importance of coursework. The study reported that leadership and development coursework had the highest average and was the most beneficial area of curricular development, receiving a score of 7.38 from alums. The average grade for animal science coursework was 7.34, and the average for internship experience was 7.12. Job search assistance and SFASU career services received the lowest average ranking, with a 3.63 grade on average. According to respondents, the arboretum and gardens, poultry research facilities, and greenhouse facilities received the highest ratings for perceived quality within the Department of Agriculture. Each facility had an average ranking of 8.58, 8.31,

and 8.00, respectively. The lowest facilities were agriculture mechanics and the sheep and goat center. These facilities had an average ranking order of 5.25 and 5.79, respectively (D'Andrea, 2010).

D'Andrea (2010) states that internship experience improves college graduates' employability. The most beneficial areas of curricular development were animal science coursework and internship experiences, and the department should continue to emphasize the importance of these areas. The faculty was the most frequently mentioned response to the department's perceived strengths, followed by the department's small size. The department's top-perceived weakness was its facilities. Most responses focused on agricultural mechanical facilities rather than general departmental facilities. Facilities for agricultural mechanics and course options related to their specializations could be improved. This further emphasized the need to ensure that alumni are provided with an academic program of the highest quality; alumni surveys offer the chance to revise curriculum requirements and evaluate the majors offered and future curriculum improvement. Monitoring programs are crucial to improving curriculums by analyzing alumni perceptions and academic experiences.

Chapter III

Methods and Procedures

A web-based survey was developed to measure the perceptions of alumni who received a degree from the Department of Agriculture at Stephen F. Austin State University (SFASU) between the Fall 2010 and Spring 2022. The web-based survey was created to include closed-ended and open-ended questions to collect individual opinions using Qualtrics Survey Software. Also, a 10-point and a 3-point Likert-type index were used to measure the perceived importance of various components of the departmental curriculum. The survey was divided into five segments, including 1) demographic data; 2) college information; 3) career information; 4) academic experience; and 5) individual opinions concerning the perceived strengths and weaknesses of the department.

The demographic data included gender and ethnic background, and the college information included questions on major, internship experience, company or agency alumni interned at, year of graduation, highest degree earned, and choice of choosing agriculture again as a major. Career information included questions on the number of full-time jobs held since graduation, duration to get employed, first professional job, current job title, job relation to undergraduate field, current job tenure, salary range, job-required skills, and if the current job requires a bachelor's degree. The college academic experience included a 10-point Likert-type scale for rating the facilities and coursework,

with one being severely lacking and ten being excellent, or NA for not applicable. The college experience was rated on a 3-point Likert-type scale, where one places less emphasis two the same, and three more emphasis on the listed item on undergraduate learning outcomes. The open-ended question included alumni opinions concerning the perceived strengths and weaknesses of the Department of Agriculture at SFASU.

Population

The study population included graduates who received a degree from the Department of Agriculture at SFASU between the Fall of 2010 and the Spring of 2022. Viable email addresses were gathered through the SFASU Alumni Association and the agriculture faculty graduates' databases for the web-based survey. Additionally, a Facebook page was used to share the survey link. The web-based survey was conducted using a convenience sampling method based on the methodology used to collect the data. The study sample included 145 alumni whose email addresses could be determined and alumni who used the link provided through the Facebook page. The first email was sent on February 3rd, 2023, and a follow-up email was sent on February 10th, 2023. The survey link to the survey instruments was posted on the department’s Facebook page in December 2022, along with content explaining the study's goal, the significance of their participation, and a guarantee of anonymity at the outset of the survey instrument.

The link to Qualtrics Survey Software was re-shared on the platform after two weeks. Data collection lasted 53 days (about one month and three weeks) before the

survey instrument was closed in the third week of February 2023, with a total response of 226 respondents.

Data Analysis

Using Qualtrics Survey Software and the Statistical Package for the Social Sciences (SPSS) survey administration software, various descriptive statistics were applied to the objective data. Frequency means and percentages were utilized to present and clarify the analyzed the results effectively. Cramér's V is an effect size (ES) measurement for the chi-square test of independence. It measures how strongly two categorical fields are associated; $ES \leq 0.2$ means the result is weak. Although the result is statistically significant, the fields are only weakly associated. The result is moderate between $0.2 < ES \leq 0.6$, and the result is strong between $ES > 0.6$. The first objective analysis was of respondent demographic data and college information, with variables including gender, ethnic background, respondent major, graduation year, internship participation, and highest degree obtained. SPSS was used to analyze the nominal measure using descriptive statistics and frequencies. Using descriptive statistics (crosstab) and Cramer's V, the relationship between the respondents' major and their choice to major in agriculture was again determined. Choosing agriculture as a major again was the dependent variable, and the independent variable was major. The second objective involved interval scale measurement. The variables included the number of jobs held since graduation, the duration required to obtain employment, salary ranges, and the current employment status, a nominal measurement. The type of analysis employed was

descriptive frequency statistics. The current jobs of the respondents were recoded, categorized, and analyzed based on the categories of jobs. The third objective was determining what former students at SFASU thought of the agriculture classes, programs, and extracurricular activities they participated in while attending the university. On a 10-point Likert-type scale, the facilities, curriculum, and services were evaluated. The perceived value of the college experience was rated on a 3-point Likert-type scale, with one representing less emphasis, two representing the same level of importance, and three representing greater emphasis. The results were analyzed by characterizing and summarizing the data meaningfully and calculating the mean and standard deviation. With short, open-ended responses from respondents regarding their perceptions of the department's strengths and weaknesses, the qualitative data were recoded meticulously and then coded with care to sort and classify them. They were compiled in Word documents and coded so that each data item could be placed in the appropriate category based on the concept in conjunction with the results of a previous survey conducted by D'Andre in 2010, thereby enabling a comprehensive evaluation and discussion of the findings.

Analysis and Presentation of the Data Results

Seven hundred and eight graduates received a degree from the Department of Agriculture at SFASU between the Fall of 2010 and the Spring of 2022. Two hundred and twenty-six respondents completed the survey, producing a 32.0% response rate. Two hundred and nine respondent surveys were used for data analysis, with 17 eliminated due

to a low number of completed responses to their survey questions and responses from alumni before 2010, which were outside the study population.

Chapter IV

Analysis of Objective 1

The first goal of this study was to describe the demographic data and college information of Department of Agriculture alumni between Fall 2010 and Spring 2022. Using Qualtrics for survey administration and the Statistical Package for the Social Sciences (SPSS) for analysis, 29.3% (n = 60) of the survey respondents were male, 69.8% (n = 143) were female, and 1.0% were other (n = 2). A majority (88.2%, n = 181) were Caucasian, followed by Hispanic (5.9%, n = 12), African American (3.4%, n = 7), other races (2.0%, n = 3), and Asian (0.5%, n = 1). Respondents were asked to state their undergraduate major. The percentage of Department of Agriculture graduates from each major who took part in the survey is shown in Figure 1. Animal Science graduates had the highest total response (29.8%, n = 59), followed by Agricultural Development/Education (25.8%, n = 51). Agricultural Development (non-teaching) and General Agriculture had the least respondent response (1.0%, n = 2). Graduate students were 1.5% (n = 3) of the respondents (Figure 1).

Figure 1

Respondent Major

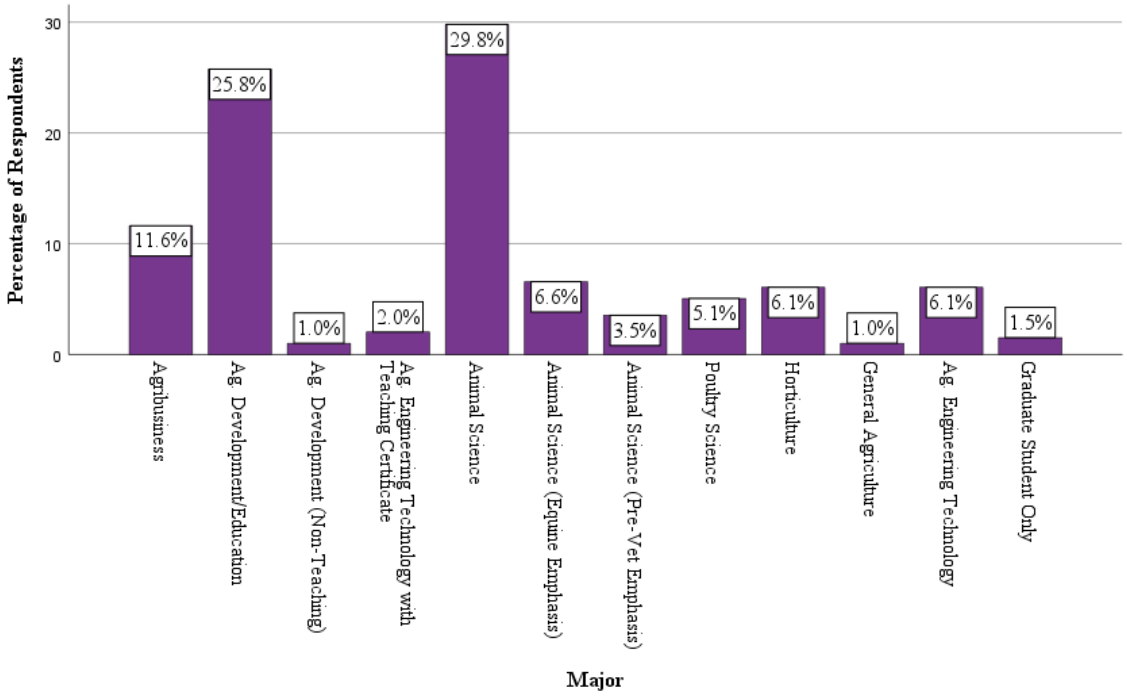
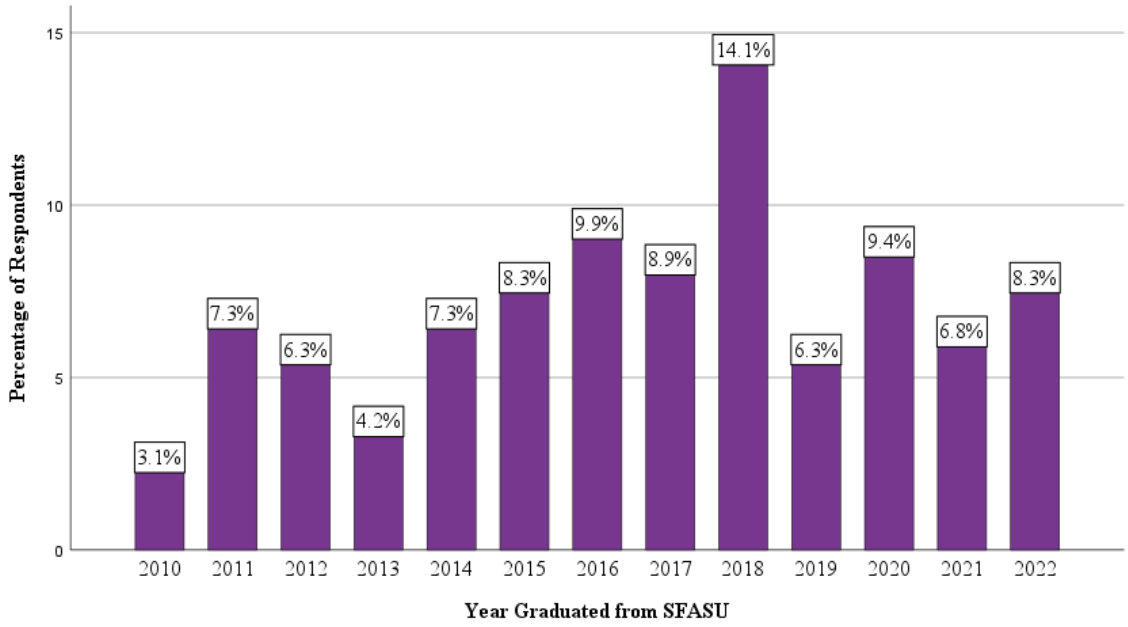


