

AN ABSTRACT OF THE DISSERTATION OF

Brian K. Warnick for the degree of Doctor of Philosophy in Education presented on April 27, 2004.

Title: The First Year of Teaching Secondary Agricultural Education: A National Study.

Abstract approved:

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Gregory W. Thompson

The purpose of this study was to describe the perceptions of the first year experience of teaching secondary agriculture and to explore the relationships between these perceptions, the characteristics of beginning agriculture teachers, and the types of support provided to beginning teachers. An additional focus of the study was to explore the relationship between the level of commitment to teaching and the perceptions of the first year experience. Information was gathered from secondary agriculture teachers across the U.S. who were in their second year of teaching agricultural education during the 2003-2004 academic year.

A survey instrument was created specifically for this study through which information about the perceived experience of the first year, the types of support provided to the beginning teacher during the initial year of teaching, the perceived effectiveness of the support provided, demographic characteristics of the beginning teacher, and the perceived likelihood of teaching secondary agriculture in the future was gathered. Data were analyzed using descriptive and correlational statistics. The

57 variables related to the perceptions of the first year experience were reduced to 14 factors through Principal Component Analysis.

Nearly 90 percent of respondents described the overall experience of their first year as very positive, positive, or somewhat positive. The most frequently reported positive experiences included working with students in the FFA, participating in professional development opportunities, and using computers and multimedia in teaching. A majority of respondents also described their relationships with school staff, colleagues, and administrators as positive or very positive. Less than 25 percent of respondents perceived the salary in relationship to the time required as positive or very positive. Most respondents reported negative perceptions of working with students in the classroom who don't want to be there and in dealing with problem student behavior.

While nearly three-fourths of the respondents reported they were highly likely to teach secondary agriculture one-year from the time of the survey, less than one-third reported they were highly likely to do so at five years, and only 15% reported they were highly likely to do so twenty years from the time of the survey.

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The First Year of Teaching Secondary Agricultural
Education: A National Study

by
Brian K. Warnick

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I understand that my dissertation will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my dissertation to any reader upon request.

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Brian K. Warnick, Author

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The First Year of Teaching Secondary Agricultural Education: A National Study

CHAPTER 1

INTRODUCTION

Providing a sufficient quantity of qualified agriculture teachers is the first goal of The National Strategic Plan and Action Agenda for Agricultural Education (National Council for Agricultural Education, 2000). The 1999-2001 National Study of the Supply and Demand for Teachers of Agricultural Education (Camp, Broyles, & Skelton, 2002) provided evidence of a shortage of agricultural education teachers. In the fall of 2001, there were openings for an estimated 1,175 new agricultural education teachers, while fewer than 700 new graduates were seeking teaching positions. Over 300 positions were not filled with fully qualified agriculture teachers by the beginning of the 2001-2002 school year. However, the number of teachers completing teacher preparation programs during that same time period was more than adequate to fill the positions. Only about 59% of newly certified agriculture teachers sought teaching positions (Camp, et al. 2002).

A research report from the American Association for Employment in Education (2000) confirmed the report of a nationwide shortage of agriculture teachers, ranking agricultural education as a field with "some shortage" (p. 7). The report ranked the demands in each of the education fields as considerable shortage, some shortage, balanced, some surplus, and considerable surplus.

Similar to the data in agricultural education, teaching positions across all disciplines experienced shortages during the 1999-2000 academic year, with 58% of all schools reporting difficulty in filling one or more teaching position openings (Ingersoll, 2003). In his analysis of the U.S. Department of Education's National Center for Education Statistic's Schools and Staffing Survey and the subsequent Teacher Follow-up Survey, Ingersoll (2001) reported that after three years, 29% of all beginning teachers left teaching altogether and after five years, 39% left teaching altogether. In an analysis of more recent data from the Schools and Staffing Survey, Ingersoll (2003) reported that the demand for new teachers is neither primarily due to student enrollment increases nor retirement, but due to the number of teachers who departed from their positions. He suggested that retaining teachers should be viewed as a potential solution to the shortage of teachers.

Similarly, Camp and Heath-Camp (1990) reported that 15 percent of vocational education teachers quit within the first year of teaching, and that more than half leave the profession within six years.

Why are beginning teachers leaving the profession at such high rates? The initial year of teaching is often problematic for beginning teachers (Camp & Heath-Camp, 1989; Veenman, 1984). Consequently, the transition that occurs between the teacher education program and mastery teaching has been identified by researchers, professional organizations, and policy makers as critical in the professional development of teachers.

While beginning agriculture teachers experience the challenges similar to other beginning teachers during their initial years, the added expectations of supervising agricultural experience programs (student projects) and advising the FFA (leadership) chapter, increase the demands and the potential for challenges. Nesbitt & Mundt (1993) indicated that “new agriculture teachers are not only responsible for the activities of a normal subject teacher such as classroom management and subject content, but they are also responsible for an entire program of vocational education” (p. 11). Furthermore, agricultural education was described by Osborne (1992, p. 3) as “A profession that eats its young.” He described the problem as follows:

The problems and causes of this professional cannibalism are the result of years of effort to maintain and improve agriculture programs in the secondary schools of America. The need to be central to the school’s curriculum, enrollment pressures, the fact that most programs involve only a single teacher, the need for community involvement and public relations, the expectation of strong FFA and SAE programs, the need to serve adults, the need to reach new audiences, agricultural literacy initiatives at the elementary level, laboratory management, the constant need to modify curriculum, lack of reliance on standard curricula and supporting texts, a high number of daily preparations in teaching, the diversity of the agricultural industry – all of these and other dimensions of being a successful high school agriculture teacher have brought us to this critical stage in the development of the profession (p. 3).

Theoretical Framework

The theory of imprinting is used in animal science to describe the period of time early in the experience of an animal “in which there is an extremely rapid attachment, during a specific critical period, of an innate behavior pattern to specific objects which thereafter become important elicitors of that behavior” (Hess & Petrovich, 1977, p. 2). Imprinting was initially studied with poultry, but has been used

to describe the early experience in insects, fish, sheep, deer, and buffalo (Hess, 1977). The concept of imprinting has also been used as a means of training newborn foals in the process of developing the horse's future relationship with humans (Miller, 2003).

Hess (1977), one of the pioneering researchers in the field of imprinting, reported that "students of behavior generally agree that the early experiences of animals (including man) have a profound effect on their adult behavior" (p. 156). He stated further that "the problem of the investigator is not to find out *whether* early experience determines adult behavior as to discover *how* it determines adult behavior" (p. 156). Additionally, Hess suggested that there are three generally held beliefs of early experience. They are, (1) "early habits are very persistent and may prevent the formation of new ones" (p. 156), (2) "early perceptions deeply affect all future learning" (p. 156), and (3) "early social contacts determine the character of adult social behavior" (p. 156).

In her review of literature related to beginning teacher support, Gold (1996) related the theory of imprinting to beginning teachers as they make attachments to individuals and experiences during the critical period of their first year. She suggested that the initial experiences of teaching become imprinted, leaving lasting impressions, perceptions, and behaviors "regarding teaching, students, the school environment, and their role as a teacher" (p. 548). Gold also stated that "a teacher's instructional and teaching related behaviors are influenced significantly by initial imprinting" (p. 548).

Imprinting as it relates to the beginning teacher is the primary theory upon which this research study was based and was described by Gold (1996) as follows:

“When initial experiences are pleasurable, the imprinting is mainly positive and the transference is positive; however, when the first experiences are negative, paired with feelings of discouragement and discomfort, the imprinting is negative, and these feelings and behaviors are elicited in similar circumstances in the future. In many instances, continued reinforcement of unpleasant experiences may result in a decision to end a teaching career” (p. 548).

A study by Chapman and Green (1986) provided support for the importance of the initial experiences in teachers. They surveyed graduates of a teacher education program more than one decade following graduation and found that the most influential factor for teacher retention was the quality of the first teaching experience. The results of their study suggested that the quality of the first teaching experience was more strongly related to teacher retention than either academic performance or perceived adequacy of the teacher preparation program.

Rationale and Statement of the Problem

The literature on support for beginning teachers is growing as is the call for support for beginning teachers by professional associations and academic organizations. However, a more complete understanding of the problems beginning teachers face is needed prior to implementing support programs. Specifically, additional information is needed on the problems of beginning secondary agriculture teachers. “Unless researchers first generate an accurate description of an educational phenomenon as it exists, they lack a firm basis for explaining or changing it.” (Gall, Borg, & Gall, 1996, p. 374).

Purpose of the Study

The purpose of this study was to describe the perceptions of the first year experience of teaching secondary agriculture and to explore the relationships between these perceptions, the characteristics of beginning agriculture teachers, and the types of support provided to beginning teachers. An additional focus of the study was to explore the relationship between the level of commitment to teaching and the perceptions of the first year experience. Information was gathered from secondary agriculture teachers from across the U.S. who were in their second year of teaching agricultural education during the 2003-2004 academic year.

The following specific research questions were addressed in this study:

1. What are the demographic characteristics of beginning agriculture teachers and the schools in which they taught?
2. What is the experience of the first year of teaching secondary agriculture in terms of positive and negative perceptions?
3. What types of support programs are provided for first year secondary agriculture teachers?
4. What is the perception of the effectiveness of the support programs provided?
5. How likely are beginning secondary agriculture teachers to remain in the profession?
6. How do the demographic characteristics of beginning teachers relate to the positive and negative perceptions of the first year experience?

7. How do the support programs provided for first year secondary agriculture teachers relate to the positive and negative perceptions of the first year experience?
8. How do the positive and negative perceptions of the first year of teaching secondary agriculture relate to the reported likelihood of the teacher remaining in the profession?

Definition of Terms

The following terms and definitions were specific to this study:

Beginning teacher - A teacher who has completed one full year of teaching secondary agriculture and is currently in the second year of teaching agricultural education.

FFA - The leadership component of agricultural education. This includes teamwork opportunities, public speaking, meeting skills development, awards recognition programs, and career development events (career skill competition events).

Secondary agriculture teacher - An individual hired to provide instruction in secondary schools and/or vocational/technical centers with at least a fifty percent assignment in agricultural education.

Supervised Agricultural Experience (SAE) – The project-based learning component of agricultural education. This includes all experiences outside of the classroom or laboratory setting in which students are provided with opportunities to apply the knowledge and skills developed in the agricultural education classroom or

laboratory. It includes projects in agricultural entrepreneurship, placement, exploration, and scientific experimentation and analysis.

Limitations of the Study

This research was conducted with the following limitations:

1. The individuals targeted as participants for this study were only those teachers identified by state supervisors of agricultural education, members of their staff, and/or teacher educators in each state. Any other teachers in the United States matching the parameters of the population were not known and were therefore not part of the population studied.
2. Because this study focused only on beginning secondary agricultural education teachers, the findings may not be generalizable to beginning teachers in other subjects and/or grade levels.
3. The researcher designed the questionnaire, and although the questionnaire was reviewed for content validity, some questions may not have accurately measured the perceptions of the respondents.
4. The researcher's own opinions and expectations may result in bias.
5. The use of a questionnaire limits the type of data collected and prohibits a richer understanding of the respondents' opinions and feelings. Questionnaires are generally inflexible and may not pose questions in a format understandable to all participants (Gall, Borg, & Gall, 1996).
6. Teachers were asked to reflect back on the previous year's experience.

Assumptions of the Study

The following assumptions were made for the purpose of this study:

1. Perceptions of the positive and negative experiences of the first year of teaching could be measured by the instrument developed for this study.
2. The entirety of the population was surveyed.
3. The instrument reached the subjects and they had the capability to complete it online.
4. The respondents answered honestly and thoughtfully when answering the items on the questionnaire.

CHAPTER 2

LITERATURE REVIEW

The purpose of this chapter was to present a review of the literature related to the first year experience of teaching, and more specifically, of teaching secondary agriculture. The following specific areas were examined: (a) teacher development, (b) teacher socialization, (c) teacher supply and demand, (d) burn-out and attrition, (e) the needs of beginning teachers, (f) the needs of beginning agriculture teachers, and (g) support programs for beginning teachers.

Search Strategy

A review of the literature was conducted primarily through the use of journal databases through the Oregon State University online database portal. The databases included in the search were EBSCO Host's Professional Development Collection, Educational Resource Information Center (ERIC), Academic Search Elite, Dissertation Abstract's, and Education Abstracts. Key words used in the searches included agricultural education, beginning teachers, beginning teacher induction, vocational education teachers, problems, secondary education, teacher attitudes, mentors, and professional development. As studies matching the intent of the study were located, additional key words were found and searches conducted on relevant terms. Key words were entered into the database search engines in various combinations so that the most relevant studies were located.

In addition to the online databases, a hand search of the *Journal of Agricultural Education* and the *Agricultural Education Magazine* were conducted and additional

relevant articles were located through this process. The information provided in the sources found through the above searches has produced the foundation for the review of literature presented in this chapter.

Teacher Development and Socialization

As a novice teacher transitions from the world of pre-service education to the professional duties as a teacher, many changes take place. Understanding these changes in teachers that take place over time, or the development of the teacher, has been described as being an important tool in diagnosing the needs of and providing support for beginning teachers (Burden, 1990). There are several models describing the development of an individual in the teaching profession, some focusing on the development over a career, while others focus on the initial development of the beginning teacher. Each of these models described the changes as a set of phases or stages that occur in the developmental process.

Super, et al. (1957) described development in a career as “an ongoing, continuous, and generally irreversible process” (p. 89). They proposed that career development can be divided into a series of life stages including exploration, establishment, maintenance, and decline. They further subdivided the exploration stage into fantasy, tentative, and realistic phases, and subdivide the establishment stage into trial and stable phases (Super et al., 1957). Although the study upon which this proposed career development model is based was conducted nearly one half century ago and only with male subjects, these stages are reflected in other more

modern models. The proposed exploration and establishment stages have implications in the development process of beginning teachers.

Fuller (1969) conducted case studies of student teachers to explore concerns of beginning teachers. The results of these case studies and an analysis of beginning in-service teacher surveys were used to suggest a “developmental conceptualization of teacher concerns” (p. 218). Her developmental conceptualization included three main phases. The first phase was referred to as the pre-teaching phase and is described as a phase of “Non-concern” as the pre-service teachers rarely exhibited specific concerns. Their concerns were described by Fuller as ambiguous and related to anticipation or apprehension. The second phase of Fuller’s model is referred to as the early teaching phase and is described as a phase of concern with self. Teachers in this phase had concerns about where they stood in relation to cooperating teachers, students, administrators, and the school culture. They also exhibited concerns about their own adequacy, particularly in regard to classroom control, knowledge of subject matter, managing problems and resources, and responding to evaluation by supervisors. The late concern phase was the final phase proposed in the model with concerns centering on students. Fuller described concerns focusing on student achievement and self evaluation in terms of student achievement as “mature.”

Another model of the developmental stages of beginning teachers was suggested by Moir (1990). She described four phases through which most teachers pass during the first year of teaching. The anticipation phase was described as beginning during the student teaching experience as the student looks forward to

experiences in their own classroom. Anticipation and anxiety about the new teaching experience increases and continue through the first few weeks of the school year. The survival phase occurs during the first month or two of the school year as the teacher moves from the anticipation phase into a time period of trying to keep up with the demands of teaching, including curriculum development, student behavior problems, and the amount of work required in the day-to-day routine of teaching. After several weeks of trying to survive, most beginning teachers move into a disillusionment phase. During this time the amount of time required and high levels of stress, coupled with the discovery that the expectations of anticipation phase are not going to be realized, typically results in the teacher questioning their commitment to teaching. The third phase in Moir's (1990) model is the Rejuvenation Phase, which is described as "a slow rise in the new teacher's attitude toward teaching" (p. 3). Successful experiences, an understanding of the system, new coping strategies, and skills in reducing or managing problems allows the teacher to focus on planning and teaching strategies. The final phase, the Reflection Phase, is described to begin in May, with the teacher reflecting back over the year, thinking about those events that were successful and making plans to improve those that were not as successful. The Reflection Phase leads the teacher back into a "new phase of anticipation" as they prepare for the upcoming school year (Moir, 1990).

More recently, Steffy, Wolfe, Pasch, and Enz (2000) proposed a "Life-Cycle" model for career teachers. Their model consists of six phases through which teachers move based upon the learning environment provided to them and upon their ability

and willingness to reflect, renew, and grow. The phases of this model includes novice, apprentice, professional, expert, distinguished, and emeritus. The novice phase includes the preservice and student teacher experiences while the apprentice phase includes those experiences primarily after they receive responsibility for teaching students on their own. The apprentice phase continues until the beginning teacher develops confidence in their ability to teach. Steffy et al. (2000) suggested that this inductive phase typically extends into the second or third years of teaching. As confidence in teaching grows and the teacher begins to focus on the student, the teacher enters the professional phase. Teachers enter the expert phase as they strive to develop their skills and desire to achieve high standards. Not all teachers will attain the distinguished phase as only those who exceed current expectations and are gifted in their field reach this stage. In this model, teachers who reach the emeritus phase represent those who retire after a lifetime of achievement and continue to serve the profession. The authors suggested that a framework of professional development be provided for all teachers, but specifically for beginning teachers to help them make the transition from the apprentice through the other phases. They further suggested that “comprehensive induction programs have the potential to help apprentices to grow professionally by facilitating self-reflection and renewal” (Steffy et al., 2000, p. 58).

All of the developmental models described above accounted for a period of time in the beginning years of teaching in which the fantasy or anticipation period of teaching gives way to a period of disillusionment. This period of time has been described as a “reality shock” as teachers become disillusioned by differences between

what they believed teaching would be like before they began and the realities of teaching (Steffy, Wolfe, Pasch, & Enz, 2000; Marso & Pigge, 1987). Veenman (1989) cautioned that the term “reality shock” as used to describe the initial experiences of a teacher should not be viewed as a very short time period during which the teacher simply needs to adjust or adapt. The beginning teacher is faced with assimilation into the teaching profession over a longer period of time. Veenman further suggested that this extended reality shock possibly results in the adjusting of behavior, attitudes, and even personality because of external pressures. Additionally, adjusting to the responsibilities of the adult world and professional life in general add to this reality shock (Marso & Pigge, 1987).

Needs of Beginning Teachers

As mentioned in the previous section, the attrition rate of teachers, particularly during the first few years is very high. Beginning teachers face a myriad of problems. This section constituted a review of prior research into the problems and needs of beginning teachers.

Veenman (1984) conducted a review of 83 articles from different countries regarding the problems and concerns of beginning teachers, primarily those in their initial year of teaching. He found that the most seriously perceived concern of beginning teachers was classroom management. Motivation of students, dealing with individual differences among students, assessing student work, and relations with parents were the next most frequently perceived problems. Some of the studies included in the review related problems of beginning teachers to individual and

situational teacher differences. While some studies found that male beginning teachers and teachers between the ages of 24 and 34 experienced fewer problems than female teachers and teachers under 24 and over 35 years old, other studies reported no differences due to gender and age. It was recommended that comprehensive studies be conducted that attempt to interrelate characteristics of teacher training and school settings with the kinds of problems they have (Veenman, 1984).

As one part of a larger study involving secondary mathematics and science preservice programs at 51 universities nationwide, Adams and Krockover (1997) explored the concerns of beginning science and mathematics teachers and sought to identify perceptions of these beginning teachers about their preservice program in relation to their concerns. They used naturalistic inquiry in an attempt to understand the perceptions of eleven beginning science and mathematics teachers related to their experiences in teaching as well as in their teacher preparation program. Using telephone interviews and survey instruments they found that beginning teachers did not feel adequately prepared in the areas of curriculum development, time management, discipline/classroom management, and presentation of content.

Several researchers suggested that classroom management is the most seriously perceived problem for beginning teachers (Adams & Krockover, 1997; Brock & Grady, 1998; Howey, 1988; Mundt, 1991; Mundt & Connors, 1999; Talbert, Camp, & Heath-Camp, 1994; Veenman, 1984). Other commonly reported problems include time management (Adams & Krockover, 1997; Mundt & Connors, 1999; Talbert, Camp, & Heath-Camp, 1994), curriculum development (Adams & Krockover, 1997;

Howey, 1988; Mundt & Connors, 1999), student motivation (Mundt & Connors, 1999; Veenman, 1984), assessment of student work (Howey, 1998; Veenman, 1984), assistance with individual student differences (Veenman, 1984), and the balance of professional and personal responsibilities (Mundt & Connors, 1999).

Needs of Beginning Agriculture Teachers

There are problems unique to career and technical education teachers that may also create problems for the beginning agriculture teacher. These include maintaining and managing physical facilities such as laboratories, shops and greenhouses, (Mundt, 1991; Mundt & Connors, 1999; Talbert, Camp, & Heath-Camp, 1994), designing curriculum without textbooks (Talbert, Camp, Heath-Camp, 1994), ordering supplies (Talbert, Camp, & Heath-Camp, 1994), and maintaining safety in laboratories (Mundt & Connors, 1999; Talbert, Camp, & Heath-Camp, 1994).

Agricultural education itself poses a set of difficulties for beginning teachers, including FFA organization and management (Mundt, 1991; Mundt & Connors, 1999; Talbert, Camp, & Heath-Camp, 1994), liability concerns with FFA activities (Talbert, Camp, & Heath-Camp, 1994), building support of faculty, counselors, and administrators for the agricultural education program (Mundt & Connors, 1999), the recruitment of students into the program (Mundt & Connors, 1999), and building community support (Mundt & Connors, 1999). Teacher isolation from other teachers in their own school as well as isolation from other teachers in the same discipline also creates a potential for beginning teacher problems as often times the agriculture program is housed in a building separate from the rest of the school and the majority

of agriculture teachers teach in single-teacher programs (Talbert, Camp, & Heath-Camp, 1994).

Warnick, Thompson and Gummer (2004) conducted an exploratory study to obtain general information regarding the successes, challenges, needs, and problem solving strategies of first year agriculture teachers. Structured group and in-depth individual interviews were conducted with beginning teachers and with individuals identified as mentors. Participants had not anticipated concerns with community expectations, decision-making responsibilities, time requirements, and students being “dumped” into the agriculture program prior to beginning their first year of teaching. Classroom management, comparisons to the previous teacher, curriculum development, and dealing with student differences were cited as the most difficult challenges faced during the first year. Beginning teachers in this study reported that they dealt with challenges and difficulties they faced by developing relationships with teachers and partners. The factors most commonly identified as promoting successful experiences included the support and mentoring received during the first year of teaching as well as prior experience in the agriculture industry and FFA.

Support of Beginning Teachers

Mentoring of new teachers by an experienced teacher has been shown to be an effective method of helping new teachers to be successful in their careers and to improve retention rates (Evertson & Smithey, 2000). However, the benefits of the mentoring program are reduced if availability, proximity, accessibility, and similarity of programs are missing from the mentor-mentee relationship (Osgood, 2001). Due to

the rural nature of most schools with agricultural science and technology programs and because typically only one agriculture teacher is employed in each school, appropriate matching of beginning teachers with mentors is difficult.

A study by Carter and Francis (2001) surveyed beginning teachers as well as their supervisors and mentors. Beginning teachers indicated that their initial education programs fell short especially in the areas of assessment, reporting and student management. They also noted that the school-based components (practicum and internship) of their initial teacher education programs provided the richest opportunities for learning about teaching. The study further supported the idea the mentoring relationships play an important role in the induction experiences of beginning teachers. The emphasis that the beginning teachers in the study put on mentoring suggested mentoring as an important part of an effective school-based induction program. Results of the study suggested mentoring relationships promoting collaborative enquiry, cooperative practice and reflection are fundamental to workplace learning for beginning teachers. Furthermore, collaborative endeavors between schools and universities were recommended as being central to effective workplace learning for teachers.

Odell and Ferraro (1992) studied groups of kindergarten through fifth grade teachers who received year-long structured support from mentor teachers during their first year of teaching. Experienced teachers whose teaching time was fully reallocated for providing mentoring support served as mentors. The mentors were prepared by university faculty to emphasize the importance of having new teachers construct their

own knowledge about teaching by reflecting on their teaching, and using strategies such as peer coaching, shared teaching, and questioning to guide and encourage the beginning teachers to identify what they were thinking and what they were focusing on in their teaching. Four years following the mentoring experience, the overall 4-year combined attritional rate was only 16% with 80% of participants reporting that they would still be teaching in 10 years. Participants reported that they most valued the emotional support they received during the first year of teaching.