Figure 2 depicts the year respondents received their bachelor's degree. Graduates from 2018 had the highest percentage (14.1%, n = 27) of responses, and respondents from 2010 had the lowest rate (3.1%, n = 6). Figure 2 depicts a comprehensive overview.

Figure 2

Percentage of Respondents by Year Graduated



The percentage of respondents who participated in internships during their college careers was 31.3% (n = 61), while 68.7% (n = 134) said they did not participate in internships. Respondents who participated in an internship were asked to state the company or agency with which they conducted their training. Table 1 shows the companies and agencies listed in alphabetical order.

Table 1

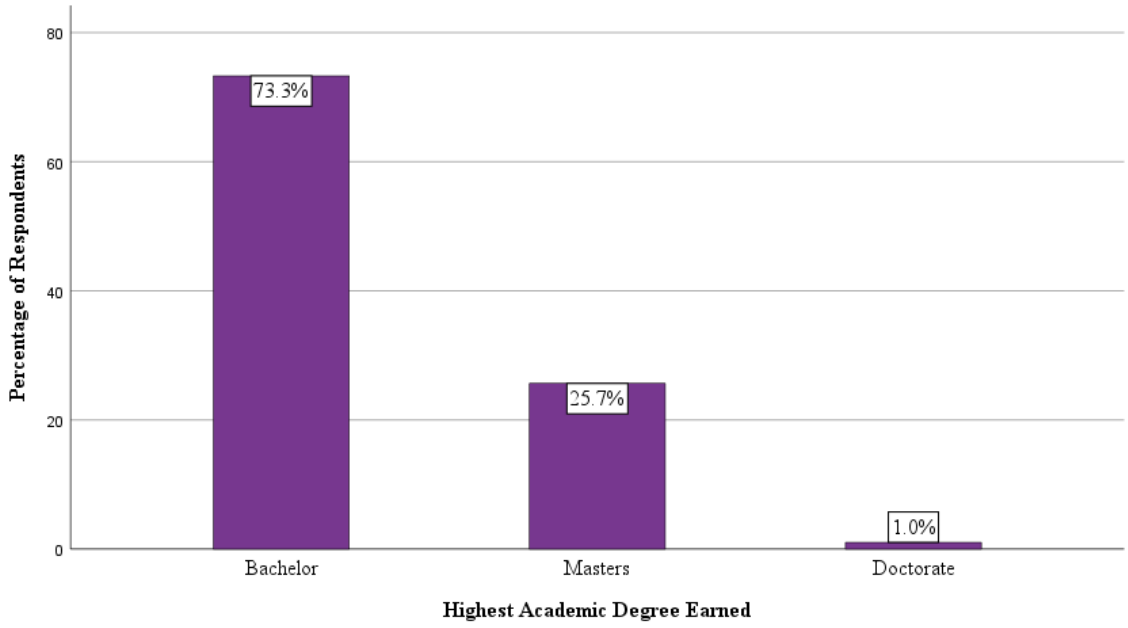
Internship Sites

Internship	Number of Respondents
14th Street Veterinary Clinic	1
American Brahman Breeders Association	1
At Lufkin HS	1
Augustus Ranch	1
Cal-Maine Foods, Inc.	1
Central Heights High School	3
Cobb Vantress Inc	2
Corsicana ISD	1
Cypress Ranch high school	1
Diboll ISD	1
Disney, Moore Farms, OGG	1
Don Rogers cutting horses	1
Douglas ISD	1
Garrison ISD	2
Hidden Oaks Cattle	1
High roller whitetails	1
Hoffman Nursery	1
Internship within school	1
John Deere	1
La Copa Cattle Company	1
Martinsville ISD	2
McQuay Stables	1
Mrs. Emily Payne	1
Mt Enterprise ISD	1
Nacogdoches High School	2
Nolan Ryan Beef	1
Ovagenix	1
Pilgrim's Pride	3
Pinewoods Vet Clinic	2
Poteet Cattle Company	1
Purina Animal Nutrition	1
Rembrandt foods	1
Riata Cattle Company	1
Sanderson Farms	2
School	1
Scott Arboretum in PA	1
Spurger ISD	1
The Arbor Gate	1
Tom McCutcheon Reining	1
Tyson Foods	2
Woden ISD	1
Yara Crop Science	1
Total	53

Figure 3 displays the highest level of education that respondents had. A total of 73.3% (n = 140) had bachelor's degrees, 25.7% (n = 49) had master's degrees, and 1% (n = 2) had doctorates.

Figure 3

Highest Academic Degree Earned by Respondents



Based on the survey question of whether they would choose an agriculture major if given another chance, approximately 61.8% of respondents agreed they would choose an agriculture major, 22.0% agreed but would choose a different specialization within agriculture, approximately 8.9% said they were uncertain, and 7.3% of the total respondents disagree.

The results were further analyzed by the major using descriptive crosstab (Cramer's V) statistics (Table 2). The results showed that Agribusiness, Animal Science, Poultry Science, Animal Science (pre-vet), and General Agriculture had a percentage below the total average of responses (61.8%) of respondents who agreed to choose agriculture again as a major. Agricultural Engineering Technology with a Teaching Certificate, Animal Science, Animal Science (equine emphasis), Poultry Science , and Animal Science (pre-vet), had a percentage above the total average (22.0%) of respondents that agree but would choose a different specialization. Cramer's V measures the strength of association between the respondent's major and their responses to choosing agriculture again as a major. Cramer's V of 0.2 indicates a weak association between the two variables.

Table 2

Would Choose Agriculture again by Major

Choose Major	AGBS[z]	AGDP[y]	AGDP[x] (non-teaching)	AGET[w] (teaching)	ANSC[v]	EQUS[u]
			%			
Agree	54.5	64.6	100.0	75.0	53.4	69.2
Uncertain	18.2	10.4	0.0	0.0	10.3	7.7
Disagree	9.1	6.3	0.0	0.0	12.1	0.0
Agree, Different Specialization	18.2	18.8	0.0	25.0	24.1	23.1
Total	100.0	100.0	100.	100.0	100.0	100.0

Table 2 Continued

Choose Major	POSC[t]	PVET[s]	AGHR[r]	General Agriculture	AGET[s]	Graduate Student
			%			
Agree	44.4	57.1	72.7	50.0	83.3	100.0
Uncertain	0.0	0.0	9.10	0.0	0.0	0.0
Disagree	0.0	14.3	9.10	0.0	0.0	0.0
Agree, Different Specialization	55.6	28.6	9.1	50.0	16.7	0.0
Total	100.	100.	100.	100.0	100.	100.0

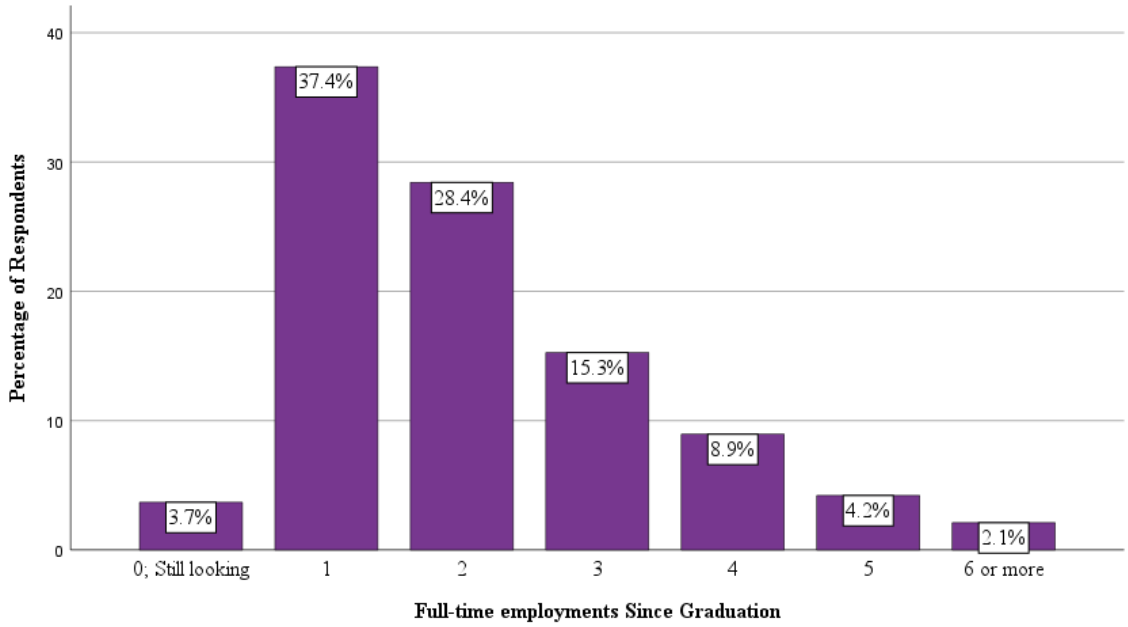
[z]AGBS = Agribussiness,
[y]AGDP = Agricultural Development/Education,
[w]AGET = Agricultural Engineering Technology with a Teaching Certificate,
[v]ANSC = Animal Science,
[u]EQUS = Animal Science (equine emphasis),
[t]POSC = Poultry Science
[s]PVET = Animal Science (pre-vet emphasis),
[r]AGHR = Horticulture

Analysis of Objective II

Objective II aimed to compare alumni employment status and salary ranges and identify alumni employment fields. Figure 4 depicts the full-time jobs held by respondents since graduation. Most respondents (37.4%; n = 71) said they had only worked one job since graduation. The lowest reported percentage was 2.1% (n = 4) among those who had held six or more jobs since graduation. Approximately 3.7% (n = 7) of respondents said they were still looking for work. About 65.8% (n = 125) of respondents had held one or two jobs since graduation, and the median number of full-time jobs held by respondents since graduation is two and the mode is one.

Figure 4

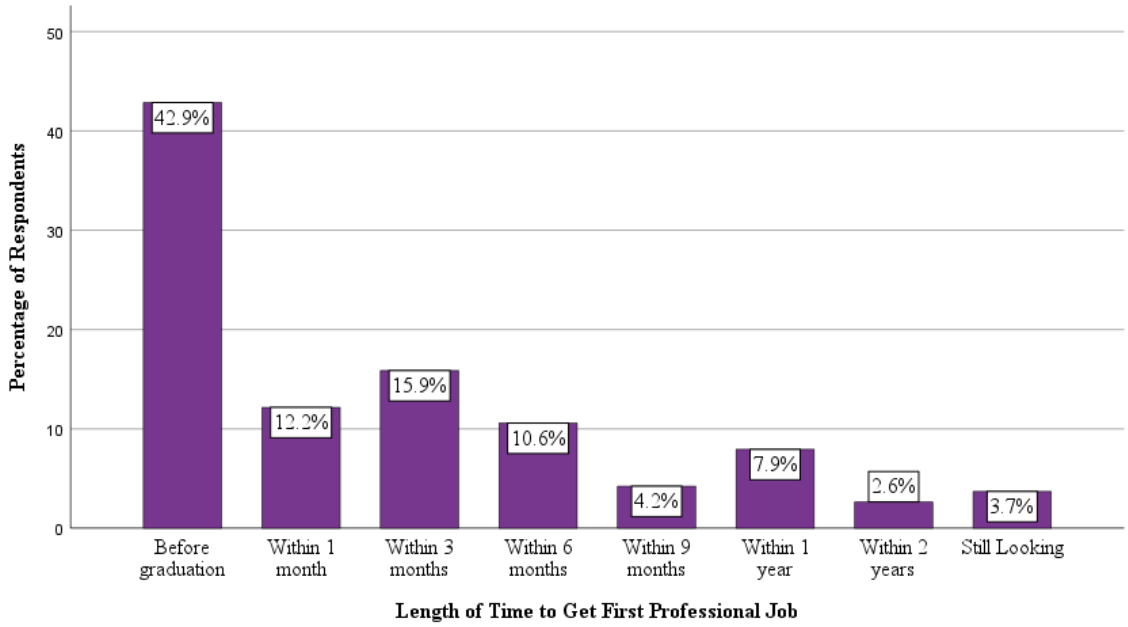
Number of Full-time Employment Since Graduation



Respondents were asked in the survey how long it took them to get the professional job they wanted after graduation (Figure 5). Most respondents (42.9%; n = 81) obtained their desired position before graduation. Within three months of graduation, only 15.9% (n = 30) of respondents found a professional career of their choice. At the same time, the lowest recorded percentage was 2.6% (n = 5) of respondents who found a professional career of their choice within two years of graduation. Approximately 3.7% (n = 7) are still seeking their desired professional job. The result indicates that 81.5% (n = 154) of respondents secured a job within six months of graduation and 93.7% (n = 177) within a year of graduation.

Figure 5

Length of Time Taken for The Respondent to Obtain a Professional Job



A description of the respondent's first professional job after graduation can be found in Table 3. Job titles were analyzed and categorized according to job type. According to Table 3, about a third (33.7%, n = 55) started teaching after graduation, and about 66.0% (n = 102) had other job titles besides education or teaching. The percentage of each job role is shown in Table 3.

Table 3

Respondent's First Professional Job

Employment Title	Percentage of Respondents
Education / Teacher	33.7
Management	18.4
Agriculture / Animal Care	14.7
Health Care / Veterinary	6.7
Sales / Marketing	6.1
Technical	6.1
Graduate Assistant	5.5
Administrative / Support	4.9
Accounting and Finance	1.8
Crew Leader	0.6
Trainee	0.6
Still looking	0.6
Total	100.0

Table 4 displays the current job titles of survey respondents. Job titles were classified and grouped according to job type. About 26.2% (n = 55) of respondents work within the education profession, and 73.4% (n = 102) have other job titles besides education or teaching.

Table 4

Respondent's Current Professional Job

Employment Title	Percentage of Respondents
Education/Teaching	26.2
Management	18.0
Administrative Roles	7.0
Technical	9.0
Sales and Marketing	4.5
Plant and Animal Care Welfare	4.5
Administrative Assistant	2.5
Stay-at-Home Mom	2.4
Students	2.0
Health Care	2.0
Missing	25.8
Total	100.0

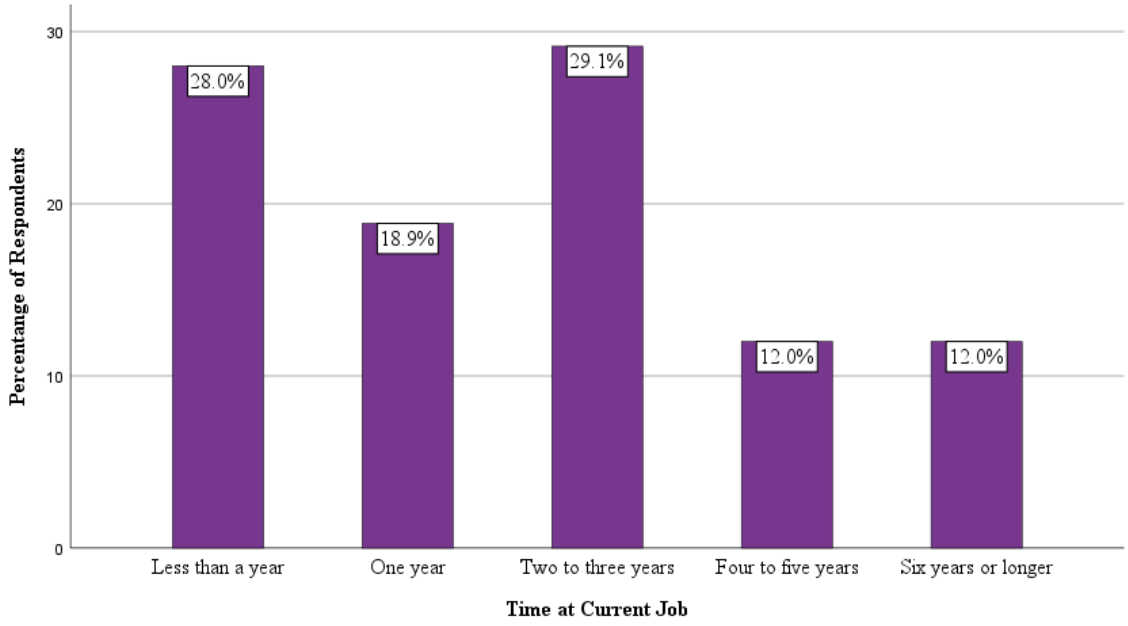
Based on the respondents' fields of study and current jobs, approximately 44.0% (n = 77) stated that their current job "directly relates" to their field of study, 29.0% (n = 51) said that their current job is "somewhat related," and 27.3% (n = 48) stated that their current job has "nothing to do" with their field of study.

Respondents' responses to the survey question about how long they have been working in their current position are shown in Figure 6. About 28.0% (n = 50) have been in their current job for less than a year. Two to three years had the most respondents, with

29.1% (n = 51), and the respondent median was within two to three years. A total of 24% (n = 42) have been in their current job for four to six years or longer.