Similarly, in a study of the relationships between beginning agriculture teachers and their mentors, Greiman (2002) found that mentors provided psychosocial assistance to the beginning teachers. He also found that mentors and beginning teachers who perceived they were similar to their dyad partner were more likely to have satisfying mentoring experiences. Mentors in the study reported personal satisfaction and professional satisfaction from assisting in supporting beginning teachers.

In a study by Oregon State University teacher education faculty (Cole & Thompson, 2000), beginning agriculture teachers perceived mentoring programs differently depending upon the source and type of mentoring. The Oregon teachers were mentored by Oregon State University Agricultural Education Faculty, an experienced agricultural science and technology teacher from another school, and a science teacher from the same school during the 1999-2000 school year. Beginning teachers were surveyed regarding the value of visits and input received from each of the mentors using a five-point Likert scale with five being very helpful and one being

not helpful. Mentors from Oregon State University and from the science departments received average scores of 4.8 and 3.2 respectively, while the experienced agricultural science and technology teacher mentors received an average score of 2.6 (Cole & Thompson, 2000).

Support for beginning teachers is not limited only to mentoring. The preliminary results of a national survey of state leaders in agricultural education (Joerger & Warnick, 2003) indicated that in addition to mentoring, beginning teacher workshops, support from professional associations, communication through e-mail, video conferencing, listserv, and telephone, beginning teacher CD-ROM's and websites, induction courses for credit and non-credit, and formal and informal discussions for beginning teachers to share comments and concerns with each other were used to provide support to beginning teachers.

A conceptual model (Figure 1) was developed based upon the theoretical framework, the literature reviewed, and the qualitative investigation (Warnick, Thompson, & Gummer, 2004) that served to inform the instrument development.

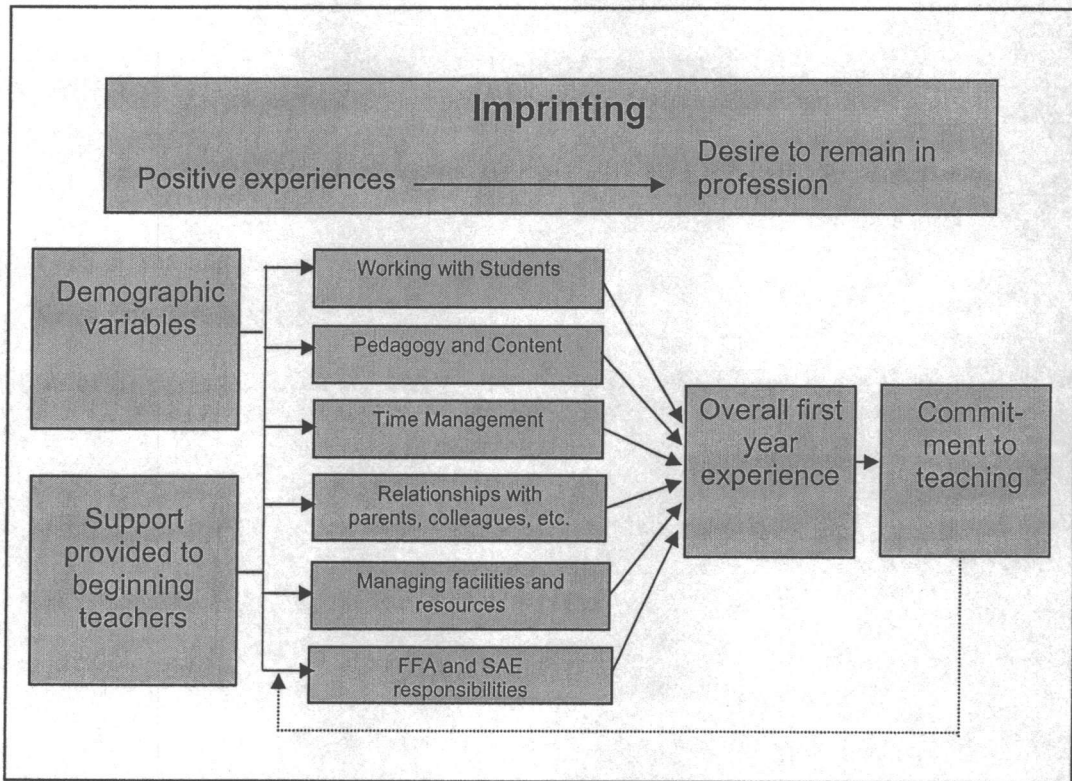


Figure 1. Theoretical framework and conceptual model.

CHAPTER 3

METHODOLOGY AND PROCEDURES

The purpose of this study was to describe the perceptions of the first year experience of teaching secondary agriculture and to explore the relationships between these perceptions, the characteristics of beginning agriculture teachers, and the types of support provided to beginning teachers. An additional focus of the study was to explore the relationship between the level of commitment to teaching and the perceptions of the first year experience. Secondary agriculture teachers from across the U.S. who were in their second year of teaching agricultural education during the 2003-2004 academic year were surveyed for this study.

An internet based survey instrument (Appendix A) was used to identify the perceived experiences of the first year, types of support provided, perceived effectiveness of the support provided, and demographic information of the beginning secondary agriculture teachers. The online questionnaire was utilized as the instrument for data collection because of the advantages of low costs, collection of data from a wide geographical area in a relatively short time period, and collection of data from a large population requiring relatively little time and labor for data input (Gall, Borg, & Gall, 1996; Dillman, 2000).

The purpose of this chapter was to describe the research procedures used to conduct this study. Subheadings in this chapter included: (a) Research Design, (b) Research Questions and Hypotheses, (c) Description of the Population, (d) Description of the Survey Instrument, (e) Construction of the Instrument, (f) Pilot Test Procedures,

(g) Reliability of the Instrument, (h) Validity of the Instrument, (i) Data Collection Procedures, (j) Data Analysis, and (k) Summary.

Research Design

Descriptive survey methods were used to gather demographic information about the beginning agriculture teachers, to assess the perceptions of the first year experience, and to gather information about the types of support provided during the first year. Descriptive research in education using qualitative methods is described by Gall, Borg, and Gall (1996) as “concerned primarily with determining ‘what is’” (p. 374) through “making careful descriptions of education phenomena” (p. 374). They further defined it as a type of research that is used to measure “the characteristics of a sample or population on prespecified variables” (p. 757). The use of descriptive methods was justified as a valid form of research in saying that “unless researchers first generate an accurate description of an educational phenomenon as it exists, they lack a firm basis for explaining or changing it” (p. 374).

This study also utilized correlational methods in exploring relationships between the demographic variables and the perceived experience of the first year, between the perceived effectiveness of support and the perceived experience of the first year, and between the commitment to teaching in the future and the experiences of the first year. Gall, Borg, and Gall (1996) described correlational research as “a type of investigation that seeks to discover the direction and magnitude of the relationship among variables through the use of correlational statistics” (p. 756).

Research Questions and Hypotheses

The following research questions served as a guide for this study:

1. What are the demographic characteristics of beginning agriculture teachers and the schools in which they taught?

2. What are the positive and negative perceptions of the first year of teaching secondary agriculture?

3. What types of support programs are provided for first year secondary agriculture teachers?

4. What is the perception of the effectiveness of the support programs provided?

5. How likely are beginning secondary agriculture teachers to remain in the profession?

6. How do the demographic characteristics relate to the positive and negative perceptions of the first year experience?

a. *Ho*: There is no relationship between the demographic characteristics and the positive and negative perceptions of the first year experience.

7. How do the support programs provided for first year secondary agriculture teachers relate to the positive and negative perceptions of the first year experience?

a. *Ho*: There is no relationship between the support programs provided for first year secondary agriculture teachers and the positive and negative perceptions of the first year experience.

8. How do the positive and negative perceptions of the first year of teaching secondary agriculture relate to the reported likelihood of the teacher remaining in the profession?

a. *Ho*: There is no relationship between the positive and negative perceptions of the first year of teaching secondary agriculture and the reported likelihood of the teacher remaining in the profession.

Description of the Population

The target population for this study included all secondary agriculture teachers in the United States who had completed one full year of teaching agriculture and who were in their second year of teaching agriculture during the 2003-2004 academic year. A secondary agriculture teacher is defined in this study as an individual hired to provide instruction in secondary schools and/or vocational/technical centers with at least a fifty percent assignment in agricultural education. The entire population was selected for participation in this study rather than a sample due to the relatively small population size ($N = 504$), ease of accessibility, and the ease of data input using online technology.

Individuals identified as the “state leader” of agricultural education in each state in the U.S. were initially contacted via E-mail (Appendix B). Names and contact information for these individuals were found in the *Agricultural Education State Leader Listing* posted on the National FFA Organization website (National FFA Organization, 2003). The individuals receiving the E-mail were asked to identify all secondary agriculture teachers in their state who had taught one year and were

currently in their second year of teaching agriculture. If they were unable to provide this information, they were asked to forward the message on to an individual in their state who could identify members of the targeted population. Follow-up communication was continued to all nonrespondents until contact was made, and the names of second year agriculture teachers in each state were identified.

In some cases, if the person identified as the state supervisor had not responded, teacher educators at the universities offering a program in agriculture teacher preparation in that state were contacted and asked for the names and contact information for second year agriculture teachers. A listing by state, of the position of the individual(s) providing the names and contact information as well as the number of teachers matching the population parameters is provided in Appendix C.

Description of the Survey Instrument

The survey instrument (Appendix A) was developed specifically for this study to assess the positive and negative experiences of the first year of teaching secondary agriculture. Additionally, it was designed to explore relationships that might exist between these experiences and the characteristics of the beginning teachers as well as the support provided during the first year of teaching. The survey instrument was developed based upon the results of related literature contributing to the various sections of the instrument. Additionally, the results of an exploratory qualitative study involving a small population of first year teachers were used extensively in the development of the instrument (Warnick, Thompson, & Gummer, 2004). Miles and

Huberman (1994) suggest the use of exploratory qualitative fieldwork in the development of quantitative questionnaires.

A panel of experts (Appendix D) examined the instrument for content validity and readability. The panel of experts consisted of 11 members as follows: six faculty members from teacher education programs in agricultural education, one faculty member from a teacher education program in science and mathematics education, one faculty member from a general teacher education program, one state supervisor of agricultural education, one university faculty member in sociology, and one secondary agriculture teacher who was the recipient of the National Association of Agricultural Educator's Outstanding Young Member Award.

Construction of the Instrument

The related literature revealed no survey instruments available that appropriately matched the purpose and objectives of this study. Due to the lack of an existing instrument's ability to address all the goals for this study, it was necessary to develop a new instrument. Instruments developed for related studies were reviewed and provided direction for the construction of the instrument used in this study. The instrument was developed based upon the recommendations of Dillman (2000), Gall, Borg, and Gall (1996), Krathwohl (1998), and Mertens (1998) and included three major sections with subsections described below (Appendix A).

Section A measured the experiences of first year teachers in terms of positive and negative experience. This section included seven subsections. In each subsection, participants were asked to respond to statements using the following scale: 6 = Very

positive, 5 = Positive, 4 = Somewhat positive, 3 = Somewhat negative, 2 = Negative, 1 = Very negative, and N/A = no basis for response. The first subsection included statements related to the teachers' experience in working with students. Statements regarding pedagogy and curriculum were listed in subsection two. Experiences involving time management provided the basis for the statements in the third subsection. Subsection four included statements regarding the experiences relating to parents, colleagues, and the community. Statements regarding the management of facilities and resources were included in the fifth subsection. The sixth subsection included statements about experiences with advising the FFA (leadership) component of agricultural education and with supervising the agriculture experience programs (project-based learning). The final subsection included a single statement about the overall experience of the first year of teaching. Section A also included two open-ended questions about the experiences of the first year in an attempt to clarify or obtain additional information that may have been missed through the inflexibility of the statements. Camp and Heath-Camp (1991) developed an instrument which provided a list of preset positive and negative experiences for which beginning vocational teachers were asked to respond with the frequency of occurrence and the degree of impact. The lists of statements from their instrument provided a framework for the types of information the researcher wanted to obtain in Section A. Additionally, Marso and Pigge (1987) developed an instrument in their study of self-perceived reality shock of beginning teachers. The participants were asked to rate identified job conditions on a scale from positive to negative. Although the specific

statements for Section A were determined based on many studies related to the initial year of teaching, the scale and framework were based upon the instruments developed by Camp and Heath-Camp (1991) and Marso and Pigge (1987).