Figure 6

Length of Tenure with Current Job Position



Using descriptive crosstab statistics, the data was further analyzed by major. The results showed that respondents with less than a year at their current job by major were Animal Science (pre-vet emphasis) (57.1%, n = 4), General Agriculture (50.0%, n = 1), Animal Science (equine emphasis) (45.5%, n = 5), Graduate Students (33.3%, n = 1), Poultry Science (33.3%, n = 3), Agribusiness (31.6%, n = 6), Agricultural Engineering Technology (27.3%, n = 3), Agricultural Development/Education (26.7%, n = 12), Animal Science (24.1%, n = 13), and Horticulture (11.1%, n = 1), Agricultural

Development (non-teaching), and Agricultural Engineering Technology with Teaching Certificate had the same result (0.0%, n = 0).

Respondents with one year's length at their current job by major were: Agricultural Development (non-teaching) (50.0%, n = 1), Agricultural Engineering Technology (45.5%, n = 5), Horticulture 44.4% (n = 4), Animal Science (22.2%, n = 12), and Animal Science (equine emphasis) (18.2%, n = 2), Animal Science (pre-vet emphasis) (14.3%, n = 1), Poultry Science (11.1%, n = 1), Agricultural Development/Education (11.1%, n = 5), Agribusiness (10.5%, n = 2), Agricultural Engineering Technology with Teaching Certificate, General Agriculture, and Graduate Students all had the same result (0.0%, n = 0).

Respondents with two to three years longer at their current job by major were: Agricultural Development (non-teaching) (50.0%, n = 1), General Agriculture (50.0%, n = 1), Agribusiness (36.8%, n = 7), Agricultural Engineering Technology with Teaching Certificate (33.3%, n = 1), Horticulture (33.3%, n = 3), Graduate Students (33.3%, n = 1), Animal Science (29.6%, n = 16), Agricultural Development/Education (28.9%, n = 13), Animal Science (pre-vet emphasis) (28.6%, n = 2), Poultry Science (22.2%, n = 2), Agricultural Engineering Technology (18.2%, n = 2), and Animal Science (equine emphasis) (18.2%, n = 2).

Respondents with four to five years' length at their current job by major were Agricultural Engineering Technology with a Teaching Certificate (66.7%, n = 2), Graduate students (33.3%, n = 1), Animal Science (16.7%, n = 9), Agricultural

Development/Education (11.1%, n = 5), Horticulture (11.1%, n = 1), Animal Science (Equine Emphasis) (9.1%, n = 1), Agribusiness, Agricultural Development (non-teaching), Animal Science (pre-vet emphasis), Poultry Science, General Agriculture, and Agricultural Engineering Technology all had the same result (0.0%, n = 0).

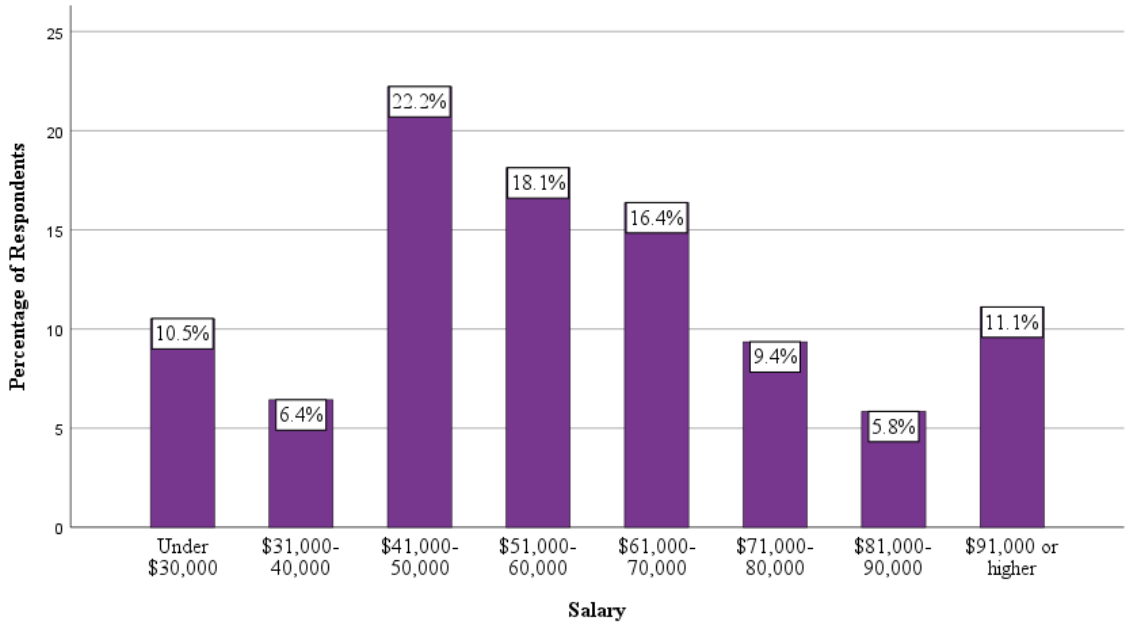
Respondents with six years or longer at their current job by major were: Poultry Science (33.3%, n = 3), Agricultural Development/Education (22.2%, n = 10), Agribusiness (10.5%, n = 2), Animal Science (equine emphasis) (9.1%, n = 1), Agricultural Engineering Technology (9.1%, n = 1), Animal Science (7.4%, n = 4), Agricultural Development (non-teaching), Agricultural Engineering Technology with Teaching Certificate, Animal Science (pre-vet emphasis), General Agriculture, Horticulture, and Graduate Students all had the same result (0.0%, n = 0).

Figure 7 shows the current salary ranges of respondents. According to the result, the median salary range of respondents is between $51,000 to $60,000. Most respondents (22.2%, n = 39) earn between $41,000 to $50,000. The lowest percentage of respondents, 6.4% (n = 11), earn between $31,000 to $40,000 annually (Figure 7). Further analysis of respondents' salaries by major showed the cumulative average of respondent salaries. Poultry Science and Agricultural Engineering Technology respondents had median salaries of $71,000 to $80,000. Agribusiness, Agricultural Development (non-teaching), and Animal Science respondents had a median salary range of $61,000 to 70,000. Agricultural Development/Education, Agricultural Engineering Technology with a Teaching Certificate, and Horticulture respondents had a median salary range of $51,000

to $60,000. Animal Science (pre-vet emphasis) and Graduate Students respondents had a median salary range of $41,000 to $50,000. Animal Science (equine emphasis) and General Agriculture respondents had a median salary range of $31,000 to $40,000.

Figure 7

Current Salary Ranges of Respondents



The participant's responses to whether they were employed as trained showed that 48.8% (n = 102) of respondents believed they are currently using their agriculture degree in their current career. Approximately 23.4% (n = 49) of respondents believe that their degree is not required but is beneficial, and about 18.7% had no response to the question. The remaining 9.2% (n = 19) believed they were not being employed as trained and using their agriculture degree.

The results were further analyzed by major using descriptive crosstab statistics. Respondents that believed they were currently using their agriculture degree in their current career by major were: Agricultural Development (non-teaching) (100.0%, n = 2), Graduate students (100.0%, n = 3), Agricultural Engineering Technology with a Teaching Certificate (75.0%, n = 3), Agricultural Development/Education (68.6%, n = 35), Animal Science (50.8%, n = 30), Poultry Science (50.0%, n = 5), Agribusiness (43.5%, n = 10), Animal Science (equine emphasis) (38.5%, n = 5), Agricultural Engineering Technology (33.3%, n = 4), Animal Science (pre-vet emphasis) (28.6%, n = 2), Horticulture (25.0%, n = 3), and General Agriculture (0.0%, n = 0).

Respondents who believed that their degree is not required but is beneficial by major were General Agriculture (100.0%, n = 2), Animal Science (pre-vet emphasis) (42.9%, n = 2), Poultry Science (40.0%, n = 4), Agribusiness (34.8%, n = 8), Agricultural Engineering Technology (33.3%, n = 4), Horticulture (33.3%, n = 4), Animal Science (25.4%, n = 15), Animal Science (equine emphasis) (15.4%, n = 2), Agricultural Development/Education (13.7%, n = 7), Agricultural Development (non-teaching), Agricultural Engineering Technology with Teaching Certificate, and Graduate students all had the same result (0.0%, n = 0).

Respondents who believed they were not being employed as trained and using their agriculture degree by major were: Animal Science (equine emphasis) (30.8%, n = 13), Animal Science (pre-vet emphasis) (28.6%, n = 2), Agricultural Engineering Technology (25.0%, n = 3), Animal Science (13.6%, n = 8), Agribusiness (4.3%, n = 1),

Agricultural Development/Education (2.0%, n = 1), Agricultural Development (non-teaching), Agricultural Engineering Technology with a Teaching Certificate, Graduate Students, Horticulture, Poultry Science, and General Agriculture all had the same result (0.0%, n = 0).

Analysis of Objective III

The third objective was to describe former students' opinions about the agriculture courses, programs, and extracurricular activities they participated in while attending SFASU. Respondents were asked to rate the facilities, coursework, and overall experience with the Department of Agriculture (SFASU). The perceived value of the college experience, the facilities, the coursework, and the services were rated on a 10-point Likert-type scale, with one representing no benefit and ten representing extremely beneficial. The means range between 4.71 and 7.96; four means fall between 7.00 and 7.99; three means fall between 6.00 and 6.24; and three are below 6.00, indicating that all the facilities contribute significantly to the alumni college experience. They are shown in descending order by item number (Table 5). The area receiving the highest average rating was poultry research facilities or labs (M = 7.96), and the lowest was sheep and goat facilities or labs (M = 4.71). The poultry research facilities and the lab have the lowest standard deviation (SD = 1.92), indicating high consistency. The agricultural mechanic's facilities and lab have the highest standard deviation (SD = 2.56). The grand mean for all items is 6.47 (SD = 1.73), and the range is 9 (Table 5).