Section B measured the types and perceived effectiveness of support programs provided to or experienced by beginning teachers. Participant responses included: N/A = Not available (meaning that the teacher did not participate in the activity or it was not provided), 6 = Very Effective, 5 = Effective, 4 = Somewhat effective, 3 = Somewhat ineffective, 2 = Ineffective, 1 = Very ineffective. The first subsection included statements regarding mentoring experiences while the second subsection included statements regarding additional support activities that may have been provided to or experience by the beginning teacher. Three open-ended questions were included at the end of section B in an attempt to clarify responses and to obtain additional information that may have been missed in the statements provided. As part of the same instrument described above, Camp and Heath-Camp (1991) asked beginning agriculture teachers to provide information regarding the assistance experienced during their first year. The instrument they developed influenced the general framework for Section B.

Section C asked for demographic information about each respondent. This section included questions to clarify whether or not the respondent fit the parameters of the population targeted in the study, information about the institution and program in which the beginning teacher worked during the first year, information regarding

gender, age, and cultural background, teacher preparation and certification, as well as experience in 4-H, FFA, and other relevant activities.

The final question in section C asked beginning teachers to respond to the likelihood that they will be teaching secondary agriculture at various intervals in the future. Response options included the following: 6 = Highly likely, 5 = Likely, 4 = Somewhat likely, 3 = Somewhat unlikely, 2 = Unlikely, 1 = Highly unlikely, and N/A = Not applicable.

Pilot Test Procedures

As the entire population was surveyed, a similar population was required for pilot testing the instrument. A group of secondary agriculture teachers ($N = 16$) who had completed either two or three years of teaching and were in their third or fourth year was identified as the pilot test participants (Appendix F). This group included teachers from California, Pennsylvania, Oregon, and Utah. The teachers were asked via E-mail (Appendix G) to complete the online questionnaire, identify any questions or parts in need of clarification, and offer suggestions to improve the survey instrument. The feedback from the pilot test resulted in a few minor wording changes for clarification and formatting purposes, but no major changes were made to the instrument.

Reliability of the Instrument

The reliability of an instrument refers to its consistency in “measuring whatever it measures” (Krathwohl, 1998, p. 435). Warmbrod (2001, p. 3) stated that reliability “defines the trustworthiness of an instrument.” He further stated that the

“reliability of scores produced by an instrument pertains to consistency, repeatability, dependability, and generalizability” (p. 3). Internal consistency measures were utilized to estimate the reliability of the instrument as it was administered only once to the population. Cronbach’s coefficient alpha was used for estimating internal consistency as the items in the instrument could not be scored dichotomously. An alpha of 1.00 indicates perfect reliability while an alpha of .80 or higher is sufficient for most research (Gall, Borg, & Gall, 1996). The Cronbach’s alpha coefficient on the entire instrument for the pilot test data was estimated at $\alpha = .83$.

Validity of the Instrument

The validity of an instrument is a measure of the truthfulness of an instrument (Warmbrod, 2001). Warmbrod explained that it is “an evaluative judgment of the extent to which an instrument measures what it purports to measure” (p. 1). He described four types of validity, including criterion-related, content, face, and construct.

Content-related and face-related evidence were used to establish the validity of this questionnaire by verifying that the instrument’s scores actually reflect the conceptual domain that these scores claim to measure and that it “appears to measure what it purports to measure” (Warmbrod, 2001, p. 2). Evidence of content and face validity was obtained through the use of a panel of experts and a pilot group as described in preceding sections. Both groups were asked to provide comments and suggestions. Input provided added to the clarity and appropriate wording of the questions.

Data Collection Procedures

Data were collected using Internet technologies following Dillman's (2000) recommendations. The instrument was placed on an online server developed by the Business Solutions Group at Oregon State University's College of Business. This software allowed all data to be entered and collected electronically. Each potential participant was assigned a unique user number and password. The password was required so that each individual could respond to the survey only one time and so that follow-up notices could be sent only to those who had not responded. The software program removed the password and unique identifier from each response so no connection could be made between the responses and the individuals responding to the survey.

A pre-notice e-mail message (Appendix H) was sent to all second-year agriculture teachers for whom an e-mail address was available. These teachers were identified by state leaders in agricultural education as second-year agriculture teachers as described in a preceding section that provided a description of the population. State leaders were asked to provide e-mail addresses and mailing addresses of all secondary agriculture teachers in their state who had completed one full year of teaching and were currently in their second year. In many cases, either an e-mail address or a mailing address was provided, but not both. Through the use of internet searching, several missing e-mail addresses were located, resulting in 429 participants for which e-mail addresses were located out of the 631 in the identified population. A pre-notice e-mail message was sent to those individuals. Twenty-three of the notices "bounced"

or, in other words, were undeliverable at the e-mail address. Accurate e-mail addresses were found for all but five of the individuals to whom the notices bounced. A mailed notice was sent to those for which e-mail addresses were not available and to those for which the e-mailed notice and no accurate address was available.

A cover letter which also served as the informed consent document (Appendix I) was sent via-email one week following the pre-notice to those participants for whom a valid e-mail address was available and sent through the U.S. Postal Service (U.S.P.S.) to those for whom a valid e-mail address was not available. The cover letter contained a link to the online survey instrument. A letter of support encouraging participation was included from Dr. Larry Case, National FFA Advisor, as an attachment to the e-mail or enclosed with the letter (Appendix J). The first mailing resulted in 186 responses. Two weeks following the mailing of the cover letter a follow-up notice (Appendix K) was sent to those potential participants from whom a response had not been received. This follow-up resulted in 49 additional responses. Another follow-up was sent two weeks later, or four weeks from the mailing of the original cover letter. This letter was sent through the U.S.P.S. to all individuals in the identified population who had not responded to the initial e-mail. This follow-up resulted in an additional 53 responses.

Data Analysis

The data collected through the survey system were downloaded into a Microsoft Excel spreadsheet. They were sorted and only those meeting the parameters of the population remained in the data base. All responses remaining in the data base were imported into SPSS 11.5 and analyzed. Specifically, analyses were completed using the following methods for each question:

1. Data related to research questions one, two, three, four, and five were analyzed using descriptive statistics. Frequencies, percentages, means, and standard deviations were calculated for the demographic variables, the reported perceived experiences of the first year, the types of support the teacher received during the first year, the perceived effectiveness of the support received, and the reported commitment to teaching.

2. Principal component analysis with varimax rotation was used to group the 58 variables from Part A of the questionnaire into a smaller number of factors for analysis. The factor scores from these variables related to the experience of the first year of teaching were calculated and saved as new variables. Canonical correlation methods were used to study the interrelationships between these factors (criterion variables) and the demographic characteristics (predictor variables) related to (a) the number of agriculture teachers in the school, (b) gender, (c) age, (d) type of teacher certification, and (e) participation in 4-H, FFA, and other related activities. Canonical correlation "facilitates the study of interrelationships among sets of multiple criterion (dependent) variables and multiple predictor (independent) variables" (Hair,

Anderson, Tatham & Black, 1992). The factor scores obtained through principal component analysis and the demographic characteristics represent the data related to research question six.

3. The data related to research question seven were also analyzed using canonical correlation. The criterion variables were the factors identified through principal component analysis regarding the experience of the first year. The predictor variables were the variables related to the effectiveness of the support provided to the beginning teacher during the first year.

4. The data related to research question eight were also analyzed using canonical correlation techniques. In this case, the independent, or predictor variables, are the factor scores obtained through principal component analysis related to the experience of the first year of teaching. The dependent variable is the perceived likelihood of teaching secondary agriculture in the future.

Summary

Both descriptive and correlational research methods were utilized to answer the eight research questions in this study. The primary research objective was to describe the experience of the first year of teaching and to explore the relationships between the experience of the first year and the support provided to the beginning teacher and demographic characteristics of the beginning teacher. An additional focus of the study was to explore the relationships between the experience of the first year of teaching and the perceived likelihood of teaching secondary agriculture in the future.

The population included all secondary agriculture teachers in the United States who had completed only one year of teaching and were in their second year of teaching secondary agriculture during the 2003-2004 academic year ($N = 504$). Usable responses were received from 208 beginning teachers for an overall response rate of 40.9%.

A survey instrument was created specifically for this study. The instrument was first reviewed by a panel of experts and then placed online. The instrument was then pilot tested by a group of secondary agriculture teachers who had taught for two or three years. Internal consistency, or reliability, was estimated using Cronbach's coefficient alpha, and content and face validity were established upon review by the panel of experts and pilot testing group. All data related to this study were analyzed using SPSS 11.5. Univariate statistics (frequencies and means), principal component analysis, and canonical correlation analysis were used.

CHAPTER 4

RESULTS

Descriptions of this study's purpose, design, population, data collection, and statistical methodologies were provided in chapter three. Chapter four focuses on statistical implementation, reasoning and results.

The purpose of this exploratory quantitative study was to describe the perceptions of the first year experience of teaching secondary agriculture and to explore the relationships between these perceptions, the characteristics of beginning agriculture teachers, and the types of support provided to beginning teachers. An additional focus of the study was to explore the relationship between the level of commitment to teaching and the perceptions of the first year experience. The population for this study consisted of all secondary agriculture teachers from across the U.S. who were in their second year of teaching agricultural education during the 2003-2004 academic year. The following questions guided the study:

1. What are the demographic characteristics of beginning agriculture teachers and the schools in which they taught?
2. What is the experience of the first year of teaching secondary agriculture in terms of positive and negative perceptions?
3. What types of support programs are provided for first year secondary agriculture teachers?
4. What is the perception of the effectiveness of the support programs provided?

5. How likely are beginning secondary agriculture teachers to remain in the profession?
6. How do the demographic characteristics relate to the positive and negative perceptions of the first year experience?
 - a. *Ho*: There is no relationship between the demographic characteristics and the positive and negative perceptions of the first year experience.
7. How do the support programs provided for first year secondary agriculture teachers relate to the positive and negative perceptions of the first year experience?
 - a. *Ho*: There is no relationship between the support programs provided for first year secondary agriculture teachers and the positive and negative perceptions of the first year experience.
8. How do the positive and negative perceptions of the first year of teaching secondary agriculture relate to the reported likelihood of the teacher remaining in the profession?
 - a. *Ho*: There is no relationship between the positive and negative perceptions of the first year of teaching secondary agriculture and the reported likelihood of the teacher remaining in the profession.

Response Rate

The total population for this study consisted of all secondary agriculture teachers in the United States who had taught one full year and were in their second year of teaching agriculture during the 2003-2004 academic year, $N = 504$. Letters or

e-mail messages were sent to all teachers identified by state supervisors of agricultural education and/or teacher educators

Two questions in the demographic information section were meant to collect information that would allow the researcher to determine if the respondent was included within the parameters of the population. The first of these questions asked for the respondents' current level of teaching experience. The responses of any participant providing a response other than, "I am currently in my second year of teaching," were not included in the final analysis. The other question used to determine whether or not participants' responses should be included in the final analysis asked for information about the teaching assignment. The responses of any participant identified as not having a full-time position with at least a 50% assignment in agricultural education were also not included in the final analysis. Therefore, the responses of 80 participants were removed from the database prior to analysis. After making adjustments for those misidentified and those responding that did not match the population parameters, 208 usable surveys were returned out of 504 potential participants, yielding a return of 41.27%. Information regarding return rate is presented in Table 1.

Table 1
Number of Questionnaires Mailed and Response Rates for the Study

	Number of Teachers
Number of teachers identified	631
Number of teachers misidentified without survey response	47
Population without those misidentified	584
Total responses	288
Initial response Rate	49.32%
Number of teachers misidentified with responses	80
Adjusted Population	504
Total Usable Responses	208
Usable Response Percentage	41.27%

The first mailing resulted in 186 returned questionnaires. The 2-week follow-up mailing to nonrespondents yielded an additional 49 completed questionnaires. The third and final reminder added 53 more questionnaires. The follow-up procedures were the first step in controlling for nonresponse error, attempting to get back as many responses as possible (Dillman 2000; Miller & Smith, 1983).