Table 5

Ratings of Department of Agriculture Facilities

Agricultural Facilities	N	Minimum	Maximum	Mean	Std. Deviation
Poultry Research Facilities/Lab	143	1	10	7.96	1.928
Horticulture and Greenhouse Facilities Lab	152	1	10	7.74	1.918
Beef Facilities/Lab	137	1	10	7.56	2.054
Equine Facilities/Lab	102	1	10	7.09	2.162
Soil Science Facilities/Lab	158	1	10	6.61	2.176
Computer Facilities/Lab	161	1	10	6.29	2.326
Swine Facilities/Lab	130	1	10	6.24	2.449
Ag Building/Classrooms	173	1	10	5.61	2.468
Ag Mechanics Facilities/Lab	146	1	10	4.90	2.564
Sheep and Goat Facilities/Lab	115	1	10	4.71	2.502

As shown in Table 6, respondents were asked if SFASU should have placed less, the same, or more emphasis on the following undergraduate learning outcomes: All items have a minimum of one and a maximum of three, with one representing less, two representing the same, and three representing more emphasis. The mean value of all rated learning outcomes falls between 2.20 and 2.47. This mean rating indicated that respondents wanted more emphasis on all the rated college experiences listed. Working with people with different abilities, interests, and perspectives was rated the highest (M = 2.47). The college experience centered around professional and ethical standards has the lowest standard deviation (SD = 0.49), indicating the data points tend to be close to the

data set's mean. College experiences regarding broad general education have the highest standard deviation (SD = 0.603), which indicates a wider range of values. The grand mean for all items is 2.34 (Table 6).

Table 6

Perceived Benefits of College Academic Experience

Academic Experience	N	Minimum	Maximum	Mean	Std. Deviation
Working with people that have other abilities, interests, and perspectives	169	1	3	2.47	.512
Improving oral communication skills	169	1	3	2.43	.508
Improving graphic and technological communication skills	167	1	3	2.40	.560
Professional and ethical standards	169	1	3	2.35	.490
Improving written communication skills	169	1	3	2.28	.514
Developing personal values	169	1	3	2.27	.532
Gaining a broad general education about different fields of knowledge	169	1	3	2.20	.603

Based on the survey question about the perceived benefits of academic curriculum and experience to respondents at SFASU, all items have a minimum of one and a maximum of ten, with one representing no benefit and ten representing extremely beneficial. The means ranged between 5.01 and 8.21, three were between 8.08 and 8.21, seven were between 6.08 and 7.46, and four were below 5.94. According to the data, the most perceived beneficial experience is the internship experience (M = 8.21, SD = 2.60),

and the least perceived beneficial experience is the SFASU Career Service (M = 5.01, SD = 3.64) (Table 7).

Further analysis of the perceived benefits of the academic curriculum and experience by major using the post hoc tests Animal Science (pre-vet emphasis) majors rated the Pre-Vet coursework with a mean of 10.0; the Horticulture respondents major rated the Horticulture coursework with a mean of 9.75; the Agricultural Development/Education majors rated Agricultural Development/ Agricultural Education coursework with a mean of 9.26; the Poultry Science major rated the Poultry Science coursework with a mean of 9.67; the Agriculture Technology coursework was rated with a mean of 9.60 by the Agricultural Engineering major; the Animal Science major rated the Animal Science coursework with a mean of 8.97; the Animal Science (equine emphasis) majors rated the equine science coursework with a mean of 8.89; the Agribusiness majors rated agricultural economics coursework with a mean of 7.28; the graduate coursework was rated at a mean of 5.0 by graduate students. The grand mean for all items is 6.62 (SD = 1.74).

Table 7

Perceived Benefits of Academic Curriculum and Experience

Academic Curriculum and Experience	N	Minimum	Maximum	Mean	Std. Deviation
Internship experience	84	1	10	8.21	2.648
Animal Science coursework	159	1	10	8.18	2.324
Leadership Skill coursework	145	1	10	8.08	2.389
Involvement with clubs and organizations	134	1	10	7.46	2.867
Ag Development/Ag Education coursework	130	1	10	7.16	3.021
Poultry Science coursework	122	1	10	6.97	2.852
Library resources	142	1	10	6.56	2.766
Academic advising	160	1	10	6.45	2.954
Ag Engineering Technology coursework	136	1	10	6.38	2.721
Graduate Coursework	61	1	10	6.21	3.272
AARC (Assistance and Resource Center)	110	1	10	6.21	3.189
Horticulture coursework	148	1	10	6.08	3.150
Pre-vet coursework	85	1	10	5.94	3.289
Ag Economics coursework	162	1	10	5.87	2.760
Equine Science coursework	116	1	10	5.78	3.288
Soil and Agronomy coursework	162	1	10	5.19	3.039
Help in finding a job, SFASU Career Service	87	1	10	5.01	3.642

In accordance with the research methodology, respondents were asked to convey their perceptions of the department's strengths and weaknesses through an open-ended, short-answer format. Responses were analyzed and aggregated into groups of similar responses. Respondents were granted the option to identify more than one strength or weakness. The results of the data analysis have been presented in Table 8, which provides a comprehensive overview of the areas in which respondents perceived weaknesses within the department. To calculate the percentage of each stated weakness, the stated weakness was divided by the total number of responses multiplied by 100% to achieve the percentage of each stated weakness. About two items comprise about 60% of all responses. Notably, 38.7% (n = 45) of respondents identified facilities and resources needing improvement. The respondents noted that the agricultural mechanics and equine facilities are outdated and need renovation. In addition, 24.1% (n = 28) of respondents identified the curriculum and program offerings as a weakness requiring attention. Other areas of weakness were also identified by respondents, as detailed in Table 8.

Table 8

Perceived Weakness of the Department of Agriculture

Weakness of Department	Percentage of Respondents
Facilities and Resources	38.7
Curriculum and Program Offering	24.1
Faculty and Teaching Style	15.5
Job Opportunities and Preparations	12.9
Funding and Support	11.2
Outreach and Promotion	2.5
Research Opportunities	2.5
Total	100

Respondent responses on each strength stated were divided by the total number of responses multiplied by 100% to achieve the percentage of each strength stated below. Over a third (35.9%, n = 39) of respondents cited a positive relationship with professors as a significant departmental strength. About two items comprise about 60% of all responses. Furthermore, the modest size of the department was regarded as a strength (27.9%, n = 34). Approximately 12.9% (n = 15) of respondents identified both the quality of staff and hands-on learning as notable strengths. Additional areas of strength were also highlighted by respondents, as detailed in Table 9.

Table 9

Perceived Strength of the Department of Agriculture

Strength of Department	Percentage of Respondents
Relationship with Professors	35.9
Small Department Advantage	27.9
Quality of Staff	12.9
Hands-on Learning	12.9
Sense of Community	3.6
Faculty	2.4
Facility	2.2
Scholarships	1.6
Total	100.0

Chapter V

Discussion

Summary

In an academic setting, evaluation is a critical managerial tool that campus administrators can use to determine whether a program or policy works as intended. The agriculture industry continues to evolve rapidly, creating a need for academic departments' goals to continuously prepare highly qualified graduates, expand their disciplines' knowledge base, and provide opportunities for professional development. Maintaining educational programs requires input and processes that are constantly monitored and improved to achieve their goals. This study aimed to evaluate the perceptions of Department of Agriculture alumni to help guide future improvements.

Findings and Conclusions

The findings and conclusions of this study were subject to the following limitations:

- The survey population was limited to Stephen F. Austin State University (SFASU) Department of Agriculture graduates who graduated between the Fall of 2010 and Spring of 2022.

- The study used a convenience sampling method, which may have resulted in selection bias since only individuals with access to the social media platform were included, as were alumni whose email addresses were accessible.
- Coding qualitative data can be subjective and influenced by the coder's personal bias.

Objective 1 was to describe Department of Agriculture alumni's demographic data and college information between Fall 2010 and Spring 2022. The result shows that 29.9% of the survey respondents were male and 68.7% were female. This survey shows that most of the respondents were female, indicating that the female population of the department has increased in the last ten years. In the previous study by D'Andrea (2010), 43.0% of the survey respondents were male and 57.0% were female. Vardeman (2003) reported a ratio of 62.0% male and 38.0% female, and Hudson (1989) said a ratio of 72.3% male and 27.7% female. This demonstrates a consistent shift in the gender ratio in the 41 years since the first alumni study at SFASU's Department of Agriculture, and the department has had more women than men since the previous study by D'Andrea (2010).

The ethnic background of survey participants and the results indicate that most respondents (85% of the sample) identified as Caucasians only. Hispanic respondents made up 5.5% of the sample, African American respondents made up 3.2%, and American Indian and Native American respondents made up 2.8%. At 0.9%, the least share of respondents identified themselves as Asian. In the preceding study (D'Andrea, 2010), 94.5% of respondents were Caucasians, 3% were Native Americans, and 1% were

Hispanic. Vardeman (2003) reported 98.7% Caucasians and 0.6% Hispanic and African Americans. The results show an increase in the diversity of the Department of Agriculture SFASU population over time.

The result for the respondents' undergraduate majors shows that most of the survey respondents were Agriculture Development Education and Animal Science majors. Agricultural Development majors represented 24.3% of all respondents, which was second to Animal Science graduates' 27.1%. Figure 4 gives an insight into the year respondents received their bachelor's degree. The results show that most respondents who participated in this survey were graduates from 2016 upward to 2021, with the highest percent (13.4%) from 2018. The results show a decreased response rate as the year moves further from the date of the survey. There was a uniform survey response range among respondents' graduation years across the population, providing some assurance that responses were representative across the entire sample.

Internships allow students to put their classroom knowledge into practice, providing great insight into potential career fields while giving them work experience before graduation. The result shows that 31.3% of the respondents participated in internships during their college careers, which is consistent with the findings in the previous study by D'Andrea (2010), in which 32.0% participated in internships. The results show that respondents who did not participate in internships were 68.7% in this study and 68.0% in the previous survey, this finding shows that internship participation remains stable. However, many students still need access or choose not to participate.

This result suggests that the Department of Agriculture SFASU should increase awareness and internship opportunities for students, particularly those that might face barriers to securing internship opportunities. According to this study, out of 53 internship-listed companies or agencies, 19 respondents interned in educational institutions, while 34 interned in industries and organizations. Agricultural Development majors are required by their curriculum to participate in an internship as part of their program. They constitute the majority of respondents within the education industry. Central Heights High School and Pilgrim's Pride each had three respondents, representing the most respondents within the companies. This result shows that educational institutions, industries, and organizations are significant sources of student internship opportunities.

Respondents were asked to indicate their level of education in this study. Results show that a vast majority of respondents, 74.0%, had earned bachelor's degrees, 25.0% had master's degrees, and 1% had a doctorate. These results indicate that a smaller proportion pursued graduate study, which agrees with the previous research by D'Andrea (2010): 80.4% had bachelor's degrees and 19.0% had master's degrees.

Objective II was designed to compare alumni employment status and salary ranges and identify alumni employment fields. According to this study, most respondents (65.8%) have only worked one to two jobs since graduation, indicating that respondents found stable employment after completing their education. Conversely, 31.0% have three to six years or longer, meaning strong job stability among graduates. According to the

findings, graduates have various job options, with solid representation (33.7%) in the education industry and about 66.0% (n = 102) of job titles besides education or teaching: managerial roles (30.0%) and other industries like agriculture, animal care, and health care. Furthermore, the study's result indicates that 81.5% (n = 154) of respondents secured a job within six months of graduation and 93.7% (n = 177) within a year of graduation. Based on the study results, agricultural graduates had a relatively high employment placement rate after concluding their studies. The agricultural and food industries were responsible for 21.1 million full- and part-time jobs in the United States in 2021, or 10.5% of all employment (United States Department of Agriculture, 2021).

About 48.8% of respondents said they were actively employing their degrees in agriculture. Approximately 23.4% of respondents believed their degree was not required. However, beneficial. Agriculture Development (non-teaching) Graduate Students, Agricultural Engineering Technology with a Teaching Certificate, and Agriculture Development/Education respondents had above 68.0% who believed they were currently using their agriculture degree in their current career: Animal Science (equine emphasis), Animal Science (pre-vet emphasis), and Agricultural Engineering Technology respondents had a high percentage within their majors that believed they were not being employed as trained and using their agriculture degree. This finding suggests that many respondents in this study with degrees in agriculture do not think they actively use those degrees in their careers. Notably, just less than half of the respondents (49.5%) believed they were using their degrees in agriculture in their present positions. However, the

survey also demonstrates that the perceived worth of the degree varies depending on the major. For instance, above 68.0% of respondents said they were currently applying their agriculture degrees in their employment, especially among graduates in Agricultural Development (non-teaching), Agricultural Engineering Technology with a Teaching Certificate, and Agriculture Development/Education. This implies that these majors might offer more direct routes to careers in the agricultural sector.

On the other hand, a large proportion of respondents in Animal Science (equine emphasis), Animal Science (pre-vet emphasis), and Agricultural Engineering Technology said they were not employed as trained or applying their degree in agriculture. This may imply that these majors do not necessarily translate well into professions in the agricultural sector. Most Animal Science graduates are hired in managerial positions within their industry; therefore, their curriculum should include management skills. This study suggests that the major's curriculum should be reevaluated to align it with the industrial requirements of their profession.

According to the result, most graduates of this study earn an average yearly wage of $51,000 to $60,000, with the most significant percentage (21.9%) of respondents falling in the $41,000 to $50,000 bracket. About 11.1% of respondents earn within the $91,000 or higher range, and 10.5% earn under $30,000 a year. D'Andrea (2010) reported that the most common respondent salary range was the lowest range, under $30,000, which had 30.2% of respondents, and about 3.7% of respondents had a salary in the highest range, $91,000 or more. Vardeman (2003) reported that the most common

respondent salary range was $26,000 to $30,000, with 26.0% of respondents, and about 18.2% of respondents had a salary in the highest range, $61,000 or more. Hudson (1989) reported that the most common respondent (25.0%) salary range was $15,000 to $20,000, and about 4.0% of respondents had a salary in the highest range, $55,000 or more.

Further analysis of respondents' salaries by major showed that the cumulative average of respondent salaries, Poultry Science and Agricultural Engineering Technology respondents had the highest median salaries of $71,000 to $80,000 among the majors, and Animal Science (equine emphasis) and General Agriculture respondents had the lowest median salary range of $31,000 to $40,000. According to the Bureau of Labor Statistics, the median weekly wage for full-time workers in the United States was $1,085 in the fourth quarter of 2021 (Bureau of Labor Statistics, 2023). This equals about $56,420 in annual pay, which is the median. The actual payment can vary depending on several factors, indicating that respondents earning within the $31,000 to $40,000 salary range earned below the average salary in the United States. According to the survey data, most study graduates earn an average yearly wage of $51,000 to $60,000, which agrees with the salary average reported by the Bureau of Labor Statistics. The results show that program graduates should expect to make a respectable living in their chosen careers, while specific career pathways may have different earning potentials.

Objective III was to describe former students' opinions about the agriculture courses, programs, and extracurricular activities they participated in while attending

SFASU. Respondents were asked to rate the facilities, coursework, and overall experience with the Department of Agriculture at SFASU.

On a 10-point rating scale, the areas receiving the highest average rating were poultry research facilities (M = 7.96), horticulture (M = 7.74), greenhouse facilities (M = 7.56), and equine and beef facilities (M = 7.09). The mean ratings are above average but could be more exceptional. This suggests that the facilities were perceived as satisfactory but could be improved in certain areas. The lowest facilities were the sheep and goat center (M = 4.71), agriculture mechanics (M = 4.90), and the agriculture building and classrooms (M = 5.61). This result is consistent with the findings in the previous study by D'Andrea (2010). The horticulture and greenhouse facilities (M = 8.54), poultry research facilities (M = 8.31), arboretum, and gardens (M = 8.0) received the highest polling results. Agriculture mechanics (M = 5.25) and the sheep and goat center (M = 5.79) received the lowest ratings for facilities. The results show there has yet to be any significant intervention at the facilities that ranked lowest in the Department of Agriculture at SFASU, even after a decade. The input from the respondents suggests that further funding is needed for the sheep and goat center, agricultural mechanics, agricultural buildings, and classroom facilities. These areas could improve the overall quality of the SFASU agriculture program and better prepare students for future careers.

Respondents were asked if SFASU should have placed less, the same, or more emphasis on a list of undergraduate learning outcomes: According to respondents' assessments, there is room for improvement. The mean value of all rated learning

outcomes falls between 2.20 and 2.47, indicating that respondents want more emphasis on all rated college experiences listed, with more emphasis on working with people that have other abilities, interests, and perspectives (M = 2.47) and improving oral communication skills (M = 2.40) to improve future students' college experiences at the Department of Agriculture.

In addition, respondents evaluated the academic curriculum and their experiences within the SFASU Department of Agriculture. The result indicates that respondents rated the internship experience as the most beneficial (M = 8.20). SFASU's career service (M = 5.0) is deemed the least beneficial experience. Several respondents pointed out the need for exposure and information about internships and jobs available in agriculture. One respondent said, "I would have also benefited from more exposure to the types of occupations I could pursue with my major." It should be noted that students have access to career services through the Center for Career and Professional Development (CCPD) at SFASU. However, the Department of Agriculture should collaborate with the CCPD to provide a platform for agriculture students to reach out to employers in their field of choice for guidance or advice about their field and a realistic view of employment. Also, collaborate with CCPD to create a platform where seminars are given by inviting guest speakers from the agricultural sector to better enlighten students about the various prospects available in agriculture. In addition, the Department of Agriculture at SFASU should create programs and services internally to empower students to achieve life-long career success through individualized assistance, diverse career development programs,

and collaboration with internal and external partners focused on career goal achievements.

Regarding academic experience, Animal Science coursework was rated as the most beneficial (M = 8.10), and Soil and Agronomy coursework was ranked as the least beneficial (M = 5.10). These results agree with the previous study by D'Andrea (2010). Animal Science coursework had the highest average (M = 7.34), and Soil and Agronomy coursework was ranked as the least beneficial (M = 5.77). The internship experience had an average rating (M = 7.12). The lowest average ranking was for help finding a job (SFASU Career Services). According to these findings, respondents value their internship experience highly, which benefits their overall academic experience. The curriculum of the Department of Agriculture should require internships. In addition, these results emphasize the need for improvements to the SFASU Career Services to enhance students' career development and better meet their ongoing expectations.

The graduate and undergraduate advising services were rated (M = 6.45), which is above average, but there is room for improvement. Several respondents pointed out a need for improvement in the advising service. For instance, one respondent said, "There should definitely be more advisors; the one advisor we did have is completely overrun with students; there is no way one person can keep up with all the students." Another respondent said, "I took a class I did not need; I had to do my advising by myself, and there are limited research opportunities, and they are very selective on whom they will allow to conduct the research, and when they do, they just give a brief breakdown, and

they say good luck, figure it out, do not ask questions." The findings of this study indicate that the Department of Agriculture should reevaluate the quality of its advising services. Additionally, it encourages advisors to better assist students in making responsible decisions aligned with their goals, interests, and degree requirements.