To provide evidence that results from this study might be applied to the 2003-2004 population of second-year agriculture teachers, a random sample of the nonrespondents was identified and contacted through telephone calls. Miller and Smith (1983) recommend a 10 to 20% sample of the non-respondents. As there were

306 teachers who had not responded to the survey, a random sample of 61 was selected. Each member of the nonrespondents sample group was asked to complete the questionnaire over the telephone, or complete it and return it through fax or e-mail. Only seven of the 61 teachers completed the questionnaire as part of this follow-up group. Eleven teachers contacted reported that they did not meet the required parameters of the population as they were either not second year teachers or did not have at least a 50 percent teaching assignment in agricultural education during their initial year. Linder, Murphy, and Briers (2001) suggested that, after diligent effort, if data can be obtained from fewer than 20 non-respondents, the data from non-respondents that is collected can be combined with the response data from late respondents in making comparisons for estimation of non-response error. They recommended that late respondents be operationally defined to include those who respond following the final follow-up stimulus. In this study, 53 participants responded after the final reminder. The summed responses of the 60 participants considered non-respondents or late-respondents were compared to the summed responses of the 155 participants who responded prior to the final reminder using an independent *t*-test. An analysis of the responses of those who were considered late respondents and non-respondents as compared to those who had responded prior to the final reminder notice showed no evidence of a difference (two-sided *p*-value = .403 from a two-sample *t* test).

Demographic Information

The first research question was designed to identify the characteristics of the population. Questions included information about each teacher's personal characteristics, characteristics about each teachers' school and program in which they taught during their first year, and the likelihood that the participant would be teaching secondary agricultural education at various points in the future.

Teacher personal characteristics

Questions about participants' personal characteristics included gender, age, racial/ethnic identity, educational background, teacher certification status, and background in 4-H and FFA. Of the respondents, 47.1% were female and 51.9% were male, with 1% (two respondents) declining to respond to the question. Figure 1 represents the percentages of male and female respondents in the study.

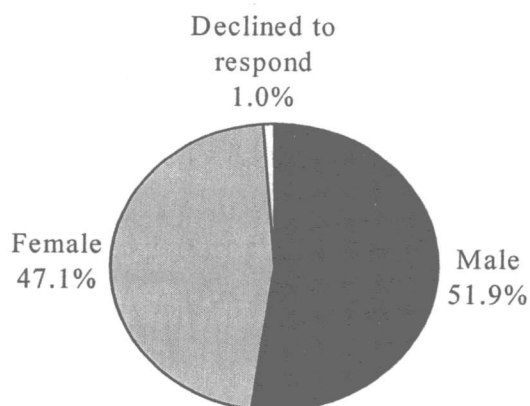


Figure 2. Gender of Beginning Secondary Agriculture Teachers ($N = 208$).

Participant ages ranged from 22 to 57 years old. These ages were grouped into eight intervals based upon the range of ages for ease of reporting. Table 2 shows the breakdown of participants into the age groups. The mean age was 26.78 with a standard deviation of 5.92.

Table 2
Distribution of Ages for Respondents ($N = 208$).

Age of Respondent	Frequency	Percentage
22 – 23	129	62.02%
24 – 25	54	25.96%
26 – 27	10	4.81%
28 – 30	4	1.92%
31 – 35	4	1.92%
35 – 40	5	2.40%
41 – 50	1	0.48%
51 – 60	1	0.48%
Missing	0	0.0%
Total	208	100%

The majority of respondents (97.59%) reported that their racial/ethnic identity was best described as “White, European American, Non-Hispanic.” One participant (0.48%) identified with each of the following descriptions: “Black, African American, Non-Hispanic,” “Hispanic or Latino American,” “American Indian or Alaskan Native,” and “Other.” One participant (0.48%) declined to respond. There were no

participants who reported that their racial/ethnic identity was described as “Asian or Asian American,” “Middle Eastern or Middle-Eastern American,” “North African or North African-American,” or “Pacific Islander.” The percentage of respondents identifying with each category of racial/ethnic identity is provided in Table 3.

Table 3
Distribution of Racial/Ethnic Identity for Respondents ($N = 208$).

Racial Ethnic Identity	Frequency	Percentage
White, European American, Non-Hispanic	203	97.59%
Asian or Asian American	0	0.0%
Black, African American, Non-Hispanic	1	0.48%
Middle Eastern or Middle-Eastern American	0	0.0%
North African or North-African American	0	0.0%
Pacific Islander	0	0.0%
Hispanic or Latino American	1	0.48%
American Indian or Alaskan Native	1	0.48%
Other	1	0.48%
Decline to respond	1	0.48%
Missing	0	0.0%
Total	208	100%

Participants were asked to respond to statements about the levels of education they had completed. Sixty-nine of the respondents (33.2%) reported that they had completed a certificate program or associates degree, 162 of the respondents (77.9%)

had completed a Bachelor's degree in agricultural education, and 57 respondents (27.4%) reported they had completed a Bachelor's degree in an area other than agricultural education. Post-baccalaureate coursework completed was reported by 93 respondents (44.7%), completion of a Master's degree was reported by 39 participants (18.8%), and completion of other graduate level training was reported by 42 participants (20.2%). Additionally, 65 participants (31.3%) reported experience of full-time employment for one year or longer in an agriculture or natural resources career other than teaching. A summary of the reported education and work experience is provided in Table 4.

Table 4

Summary of Completion of Education and Work Experience ($N = 208$)

Education and Work Experience	<u>Yes</u>		<u>No</u>	
	Frequency	Percentage	Frequency	Percentage
Certificate Program / Associates Degree	69	33.2%	139	66.8%
Bachelor's Degree in Agricultural Education	162	77.9%	46	22.1%
Bachelor's degree other than agricultural education	57	27.4%	151	72.6%
Post-baccalaureate degree	93	44.7%	115	55.3%
Master's Degree	39	18.8%	169	81.3%
Other graduate level training	42	20.2%	166	79.8%
Full-time employment for more than one year in an agricultural or natural resources	65	31.3%	143	68.8%

Participants were asked to select from a list of statements that best described the teacher certification status at the beginning of their first year of teaching. A majority of the participants, 175 teachers (84.1%), reported they held a certification obtained through a traditional agricultural education teacher preparation program. Eleven of the participants (5.3%) held a certification obtained through an alternative certification program, while 14 respondents (6.7%) held temporary certification and were working toward alternative certification. No respondents reported holding a temporary certificate without plans to obtain certification. Eight participants (3.8%) reported a certification other than one of the choices. The open ended responses for the other categories included two participants previously certified in the process of re-certifying, four who were on provisional or emergency certificates working toward certification, one with a professional technical certificate, and one certified through a graduate program. A summary of the respondents' reported teacher certification status is given in Table 5.

Table 5
Summary of Teacher Certification Status ($N = 208$)

Certification Status at the Beginning of the First Year of Teaching	Frequency	Percentage
Certified through traditional agricultural education teacher education program	175	84.1%
Temporary certification working toward alternative certification	14	6.7%
Certified through an alternative certification program	11	5.3%
Other	8	3.8%
Temporary certification with no plans to obtain certification	0	0.0%
Total	208	100%

The final questions regarding the personal characteristics of the respondents dealt with the teachers' backgrounds in 4-H, FFA, or other programs related to their position as an FFA advisor and agriculture teacher. One hundred twenty-eight participants (61.5%) reported they had participated in both 4-H and FFA as youth, while 48 respondents (23.1%) had participated in FFA but not 4-H, and 15 respondents (7.2%) had participated in 4-H but not FFA. Only 17 respondents (8.2%) had not participated in one or the other activities as youth. Of those participating in FFA, the mean number of years of participation was 4.53 with a standard deviation of 1.672, and for those participating in 4-H, the mean number of years of participation was 7.83 with a standard deviation of 3.14. Participants were also asked if they had

participated in other activities as youth that were relevant to their position as an FFA advisor (i.e., public speaking, student government, etc.). Approximately two-thirds of the participants (139 teachers; 66.8%) responded that they had participated in other relevant activities, while 64 participants (31.5%) reported that they had not participated in such activities. Of the 64 not reporting relevant activities, only twelve (5.8%) also reported no participation in either 4-H or FFA. Table 6 summarizes the subjects' participation in 4-H, FFA, and other relevant activities.

Table 6
Summary of Participation in 4-H, FFA, and Other Relevant Activities ($N = 208$)

Activity	Frequency	Percentage	Mean Years of Participation	SD
Participation in FFA	176	84.6%	4.54	1.67
Participation in 4-H	143	68.8%	7.83	3.14
Participation in other relevant activities	139	66.8%	n/a	n/a
Participation in both 4-H and FFA	128	61.5%	n/a	n/a
No participation in 4-H or FFA reported	17	8.2%	n/a	n/a
No participation in 4-H, FFA, or other relevant activities reported	12	5.8%	n/a	n/a

School and program characteristics

Questions about the characteristics of the school in which the beginning teacher taught during the first year included the type of school, student enrollment, and the state in which the school was located. Questions about the agriculture program in

which the teacher taught during the first year included the number of agriculture instructors in the program, the number of students enrolled in the agriculture program, the percentage of students enrolled who were members of the FFA, the number of students enrolled who had supervised agricultural experience programs, perceptions of the previous reputation of the agriculture program, the number of students in each class, and about FFA stipends and extended days contracts.

Participants were asked to select a statement that best described the school in which they taught during their first year. A majority (167 respondents, 80.3%) of the participants reported that they taught in a comprehensive high school during their first year, while 13 respondents (6.3%) said that a vocational, technical, or career school best described the school in which they taught, 13 respondents (6.3%) taught in a junior high or middle school, and 15 respondents (7.2%) taught in a split assignment between different types of schools. Table 7 provides a summary for the responses to the question about the type of school in which the beginning teachers taught during their first year.

Table 7

Type of school in which respondents taught during their first year (N = 208)

School type	Frequency	Percentage
Comprehensive High School	167	80.3%
Vocational, Technical, or Career Center	13	6.3%
Junior High or Middle School	13	6.3%
Split assignment between different types of schools	15	7.2%
Total	208	100%

Participants were asked to report the number of students enrolled in the school in which they taught during their first year. Responses ranged from 37 to 4500 students with a mean of 678.68 and standard deviation of 688.42. A summary of the reported school student enrollment is provided in Table 8. For reporting purposes, the reported numbers of students enrolled were grouped into increments that best represented the range of enrollment reported.

Table 8
 Summary of school student enrollment ($N = 208$)

Number of students enrolled in the school in which beginning teachers taught during their first year	Frequency	Percentage
100 students or fewer	24	11.5%
101 – 250 students	39	18.8%
251 – 500 students	45	21.6%
501 – 750 students	30	14.4%
751 – 1000 students	28	13.5%
1001 – 1250 students	10	4.8%
1251 – 1500 students	10	4.8%
1501 – 1750 students	5	2.4%
1751 – 2000 students	6	2.9%
More than 2000 students	9	4.3%
Missing	2	1.0%
Total	208	100%

The distribution of states in which participants reportedly taught during their first year is summarized in Table 9.

Table 9

Summary of states in which respondents taught during the first year ($N = 208$)

State	Frequency	%	State	Frequency	%
Alabama	0	0.0%	Nebraska	6	2.9%
Alaska	0	0.0%	Nevada	1	0.5%
Arizona	8	3.9%	New Hampshire	1	0.5%
Arkansas	2	1.0%	New Jersey	1	0.5%
California	13	6.3%	New Mexico	0	0.0%
Colorado	5	2.4%	New York	7	3.4%
Connecticut	1	0.5%	North Carolina	9	4.3%
Delaware	2	1.0%	North Dakota	4	1.9%
Florida	0	0.0%	Ohio	11	5.3%
Georgia	10	4.8%	Oklahoma	7	3.4%
Hawaii	0	0.0%	Oregon	7	3.4%
Idaho	5	2.4%	Pennsylvania	5	2.4%
Illinois	8	3.9%	Rhode Island	0	0.0%
Indiana	6	2.9%	South Carolina	3	1.4%
Iowa	4	1.9%	South Dakota	0	0.0%
Kansas	10	4.8%	Tennessee	3	1.4%
Kentucky	6	2.9%	Texas	12	5.8%
Louisiana	1	0.5%	Utah	3	1.4%
Maine	0	0.0%	Virginia	6	2.9%
Maryland	0	0.0%	Vermont	1	0.5%
Massachusetts	0	0.0%	Washington	5	2.4%
Michigan	2	1.0%	Wisconsin	5	2.4%
Minnesota	6	2.9%	West Virginia	5	2.4%
Mississippi	1	0.5%	Wyoming	4	1.9%
Missouri	5	2.4%	Missing	3	1.0%
Montana	4	1.9%	Total	208	100%

Beginning teachers were asked how many agricultural education instructors taught in the school in which they taught during their first year. A majority of the participants (119 respondents; 57.2%) reported that they taught in a school with only one agriculture teacher. Seven respondents (3.4%) reported that there were no agriculture teachers in the school, while 46 participants (22.1%) taught in a school with two agriculture teachers. Thirty-six teachers (17.3%) reported that they taught in a school with three or more agriculture teachers. The mean number of agriculture teachers was 2.47 with a standard deviation of 8.96. Some outliers cause concern that not all participants fully understood the question. The median value was 1.0. A summary of the number of agriculture teachers in the school in which the beginning teacher taught during the first year is given in Table 10.

Table 10

Number of agriculture teachers in the school in which respondents taught during their first year (N = 208)

Number of Agriculture Teachers	Frequency	Percentage
Zero to One Agriculture Teachers	126	60.6%
Two Agriculture Teachers	46	22.1%
Three or more Agriculture Teachers	36	17.3%
Total	208	100%

Participants were asked to report the number of students enrolled in the agriculture program in which they taught during their first year. A range of values

was reported from 10 students to 680, with a mean of 130.64 and a standard deviation of 119.89. For reporting purposes, frequencies and percentages were broken into increments of 50 and are summarized in Table 11.

Table 11

Number of students enrolled in the agriculture program in which beginning teachers taught during their first year (N = 208)

Student Enrollment in Agricultural Education	Frequency	Percentage
Less than 50 students	51	24.5%
51 - 100 students	69	33.2%
101 - 150 students	30	14.4%
151 - 200 students	16	7.7%
201 - 250 students	16	7.7%
251 - 300 students	12	5.8%
More than 300 students	12	5.8%
Missing	2	1.0%
Total	208	100%

The next two questions asked beginning teachers to report the percentage of students enrolled in the agricultural education program in which they taught during their first year who were FFA members and who had supervised agricultural experience (SAE) programs. The mean percentage of FFA members was 67.7% with a standard deviation of 61.8 and the mean percentage of students with SAE programs was 45.7% with a standard deviation of 41.7. Percentages of FFA membership and

SAE programs are summarized in Table 12 in increments of ten percent with the exceptions of 0% and 100%, which are presented individually. A few participants reported higher than 100% for both questions.

Table 12

Summary of percentage students who were FFA members and had supervised agricultural experience programs (N = 208)

Percentage of Students	FFA Membership		SAE Participation	
	Frequency	Percentage	Frequency	Percentage
0%	6	2.9%	22	10.6%
1-10%	16	7.7%	35	16.8%
11-20%	17	8.2%	15	7.2%
21-30%	18	8.7%	27	13.0%
31-40%	11	5.3%	12	5.8%
41-50%	20	9.6%	24	11.5%
51-60%	15	7.2%	5	2.4%
61-70%	9	4.3%	6	2.9%
71-80%	19	9.1%	17	8.2%
81-90%	21	10.1%	13	6.3%
91-99%	3	1.4%	6	2.9%
100%	43	20.7%	21	10.1%
More than 100%	8	3.8%	4	1.9%
Missing	2	1.0%	1	0.5%
Total	208	100%	208	100%

Participants were asked to respond to a question regarding the perceived general reputation of the agriculture program in which they taught during their first year before they began teaching. Twenty-three teachers (11.1%) responded that the

reputation of the program was “Very Strong,” 55 participants (26.4%) reported the reputation to be “Strong,” 57 teachers (27.4%) said that the reputation was “Fair,” 31 respondents (14.9%) reported that it was “Poor,” 32 teachers (15.4%) chose the “Very Poor” option, and 10 teachers (4.8%) reported that it was a new program. Table 13 summarizes the results of this question.

Table 13

Perceived general reputation of the agriculture program prior to the beginning teacher’s first year (N = 208)

Perceived general reputation	Frequency	Percentage
Very Strong	23	11.1%
Strong	55	26.4%
Fair	57	27.4%
Poor	31	14.9%
Very Poor	32	15.4%
It was a new program	10	4.8%
Total	208	100%

Two questions were asked about the number of students the beginning teacher was asked to teach in each class. Twenty-three teachers (11.1%) responded that overall the number of students asked to teach in each class was “Too large to manage,” 58 teachers (27.9%) said that it was “Large, but manageable,” 91 teachers (43.8%) felt their class sizes were “Just right,” 30 participants (14.4%) felt their

classes were “Small,” and six teachers (2.9%) said their classes were “Much too small.” Beginning teachers were also asked to estimate the number of students in each class. A summary of the mean, maximum, minimum and median broken down by the responses to the questions about class size is given in Table 14.

Table 14

Summary of the perception of class size and number of students in each class (N = 208)

The number of students asked to teach in each class is:	Frequency	Percentage	Average number of students per class		
			Mean (SD)	Min/Max	Median
Too large to manage	23	11.1%	26.1 (3.7)	20 / 34	25
Large, but manageable	58	27.9%	22.7 (6.1)	10 / 35	23
Just right	91	43.8%	15.7 (5.5)	5 / 30	15
Small	30	14.4%	9.3 (3.1)	5 / 15	10
Much too small	6	2.9%	7.3 (2.5)	4 / 10	7
Missing	0	0.0%			
Total	208	100%			

The final questions relating to the program in which the beginning teacher taught during the first year dealt with extra compensation provided for the additional responsibilities of FFA advising and SAE program supervision. Teachers were asked whether or not they received an FFA stipend during the first year, with 99 participants (47.6%) reporting they had not received a stipend, and 109 participants (52.4%) reporting they had received a stipend. Participants were also asked if they received an extended days contract for advising and/or supervision during the first year. Forty

teachers (19.2%) reported they did not receive compensation for additional days of work beyond the standard teaching contract, while 166 teachers (79.8%) reported they did receive an extended days contract. Data from these questions is summarized in Table 15. Participants were also asked how many days pay they received in addition to the standard teaching contract. The mean response was 36.36 days with a standard deviation of 17.45.

Table 15

Summary of compensation provided for additional responsibilities (N = 208)

Compensation provided for additional responsibilities:	FFA Stipend		Extended Contract	
	Frequency	Percentage	Frequency	Percentage
Yes	109	52.4%	166	79.8%
No	99	47.6%	40	19.2%
Missing	0	0.0%	2	1.0%
Total	208	100%	208	100%

Likelihood of remaining in the classroom

Participants were asked about the likelihood of their teaching secondary agriculture one year, three years, five years, ten years, and twenty years from the time of the survey. One-hundred eighty-five of the participants (88.9%) responded that they are either “Likely” or “Highly Likely” to be teaching secondary agriculture one year from the time of the survey, while only six participants (2.8%) responded they are either “Unlikely” or “Highly Unlikely” to be teaching one year from now. At three years from the time of the survey, 153 participants (73.6%) said they are either “Likely” or “Highly Likely” to be teaching secondary agriculture, while eight

participants (3.8%) responded that they are either “Unlikely” or “Highly Unlikely.” One-hundred twenty-seven teachers (61.1%) felt it was either likely or highly likely that they would be teaching secondary agriculture five years from the time of the survey, while 17 teachers (9.1%) responded they are either unlikely or highly likely to be teaching at that time. Less than half (44.7%) of the participants reported they were either likely or highly likely to be teaching secondary agriculture ten years from the time of the survey, while 34 participants (16.3%) felt they were either unlikely or highly unlikely to be teaching at that time. Slightly less than one-third (31.7%) of the participants responded that they are likely or highly likely to be teaching secondary agriculture twenty years from the time of the survey. One-fourth of the participants reported that they were either unlikely or highly unlikely to be teaching secondary agriculture twenty years from the time of the survey. The results from this question about the likelihood of teaching secondary agriculture in the future are summarized in Table 16.

Table 16
Perceived likelihood of teaching secondary agriculture in the future (N = 208)

	Highly Likely	Likely	Some-what Likely	Some-what Unlikely	Unlikely	Highly Unlikely
Time from survey	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
One year	151 (72.6%)	34 (16.3%)	9 (4.3%)	7 (3.4%)	3 (1.4%)	3 (1.4%)
Three years	101 (48.6%)	52 (25%)	32 (15.4%)	10 (4.8%)	3 (1.4%)	5 (2.4%)
Five years	69 (33.2%)	58 (27.9%)	43 (20.7%)	16 (7.7%)	11 (5.3%)	8 (3.8%)
Ten years	42 (20.2%)	51 (24.5%)	52 (24.0%)	24 (11.5%)	19 (9.1%)	15 (7.2%)
Twenty years	32 (15.4%)	34 (16.3%)	61 (29.3%)	24 (11.5%)	19 (9.1%)	33 (15.9%)

Analysis of Instrument Reliability

The instrument created for this study consisted of three major sections, each with a number of subsections. In the first major section, the six subsections were each intended to measure a different construct. Each subsection was evaluated for reliability, or internal consistency, independent of the other subsections. Reliability was then examined for the major section to measure its overall reliability. Accordingly, the reliability of the second and third sections of the instrument were each estimated individually.

The internal consistency of the instrument was estimated using Cronbach's alpha. Cronbach's alpha is a widely used method for estimating the internal consistency of instruments that utilize data that are not scored dichotomously (Gall, Borg, & Gall, 1996; Krathwohl, 1998). As this instrument consisted of scaled data, Cronbach's alpha was the most appropriate estimate of internal consistency. Table 17 reports the number of items, types of options available for response and coefficient alpha for each section of the questionnaire. When analyzing all scaled items for the instrument, the overall alpha score for the questionnaire was .92.

Table 17

Coefficient Alpha for Each Questionnaire Section

Section Number	Number of Items	Title	Response Option	Coefficient alpha
I	58*	Experiences of the first year: Complete section	Very positive, positive, somewhat positive, somewhat negative, negative, very negative	.94
I a	13	Working with students		.77
I b	12	Pedagogy and curriculum		.85
I c	5	Personal time management and compensation		.86
I d	12	Relationships with parents, colleagues, and community		.79
I e	7	Managing facilities and resources		.83
I f	8	FFA and SAE responsibilities		.91
II	17	Support for beginning teachers	N/A, Very Effective, Effective, Somewhat Effective, Somewhat Ineffective, Ineffective, Very Ineffective	.74
III	5	Likelihood of teaching secondary agriculture in the future	Highly Likely, Likely, Somewhat Likely, Somewhat Unlikely, Unlikely, Highly Unlikely	.92

* Includes a final overall question not included in one of the subsections.

Screening of Data

Before any data analysis was performed, all responses were carefully screened to ensure that the respondent matched the parameters of the population. Eighty sets of responses were eliminated from the data set because the respondents were not in their second year of teaching secondary agricultural education and/or had an assignment of less than 50% agricultural education. Additionally, the data were carefully screened for accuracy, missing values, outliers, normal distribution, and linearity using SPSS for Windows version 11.5. Accuracy was checked by looking at the minimum and maximum values as well as frequencies and histograms. Missing value analysis showed that no more than 5% of any one variable was missing. Several cases had one missing value, but these missing values appeared to be randomly distributed.

Normality was assessed visually using histograms with normal curves for data.

Experiences and Support of Beginning Agriculture Teachers

Research question two was designed to describe the perceived experience of the first year of teaching by the beginning teachers who had completed one full year of teaching secondary agriculture and were in their second year of teaching during the 2003-2004 academic year. Part A of the questionnaire provided statements about experiences during the first year. Respondents were asked to determine whether they viewed the experience as "Very Positive," "Positive," "Somewhat Positive," "Somewhat Negative," "Negative," or "Very Negative." There were seven subsections comprising Part A with two open-ended questions at the end of the section for participants to provide additional comments or information.