Further analysis of the perceived benefits of the academic curriculum and experience by major shows that the Pre-Vet coursework was rated (M = 10.0) by Animal Science (pre-vet emphasis) majors, and the Agricultural Economics coursework was rated (M = 7.28) by Agribusiness majors. This finding suggests that the students' evaluations of the Agricultural Economics coursework were moderate (M = 7.28) but have room for improvement. The graduate coursework was rated (M = 5.0) by graduate students. According to this finding, graduate coursework with a mean rating of 5.0 would have an average rating or satisfaction level of 50.0%, regarded as a failing grade in most grading systems utilizing a 10-point scale. This study recommends reassessing graduate curricula to deliver a more meaningful and fulfilling academic experience.

Respondents were required to provide their opinions of the department's strengths and weaknesses using an open-ended, brief answer format. The survey respondents highlighted several areas needing improvement in the Department of Agriculture at SFASU, particularly regarding facilities, advising services, coursework, SFASU career placement assistance, and faculty. The most common perceived weakness in the department was facilities. The overall ratings of all the facilities listed in the survey questions were not higher than a mean of 7.96 out of 10, which is above average but

could be more exceptional. The respondents noted that the agricultural mechanics and equine facilities are outdated and need renovation. In addition, respondents indicated dissatisfaction with the quality of advising services and assistance in finding internships and employment. D'Andrea (2010) also reported facilities as the number one weakness.

Some respondents also mentioned the need for more attention, support, and funding for the Department of Agriculture by the university. The curriculum, coursework, teaching methodology, and the need for more innovative professors with deeper specialties were among the areas respondents thought required improvement. To ensure that the department meets the needs of its students, SFASU should make improvements in these identified areas. Based on the results, respondents also want more specific course options related to specialization areas in their major. The fact that they indicated a need for a specific curriculum that aligns with their career goals might suggest that they perceive their education as generalized. These results agree with the previous study by D'Andrea (2010), which found that relationships between respondents and professors were the department's greatest strength, followed by the department small size. Students praised the small student-to-professor ratio, the department's family-like atmosphere, hands-on learning, knowledgeable and caring professors, and the opportunity to network.

Implications

This result suggests that the Department of Agriculture at SFASU should increase awareness and internship opportunities for students, particularly those that might face barriers to securing internship opportunities. The Department of Agriculture curriculum

should require internships. The Department of Agriculture should collaborate with the CCPD to provide a platform for agriculture students to reach out to employers in their field of choice for guidance or advice about their field and a realistic view of employment. Also, collaborate with CCPD to create a platform where seminars are given by inviting guest speakers from the agricultural sector to better enlighten students about the various prospects available in agriculture. In addition, the Department of Agriculture at SFASU should create programs and services internally to empower students to achieve life-long career success through individualized assistance, diverse career development programs, and collaboration with internal and external partners focused on career goal achievements.

The input from the respondents suggests that further funding is needed for the sheep and goat center, agricultural mechanics, agricultural buildings, and classroom facilities. These areas could improve the overall quality of the SFASU agriculture program and better prepare students for future careers. The findings of this study indicate that the Department of Agriculture must reevaluate the quality of its advising services. Additionally, it encourages advisors to better assist students in making responsible decisions aligned with their goals, interests, and degree requirements.

Respondents indicated that curriculum, coursework, teaching methodology, and the need for more innovative professors with more specialized knowledge required refinement. This study suggests that the agricultural major's curriculum should be

reevaluated to align it with the professional requirements of the agricultural industry. This result suggests a need for more specialized graduate disciplines and suggests reevaluating graduate curricula to provide a more meaningful and satisfying academic experience.

Areas of Further Research

- A follow-up study focusing on the graduate program.
- A study focusing on the shift in gender among agriculture majors.
- Overview of curriculum: The theory and practice
- This study should be repeated every ten years.

References

Al-Turki, U., & Duffuaa, S. (2003). Performance measures for academic departments. *International Journal of Educational Management, 17*(7), 330-338. https://doi.org/10.1108/09513540310501012

Borden, V. M. H., & Rajecki, D. W. (2000). First-year employment outcomes of psychology baccalaureates: Relatedness, preparedness, and prospects. *The Teaching of Psychology*, 27(3), 164–168. https://doi.org/10.1207/S15328023TOP2703_01

Bureau of Labor Statistics. (2023). *Usual weekly earnings of wage and salary workers first quarter 2023.* https://www.bls.gov/news.release/pdf/wkyeng.pdf

Cabrera, A. F., Weerts, D. J., & Zulick, B. J. (2005). Making an impact with alumni surveys. *New Directions for Institutional Research, 2005*(126), 5-17. https://doi.org/10.1002/ir.144

D'Andrea, R. A. (2010). *An assessment of departmental effectiveness as perceived by graduates of the Department of Agriculture at Stephen F Austin State University* (Publication No. 1499005) [Master's thesis, Stephen F. Austin State University]. ProQuest Dissertations & Theses @ Stephen F. Austin State University.

Department of Agriculture, Stephen F. Austin State University. (2009). Mission Statement. Retrieved December 6, 2022, from http://catalog.sfasu.edu/preview_entity.php?catoid=1&ent_oid=30

Gaier, S. E. (2005). Alumni satisfaction with their undergraduate academic experience and the impact on alumni giving and participation. *International Journal of Educational Advancement, 5*, 279–288. https://doi.org/10.1057/palgrave.ijea.2140220

Hoey, J. J., & Gardner, D. C. (1999). Using surveys of alumni and their employers to improve an institution. *New Directions for Institutional Research*, *1999*(101), 43-59. https://doi.org/10.1002/ir.10103

Horton, N. I. (1995). *Philanthropic support for higher education* **(**ED394409). ERIC. https://eric.ed.gov/?id=ED394409

Hudson, C. I. (1989). *A follow-up study of graduates of the Department of Agriculture from spring 1981 to spring 1988* (Publication No. 1339411) [Master's thesis, Stephen F. Austin State University]. ProQuest Dissertations & Theses @ Stephen F. Austin State University.

Irani, T., & Scherler, C. (2002). Job satisfaction as an outcome measure of the effectiveness of an agricultural communications academic program. *Journal of agricultural education*, *43*(1), 12-23. https://doi.org/10.5032/jae.2002.01012

Ironson, G. H., Smith, P. C., Brannick, M. T., Gibson, W. M., & Paul K. B. (1989). Constitution of a job in general Scale: A comparison of global, composite, and specific measures. *Journal of Applied Psychology*, *74*(2), 193–200. https://10.1037/0021-9010.74.2.193

James R. B., Langdana F. K., Patricia D. R., & Jude C. R (1997). A factor analytic study of teaching methods that influence retention among mba alumni, *Journal of Education for Business*, *72*(5), 297-302, https://10.1080/08832323.1997.10118326

Johnson, J. W., & Eckel, P. D. (1998). *The senior year experience: Facilitating integration, reflection, closure, and transition* (ED412890). ERIC. https://eric.ed.gov/?id=ED412890

Kelsey, K. D., Lindner, J. R., & Dooley, K. E. (2002). Agricultural education at a distance: Let's hear from the students. *Journal of Agricultural Education*, *43*(4), 24-32. Retrieved March 23, 2022, from https://www.learntechlib.org/p/95207/

Koral, M. (1998). Political performance: If you want campus support from legislators, alumni volunteers are instrumental to your success. Here is how to fine-tune your advocacy efforts. *Currents-Washington*, *24*, 46-52.

McIntosh, M. S., & Strand, I. E. (1983). Job satisfaction as related to characteristics of agronomy and agriculture alumni. *Journal of Agronomic Education*, *12*(1), 49-52. https://doi.org/10.2134/jae.1983.0049

National Center for Higher Education Management Systems. (1992). Comprehensive alumni assessment survey: Four-year institutions [Brochure]. NCHEMS Publications.

Ogletree, S. M. (1998). Using alumni surveys to evaluate and improve the psychology major. *College Student Journal*, *32*(2), 215-221.

Ouraich, I. (2015). *Agriculture, climate change, and adaptation in Morocco: A computable general equilibrium analysis* (Publication No. 3719694) [Doctoral Dissertations, Purdue University]. ProQuest Dissertations & Theses Global.

Ouraich, I., Lowenberg-Deboer, J., Soumah, A., & Diallo, D. (2017). Employment prospects for agricultural graduates in Guinea Conakry. *Journal of Agricultural Extension and Rural Development*, *9*(1), 5-13 https://doi.org/10.5897/JAERD2016.0804

Pace, C. R. (1979). *Measuring outcomes of college. Fifty years of findings and recommendations for the future*. Jossey-Bass.

Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: Findings and insights from twenty years of research.* Jossey-Bass.

Pettit, J. (1991). *Listening to your alumni: One way to assess academic outcomes* (ED337098). ERIC. https://eric.ed.gov/?id=ED337098

Schneider S. C. & Niederjohn R. J. (1995, November). *Assessing student learning outcomes using graduating senior exit surveys and alumni surveys* [Engineering

Education for the 21st Century]. Proceedings Frontiers in Education 1995 25th Annual Conference, Atlanta, USA.

Sheehan, E. P., & Granrud, C. E. (1995). Assessment of student outcomes: Evaluating an undergraduate psychology program. *Journal of Instructional Psychology*, 22(4), 366. https://www.proquest.com/openview/8b430d4d6f5af00286950e4db35ac588/1?pq-origsite=gscholar&cbl=2029838

Smith, P. C., Kendall, L. M., & Hulin, C. L. (1969*). Measurement of satisfaction in work and retirement.* Rand Mcnally.

Spector, P. E. (1997). *Job Satisfaction: Application, assessment, causes, and consequences.* Sage.