The first set of questions in Part A included statements related to experiences in working with students during the first year. “Working with students in the FFA” was the statement most frequently selected as very positive, with 85 percent of participants responding either positive or very positive. Other statements perceived as positive or very positive most frequently included, “working with my students outside of class” (81.7%), “working with students within the classroom” (73.1%), and “dealing with student gender differences” (71.2%). Statements related to working with students that were perceived as positive or very positive least frequently included “Working with students in your classes who don’t want to be there” (14.9%), “Dealing with problem student behavior” (32.6%), “Dealing with student academic differences” (39.4%), and “Teaching students with learning disabilities” (39.9%). The statement most frequently perceived as negative or very negative was “Working with students in your classes who don’t want to be there” (44.9%), followed by “Dealing with problem student behavior” (12.5%). No other statements related to working with students were perceived as negative or highly negative at a frequency greater than ten percent. Table 18 provides a summary of the response frequencies for the statements related to working with students.

Table 18: Perceived experiences in working with students during the first year (N = 208)

	Very Positive	Positive	Some-what Positive	Some-what Negative	Negative	Very Negative	N/A
	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Experiences with students							
Working with students in FFA	107 (51.4)	70 (33.7)	16 (7.7)	3 (1.4)	3 (1.4)	1 (0.5)	7 (3.4)
Working with my students outside of class	92 (44.2)	78 (37.5)	33 (15.9)	1 (0.5)	0 (0.0)	0 (0.0)	3 (1.4)
Recruiting students into agricultural education	48 (23.1)	64 (30.8)	59 (28.4)	20 (9.6)	6 (2.9)	3 (1.4)	8 (3.8)
Dealing with student gender differences	47 (22.6)	101 (48.6)	44 (21.2)	4 (1.9)	3 (1.4)	0 (0.0)	6 (2.9)
Working with students within the classroom	43 (20.7)	109 (52.4)	43 (20.7)	10 (4.8)	2 (1.0)	0 (0.0)	0 (0.0)
Helping students work through personal problems	37 (17.8)	82 (39.4)	70 (33.7)	5 (2.4)	1 (0.5)	0 (0.0)	12 (5.8)
Teaching students with socioeconomic differences	24 (11.5)	111 (53.4)	46 (22.1)	15 (7.2)	3 (1.4)	1 (0.5)	6 (2.9)
Motivating students in the classroom	20 (9.6)	81 (38.9)	69 (33.2)	25 (12.0)	11 (5.3)	1 (0.5)	0 (0.0)

Table 18 (Continued)

	Very Positive	Positive	Some-what Positive	Some-what Negative	Negative	Very Negative	N/A
	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Experiences with students							
Teaching students with cultural differences	17 (8.2)	88 (42.3)	40 (19.2)	11 (5.3)	4 (1.9)	0 (0.0)	48 (23.1)
Teaching students with learning disabilities	16 (7.7)	67 (32.2)	77 (37.0)	28 (13.5)	12 (5.8)	2 (1.0)	6 (2.9)
Dealing with student academic differences	10 (4.8)	72 (34.6)	81 (38.9)	38 (18.3)	7 (3.4)	0 (0.0)	0 (0.0)
Dealing with problem student behavior	8 (3.8)	60 (28.8)	72 (34.6)	42 (20.2)	23 (11.1)	3 (1.4)	0 (0.0)
Working with students in your classes who don't want to be there	2 (1.0)	29 (13.9)	59 (28.4)	61 (29.3)	40 (19.2)	14 (6.7)	2 (1.0)

Table 19 depicts the respondents' perceptions regarding pedagogy and curriculum. "Professional development opportunities" were most frequently reported as a very positive or positive experience (71.6%). Other statements most frequently reported as very positive or positive included "Knowledge of the subject matter" (65.4%), "Using multimedia in teaching" (62.0%), and "Keeping technically competent in new agricultural knowledge and skills" (61.1%). "Targeting instruction for learning level of students" and "Lesson Planning" were perceived as positive or very positive by only 30.8 percent and 40.8 percent of respondents respectively. "Using computers in the classroom" was the only statement related to pedagogy and curriculum that was perceived as negative or very negative by more than five percent of respondents (6.7%); however, 59.2 percent of the respondents reported positive or very positive perceptions related to the use of computers.

Fewer than 25 percent of respondents reported positive or very positive perceptions for all statements related to time management and compensation. "Salary in relationship to time required" was perceived as positive and very positive most frequently by respondents (24.5%) and also perceived as negative or very negative most frequently (25.9%). "Personal time management" (23.6%) was the next most frequently statement reported as positive or very positive. "Preparation time" (17.3%) and "Balancing professional and personal responsibilities" (22.6%) were the statements reported as positive or very positive least frequently. The majority of respondents reported either somewhat positive or somewhat negative perceptions to all statements in this section. Table 20 provides a summary of the data from this section.

Table 19: Perceived experiences with pedagogy and curriculum during the first year (N = 208)

	Very Positive	Positive	Some-what Positive	Some-what Negative	Negative	Very Negative	N/A
Experiences with pedagogy and curriculum	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Professional development opportunities	78 (37.5)	71 (34.1)	43 (20.7)	12 (5.8)	3 (1.4)	0 (0.0)	0 (0.0)
Using multimedia in teaching	61 (29.3)	68 (32.7)	50 (24.0)	16 (7.7)	3 (1.4)	2 (1.0)	7 (3.4)
Keeping technically competent in new agricultural knowledge and skills	53 (25.5)	74 (35.6)	59 (28.4)	15 (7.2)	2 (1.0)	1 (0.5)	4 (1.9)
Using computers in the classroom	53 (25.5)	70 (33.7)	46 (22.1)	16 (7.7)	8 (3.8)	3 (1.4)	11 (5.3)
Knowledge of the subject matter	31 (14.9)	105 (50.5)	52 (25.0)	18 (8.7)	2 (1.0)	0 (0.0)	0 (0.0)
Curriculum development	22 (10.6)	76 (36.5)	77 (37.0)	26 (12.5)	7 (3.4)	0 (0.0)	0 (0.0)
Teaching students problem-solving and decision making skills	18 (8.7)	78 (37.5)	75 (36.1)	31 (14.9)	3 (1.4)	0 (0.0)	3 (1.4)

Table 19 (Continued)

	Very Positive	Positive	Some-what Positive	Some-what Negative	Negative	Very Negative	N/A
Experiences with pedagogy and curriculum	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Assessment and evaluation of student performance	17 (8.2)	85 (40.9)	79 (38.0)	21 (10.1)	4 (1.9)	2 (1.0)	0 (0.0)
Teaching using experiments / inquiry	17 (8.2)	63 (30.3)	74 (35.6)	38 (18.3)	5 (2.4)	0 (0.0)	8 (3.8)
Strategies for quality instruction	9 (4.3)	82 (39.4)	90 (43.3)	22 (10.6)	3 (1.4)	0 (0.0)	1 (0.5)
Lesson planning	9 (4.3)	76 (36.5)	77 (37.0)	38 (18.3)	6 (2.9)	2 (1.0)	0 (0.0)
Targeting instruction for learning level of students	6 (2.9)	58 (27.9)	98 (47.1)	38 (18.3)	5 (2.4)	1 (0.5)	1 (0.5)

Table 20: Perceived experiences with time management and compensation during the first year (N = 208)

	Very Positive	Positive	Some-what Positive	Some-what Negative	Negative	Very Negative	N/A
Experiences with time management and compensation	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Salary in relationship to time required	6 (2.9)	45 (21.6)	62 (29.8)	41 (19.7)	35 (16.8)	19 (9.1)	0 (0.0)
Personal time management	6 (2.9)	43 (20.7)	57 (27.4)	62 (29.8)	29 (13.9)	11 (5.3)	0 (0.0)
Managing teaching load	6 (2.9)	42 (20.2)	76 (36.5)	57 (27.4)	22 (10.6)	5 (2.4)	0 (0.0)
Balancing professional and personal responsibilities	5 (2.4)	42 (20.2)	56 (26.9)	62 (29.8)	29 (13.9)	11 (5.3)	0 (0.0)
Preparation time	4 (1.9)	32 (15.4)	68 (32.7)	62 (29.8)	33 (15.9)	9 (4.3)	0 (0.0)

Over 90 percent of respondents reported positive or very positive relationships with school staff (i.e., secretaries, custodians, cooks, etc.) and more than three-fourths reported positive or very positive relationships with colleagues. Positive or very positive relationships with administrators and with guidance counselors were reported by nearly 70 percent and nearly 60 percent respectively. Only about 33 percent of respondents reported positive or very positive perceptions regarding developing and implementing a public relations program and regarding utilizing an advisory committee to provide guidance to the agricultural program. Over 30 percent of respondents reported "Not applicable" to the statement about advisory committees. In the section related to experiences with parents, colleagues, and community, "Dealing with the reputation of the previous agriculture teacher" was the statement most frequently reported as negative or very negative (22.1%). Frequencies for the section related to experiences with parents, colleagues, and community is found in Table 21.

Just over half of the respondents (52.0%) reported positive or very positive experiences in organizing and managing safe and attractive facilities followed by "dealing with school policies and rules" (46.1%). "Repair and replacement of laboratory / shop equipment" was least frequently reported as positive or very positive (32.7%) and most frequently reported as negative or very negative (14.4%). Thirteen percent of respondents reported negative or very negative perceptions regarding the availability of equipment. A summary of perceptions related to managing facilities and resources is provided in Table 22.

Table 21: Perceived experiences with parents, colleagues, and community during the first year (N = 208)

	Very Positive	Positive	Some-what Positive	Some-what Negative	Negative	Very Negative	N/A
Experiences with parents, colleagues, and community	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Relationships with school staff	116 (55.8)	75 (36.1)	15 (7.2)	1 (0.5)	0 (0.0)	0 (0.0)	1 (0.5)
Relationships with colleagues	75 (36.1)	85 (40.9)	36 (17.3)	8 (3.8)	2 (1.0)	1 (0.5)	0 (0.0)
Relationships with administrators	70 (33.7)	76 (36.5)	38 (18.3)	12 (5.8)	8 (3.8)	4 (1.9)	0 (0.0)
Relationships with guidance counselors	51 (24.5)	73 (35.1)	50 (24.0)	22 (10.6)	7 (3.4)	2 (1.0)	3 (1.4)
Developing partnerships with parents, organizations, alumni groups, and community adult groups	44 (21.2)	78 (37.5)	56 (26.9)	15 (7.2)	6 (2.9)	1 (0.5)	8 (3.8)
Identifying and building support from resource people and agricultural industries in the community	36 (17.3)	67 (32.2)	67 (32.2)	18 (8.7)	7 (3.4)	1 (0.5)	11 (5.3)

Table 21 (Continued)

	Very Positive	Positive	Some-what Positive	Some-what Negative	Negative	Very Negative .	N/A
	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Experiences with students							
Dealing with the reputation of the previous agriculture teacher	23 (11.1)	50 (24.0)	30 (14.4)	40 (19.2)	26 (12.5)	20 (9.6)	18 (8.7)
Dealing with students' parents	22 (10.6)	90 (43.3)	62 (29.8)	24 (11.5)	7 (3.4)	2 (1.0)	1 (0.5)
Conducting parent-teacher conferences	22 (10.6)	84 (40.4)	62 (29.8)	22 (10.6)	7 (3.4)	3 (1.4)	8 (3.8)
Marketing the local agricultural education program	22 (10.6)	79 (38.0)	72 (34.6)	19 (9.1)	6 (2.9)	4 (1.9)	6 (2.9)
Utilizing an advisory committee to provide guidance to the agricultural program	22 (10.6)	49 (23.6)	49 (23.6)	10 (4.8)	11 (5.3)	4 (1.9)	63 (30.3)
Developing and implementing a public relations program	15 (7.2)	53 (25.5)	78 (37.5)	17 (8.2)	10 (4.8)	2 (1.0)	33 (15.9)

Table 22: Perceived experiences with managing facilities and resources during the first year (N = 208)

	Very Positive	Positive	Some-what Positive	Some-what Negative	Negative	Very Negative	N/A
Experiences with managing facilities and resources	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Availability of equipment	25 (12.0)	54 (26.0)	56 (26.9)	44 (21.2)	18 (8.7)	9 (4.3)	0 (0.0)
Organizing and managing safe and attractive facilities	23 (11.1)	85 (40.9)	59 (28.4)	31 (14.9)	9 (4.3)	0 (0.0)	1 (0.5)
Availability of materials and supplies	23 (11.1)	58 (27.9)	63 (30.3)	38 (18.3)	16 (7.7)	8 (3.8)	0 (0.0)
Repair and replacement of laboratory / shop equipment	22 (10.6)	46 (22.1)	63 (30.3)	43 (20.7)	20 (9.6)	10 (4.8)	4 (1.9)
Dealing with school policies and rules	19 (9.1)	77 (37.0)	73 (35.1)	28 (13.5)	4 (1.9)	6 (2.9)	1 (0.5)
Developing and managing the budget and finances of the agricultural program	18 (8.7)	63 (30.3)	70 (33.7)	32 (15.4)	7 (3.4)	5 (2.4)	13 (6.3)
Completing paper work and meeting required deadlines	14 (6.7)	61 (29.3)	63 (30.3)	50 (24.0)	13 (6.3)	7 (3.4)	0 (0.0)

Table 23 depicts data reported on perceptions of experiences related to FFA and Supervised Agriculture Experience (SAE) programs. Statements related to FFA were perceived as positive or very positive more frequently than were the statements related to SAE. Nearly 65 percent of respondents reported positive or very positive experiences in managing the overall activities of the local FFA chapter. “Motivating students in FFA” (60.1%) and “Preparing competent teams for FFA Career Development Events” (51.9%) were the next most frequently reported positive experiences, while “Motivating students in SAE programs” (31.8%) and “Developing relevant SAE programs for students” (32.7%) were the least frequently reported positive experiences. The development of SAE programs was also perceived as negative or very negative by more respondents (9.6%) than any of the other statements.