Sprecker, K. J., & Rudd, R. D. (1998). Opinions of practitioners concerning curricular requirements of agricultural communication students at the University of Florida. *Journal of Applied Communications, 82*(1), 31-42. https://doi.org/10.4148/1051-0834.2125

United States Department of Agriculture. (2021). Agriculture and food sectors and the economy. https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/ag-and-food-sectors-and-the-economy/

Vardeman, C. L. (2001). *A follow-up study of graduates of the Department of Agriculture from 1995 to 2001*(Publication No. 1413894) [Master's thesis, Stephen F. Austin State University]. ProQuest Dissertations & Theses @ Stephen F. Austin State University.

Volkwein, J. F. (2010). Assessing alumni outcomes. *New Directions for Institutional Research*, *2010*(1), 125-139. https://doi.org/10.1002/ir.335

Watson, A., Migliaccio, K., & Porter, W. (2019). Alumni, faculty, and employer insights into agricultural operations management curricula. *NACTA Journal*, *64*, 224-235. https://10.13140/RG.2.2.11814.27200

Appendix A

Consent Letter

Letter of Consent to Survey Sample

Web-based survey for the Department of Agriculture evaluation at Stephen F. Austin State University.

Assessing our former students' opinions concerning the department's effectiveness is essential to planning for the future. This web-based survey has been developed to measure the perceptions of alumni who received a degree from the Department of Agriculture at Stephen F. Austin State University between the Fall 2010 and the Spring 2022. This survey should take at most 10 minutes to complete.

CONFIDENTIALITY: The survey does not ask for your identity. This study has been approved by the Institutional Review Board (IRB) at SFASU. By completing this survey, you consent to participate in this study, but your identity will not be revealed in any way.

Thank you for helping us make the Department of Agriculture at SFASU a more effective program for preparing young people for a successful career in agriculture.

Click on **YES** to consent to participate in this study and survey.

- Yes
- No

Appendix B

Survey Instrument

Introduction

Web-based survey for evaluation of the Department of Agriculture at Stephen F. Austin State University.

Assessing our former students' opinions concerning the department's effectiveness is essential to plan for the future. This web-based survey has been developed to measure the perceptions of alums who received a degree from the Department of Agriculture at Stephen F. Austin State University between Fall of 2010 and Spring of 2022. This survey should take at most 10 minutes to complete.

CONFIDENTIALITY: The survey does not ask for your identity. This study has been approved by the Institutional Review Board (IRB) at SFASU. By completing this survey, you consent to participate in this study, but your identity will not be revealed in any way.

Thank you for helping us make the Department of Agriculture at SFASU a more effective program for preparing young people for a successful career in agriculture.

Click on **YES** to consent to participate in this study and to take this survey

- ○ YES
- ○ NO

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Click on **YES** to consent to participate in this study and to take this survey

- ○ YES
- ○ NO

Demographic Information

Gender

- ○ Male
- ○ Female
- ○ Other

Ethnic Background

- ○ African American
- ○ Asian
- ○ Caucasian
- ○ Hispanic
- ○ Other(please specify) _____

College Information

What was your UNDERGRADUATE major?

- ○ Agribusiness
- ○ Ag. Development/Education
- ○ Ag. Development (Non-Teaching)
- ○ Ag. Engineering Technology with Teaching Certificate
- ○ Ag. Engineering Technology
- ○ Animal Science
- ○ Animal Science (Equine Emphasis)
- ○ Animal Science (Pre-Vet Emphasis)
- ○ Poultry Science
- ○ Horticulture
- ○ General Agriculture
- ○ Graduate Student Only

Did you participate in an internship program during your college experience?

- ○ Yes
- ○ No

What company or agency was your internship with?

When did you graduate from SFA?

- ○ 2010
- ○ 2011
- ○ 2012
- ○ 2013
- ○ 2014

- ○ 2015
- ○ 2016
- ○ 2017
- ○ 2018
- ○ 2019
- ○ 2020
- ○ 2021
- ○ 2022
- ○ Before 2010

What is your highest degree held?

- ○ Bachelor
- ○ Masters
- ○ Doctorate

If I could start college over, I would choose agriculture as my major.

- ○ Agree
- ○ Agree but would choose a different specialization
- ○ Uncertain
- ○ Disagree

Career Information

How many full-time employments have you held since graduation from SFA?

- ○ 0; Still looking
- ○ 1
- ○ 2
- ○ 3

- ○ 4
- ○ 5
- ○ 6 or more

How long did it take to get your first professional job?

- ○ Before graduation
- ○ Within 1 month
- ○ Within 3 months
- ○ Within 6 months
- ○ Within 9 months
- ○ Within 1 year
- ○ Within 2 years
- ○ Still Looking

What was your first professional job after graduation from SFA? (This includes graduate school attendance)

Job Tittle
Employer
Location

What is your current job listed as?

Job Tittle
Employer
Location

How closely is your job related to your undergraduate field of study?

- ○ Not related
- ○ Somewhat related

- ○ Directly related

How long have you been in your current job position?

- ○ Less than a year
- ○ One year
- ○ Two to three years
- ○ Four to five years
- ○ Six years or longer

What is your salary range?

- ○ Under $30,000
- ○ $31,000-40,000
- ○ $41,000-50,000
- ○ $51,000-60,000
- ○ $61,000-70,000
- ○ $71,000-80,000
- ○ $81,000-90,000
- ○ $91,000 or higher

What skills does your current job require? (select all that apply)

- ☐ Teamwork
- ☐ Critical Thinking Skills
- ☐ Technology Skills
- ☐ Communication Skills
- ☐ Empirical and Quantitative Skills
- ☐ Personal Responsibility
- ☐ Social Responsibility

Is having a bachelor degree required for your current position?

- ○ Yes
- ○ No, but helpful
- ○ No

College Academic Experience

Please, rate the following facilities in this section from 1 to 10, with 1 being severely lacking and 10 being excellent, or NA for being not applicable.

	1	2	3	4	5	6	7	8	9	10	N/A
Equine Facilities/Lab	○	○	○	○	○	○	○	○	○	○	○
Swine Facilities/Lab	○	○	○	○	○	○	○	○	○	○	○
Beef Facilities/Lab	○	○	○	○	○	○	○	○	○	○	○
Ag Mechanics Facilities/Lab	○	○	○	○	○	○	○	○	○	○	○
Sheep and Goat Facilities/Lab	○	○	○	○	○	○	○	○	○	○	○
Poultry Research Facilities/Lab	○	○	○	○	○	○	○	○	○	○	○
Horticulture and Greenhouse Facilities Lab	○	○	○	○	○	○	○	○	○	○	○
Computer Facilities/Lab	○	○	○	○	○	○	○	○	○	○	○
Soil Science Facilities/Lab	○	○	○	○	○	○	○	○	○	○	○
Ag Building/Classrooms	○	○	○	○	○	○	○	○	○	○	○

As it relates to you, how beneficial were each of the following components of your undergraduate or graduate experience?

Please, rate the following statements in this section from 1 to 10, with 1 being of no benefit to me and 10 being extremely beneficial to me, or NA for being not applicable.

	1	2	3	4	5	6	7	8	9	10	N/A
Soil and Agronomy coursework	○	○	○	○	○	○	○	○	○	○	○
Ag Economics coursework	○	○	○	○	○	○	○	○	○	○	○
Animal Science coursework	○	○	○	○	○	○	○	○	○	○	○
Equine Science coursework	○	○	○	○	○	○	○	○	○	○	○
Pre-vet coursework	○	○	○	○	○	○	○	○	○	○	○
Poultry Science coursework	○	○	○	○	○	○	○	○	○	○	○
Ag Engineering Technology coursework	○	○	○	○	○	○	○	○	○	○	○
Horticulture coursework	○	○	○	○	○	○	○	○	○	○	○
Ag Development/Ag Education coursework	○	○	○	○	○	○	○	○	○	○	○
Leadership Skill coursework	○	○	○	○	○	○	○	○	○	○	○
Internship experience	○	○	○	○	○	○	○	○	○	○	○
Involvement with clubs and organization	○	○	○	○	○	○	○	○	○	○	○
Help in finding a job, SFA Career Service	○	○	○	○	○	○	○	○	○	○	○
Academic advising	○	○	○	○	○	○	○	○	○	○	○
Library resources	○	○	○	○	○	○	○	○	○	○	○
AARC (Academic Assistance and Resources Center)	○	○	○	○	○	○	○	○	○	○	○
Graduate Coursework	○	○	○	○	○	○	○	○	○	○	○

Looking back on your college experience, do you believe SFA should have placed less, the same, or more emphasis on the following undergraduate learning outcomes

	Less	The same	More
Gaining a broad general education about different fields of knowledge	○	○	○
Improving written communication skills	○	○	○
Improving oral communication skills	○	○	○
Improving graphic and technological communication skills	○	○	○
Developing personal values	○	○	○
Professional and ethical standards	○	○	○
Working with people that have other abilities, interests, and perspectives	○	○	○

Personal Opinions

What do you consider the strengths of the SFA Department of Agriculture?

What weaknesses do we need to address in the SFA Department of Agriculture?

I am interested in attending an alumni dinner and social events

- ◯ Yes
- ◯ No

Click on this link to provide contact information for alumni activities and correspondence. This link will take you to a database outside of this survey so your identity will not be connected to your survey answers.
https://forms.gle/4Qtcc9FYxEFrCnNLA

Vita

Sherifat Rufai was born in Owo, Ondo-State on January 22, 1993, to Awawu and Fatai Rufai. She graduated from Ladoke Akintola University of Technology in 2015 with honors. She graduated with a B.Tech. in Agriculture, majoring in Crop Production and Soil Science. In the fall of 2021, she enrolled in Stephen F. Austin State University, Nacogdoches, Texas, in August 2021. She was offered a graduate assistantship in the Department of Agriculture at Stephen F. Austin State University in September 2021. A Master of Science degree in Agriculture and a Minor in Management was granted in May 2023.

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This thesis was typed by Sherifat A. Rufai.