More than half of the beginning teachers responding to this survey reported positive or very positive perceptions of their overall first year experience. Only 3.9 percent reported negative or very negative perceptions and only 7.2 percent reported a somewhat negative perception of their first year experience. This data is provided in Table 24.

Table 23: Perceived experiences with FFA and SAE during the first year (N = 208)

	Very Positive	Positive	Some-what Positive	Some-what Negative	Negative	Very Negative	N/A
Experiences with FFA and SAE	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Motivating students in FFA	47 (22.6)	78 (37.5)	54 (26.0)	12 (5.8)	6 (2.9)	5 (2.4)	5 (2.4)
Managing the overall activities of the local FFA chapter	42 (20.2)	93 (44.7)	49 (23.6)	7 (3.4)	4 (1.9)	2 (1.0)	10 (4.8)
Preparing competent teams for FFA Career Development Events	26 (12.5)	82 (39.4)	57 (27.4)	22 (10.6)	9 (4.3)	3 (1.4)	9 (4.3)
Motivating students in SAE programs	22 (10.6)	44 (21.2)	66 (31.7)	39 (18.8)	13 (6.3)	6 (2.9)	18 (8.7)
Supervising SAE programs	21 (10.1)	71 (34.1)	56 (26.9)	31 (14.9)	9 (4.3)	1 (0.5)	19 (9.1)
Completing FFA forms and award applications	15 (7.2)	67 (32.2)	64 (30.8)	33 (15.9)	10 (4.8)	4 (1.9)	15 (7.2)
Assisting students with record keeping	13 (6.3)	62 (29.8)	63 (30.3)	40 (19.2)	8 (3.8)	3 (1.4)	19 (9.1)
Developing relevant SAE programs for students	11 (5.3)	57 (27.4)	69 (33.2)	34 (16.3)	15 (7.2)	5 (2.4)	17 (8.2)

Table 24: Perceived overall experience of the first year (N = 208)

	Very Positive	Positive	Some-what Positive	Some-what Negative	Negative	Very Negative	N/A
	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
The first year experience as a whole	26 (12.5)	98 (47.1)	61 (29.3)	15 (7.2)	7 (3.4)	1 (0.5)	0 (0.0)

Participants were asked to respond to two open-ended questions following the 58 statements about the experience of the first year. In analyzing the responses, the open-ended questions were coded initially based upon the content of the response. A formal coding scheme was developed from the initial list of codes, and the responses were coded a second time using the formal coding scheme.

The first open-ended question asked teachers to describe the most difficult problem they faced during the first year of teaching. Time management was the most common response to this question. Most responses in this area described difficulties in balancing personal lives with professional life, with the time required for course preparation, FFA advising, and SAE supervision. One teacher wrote: "The most difficult problem I faced as a new teacher is easily time! The job was overwhelming! Between lesson plans, FFA, SAE's and yet trying to function as a human that does not live in the classroom is very tough." Another said,

The most difficult problem was time management. My personal life, family life and social life suffered tremendously because of the overwhelming burden that FFA puts on a first year teacher. Teaching students in the classroom and supervising their SAE projects is comparable to teacher who teaches and coaches a sport like football. Adding the FFA is like taking on a second full time job.

Comments regarding comparisons to the previous agriculture teacher were the next most common responses to the first question. One teacher said,

The teacher before ruined the program and facilities. The 40 acre farm had most equipment stolen and parents had keys to everything and thought they owned the place in the 12 year time the other teacher was here. Zero FFA activities except the county fair before I arrived. Students were allowed to smoke and play video games in

class before I got here. This town is a strong Ag community it deserves better and that is what I am trying to do.

Another teacher described the experience by writing, "Students seemed to convince themselves that I would be like the previous teacher, but obviously that was not and is never the case." Not all respondents who made comments about the previous teacher were trying to rebuild a program. One teacher said that it was difficult "living up to the standards of the previous teacher." Another said that it was difficult "dealing with parents and students that were attached to the previous ag teacher."

Responses related to classroom management were the third most common for the question about difficulties during the first year. One beginning teacher said, "My most difficult problem was handling student behavior in class. Even though things were handled "by the book" the students didn't listen or show respect for anything or anyone." Another said that it was difficult "learning how to effectively discipline the students and gain respect of the students."

The second open-ended questions asked respondents to describe the most successful experience of the first year of teaching. The most common responses dealt with working with students in FFA, working with students in the classroom, providing students with opportunities for success, improving the program, and surviving the first year. One teacher described the experience of working with students in the FFA in this way: "My most successful experience is working with the handful of active FFA members I have who actually want to be here and participate in the FFA activities." Another teacher reported that the most successful experience of the first year was,

“Having success in the FFA speaking contests. It gave me a chance to get to work with my students on a one-on-one basis.” Another said, “The most successful part was watching the students achieve their very first successful CDE (Career Development Event) year at the State FFA convention. It was very pleasing to watch the students be excited about a task accomplished.”

An example of successes in working with students in the classroom was provided by this response: “I have had several great experiences. One of which was having two special education students successfully say the [FFA] creed and also scored higher on my final exam than the regular ed students. I really felt that I had taught them something valuable.” Other comments included, “I reached a student and got him motivated and excited about my class which other teachers had had a terrible time doing” and, “I was assigned a group of very low functioning students and by the end of the year they were my favorite group and I miss them this year. I had challenges with their behavior at the beginning but we worked through it and had a lot of fun together.”

Helping students to succeed was mentioned by many of the respondents. One teacher said that the most successful experience of the first year was the “personal reward of seeing the students strive and achieve in something they were really interested in - of finding value in themselves.” Others mentioned that “Getting a kid to go to college, who would not have otherwise” and “Helping a few kids succeed in the classroom and with SAE’s that previously had very little success” were their most successful experiences.

Several teachers mentioned that “simply surviving” the first year was their most successful experience. As one teacher put it, “I survived- sounds corny, but all in all it comes down to that. This year is MUCH easier!!!!” “Just getting through it” and “Knowing that I survived” were reported by two teachers as their most successful experiences.

The goal of research questions three and four was to determine the types of support provided to teachers during their first year and to gauge the effectiveness of the support received as perceived by the beginning teachers. Statements were provided to participants in two sections. The first section asked teachers about the type of support received from mentors. If they received this type of support, they were asked to select the level of effectiveness of the support on a scale from very effective to very ineffective. If the teacher did not receive that type of support, they were asked to select “N/A.”

The most commonly reported form of mentoring was from a non-agriculture teacher teaching in the same school as the beginning teacher who was assigned to mentor the first year teacher. This was reported by 62.5 percent of the respondents. Of those receiving this form of mentoring, 43.8 percent perceived it as effective or very effective, while 20 percent perceived it as ineffective or very ineffective. An agriculture teacher in another school self-chosen by the beginning teacher was reported as the next most common form by 56.7 percent of the respondents. Nearly 80 percent of those receiving this type of support perceived it as effective or very effective. Only 2.5 percent perceived this form of mentoring as ineffective or very

ineffective. A self-selected non-agriculture teacher in the same school was perceived as effective or very effective by 63.3 percent of those receiving (41.8%) this type of support. A summary of the frequencies of occurrence and effectiveness of various forms of mentoring is provided in Table 25.

Statements related to types of support other than mentoring were also provided to the participants. They were asked to respond in the same manner as with the section on mentoring. Over 85 percent of the participants reported that they received support from their state agriculture teachers association with 63.7 percent of those participants responding that this support was effective or very effective. Less than five percent perceived this form of support as ineffective or very ineffective. Informal meetings and discussions with other beginning teachers was also reported as a common form of support by participants (86.5%). Nearly 80 percent of those receiving this type of support rated it as effective or very effective. More than three-fourths of participants reported receiving the Local Program Success Guide and Beginning Teacher Survival Kit CD-ROM produced and distributed by the National FFA Organization. It was ranked as effective or very effective by 44.2 percent of those receiving it. The two forms of support reported least frequently were on-site visits from university teacher educators (42.8%) and informal mentoring from university teacher educators (49.0%). However, these two forms of support were ranked as effective or very effective by 56.2 percent and 64.8 percent respectively of those receiving this type of support. The results of the questions regarding other types of support are provided in Table 26.

Table 25: Mentoring support provided and perceived effectiveness during the first year ($N = 208$)

	Teachers reporting this type of support <i>f</i> (%)	Perceptions of effectiveness by those reporting this type of support:					
		Very Effective	Effective	Some-what Effective	Some-what Ineffective	Ineffective	Very Ineffective
		<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Mentoring support provided							
Non-agriculture teacher in the same school who was assigned	130 (62.5)	28 (21.5)	29 (22.3)	32 (24.6)	15 (11.5)	11 (8.5)	15 (11.5)
Agriculture teacher in another school chosen by teacher	118 (56.7)	64 (54.2)	30 (25.4)	17 (14.4)	4 (3.4)	0 (0.0)	3 (2.5)
Non-agriculture teacher in the same school chosen by the beginning teacher	87 (41.8)	27 (31.0)	29 (33.3)	26 (29.9)	2 (2.3)	0 (0.0)	3 (3.4)
Agriculture teacher in another school who was assigned	71 (34.1)	16 (22.5)	13 (18.3)	9 (12.7)	9 (12.7)	7 (9.9)	17 (23.9)
Agriculture teacher in the same school who was assigned	54 (26.0)	15 (27.8)	14 (25.9)	7 (13.0)	3 (5.6)	3 (5.6)	12 (22.2)
Agriculture teacher in the same school chosen by teacher	50 (24.0)	21 (42.0)	12 (24.0)	7 (14.0)	1 (2.0)	2 (4.0)	7 (14.0)

Table 26: Support activities provided during the first year and perceived effectiveness of activities ($N = 208$).

Support activities provided	Teachers reporting this type of support <i>f</i> (%)	Perceptions of effectiveness by those reporting this type of support:					
		Very Effective	Effective	Some-what Effective	Some-what Ineffective	Ineffective	Very Ineffective
		<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Support from state agriculture teachers association	182 (87.5)	61 (33.5)	55 (30.2)	49 (26.9)	8 (4.4)	3 (1.6)	6 (3.3)
Informal meetings and discussions with other beginning teachers	180 (86.5)	64 (35.6)	78 (43.3)	25 (13.9)	4 (2.2)	5 (2.8)	4 (2.2)
Local Program Success Guide and Beginning Teacher Survival Kit CD-ROM	163 (78.4)	29 (17.8)	43 (26.4)	67 (41.1)	13 (8.0)	5 (3.1)	6 (3.7)
Beginning teacher inservice program provided by local school district	157 (75.5)	6 (3.8)	28 (17.8)	58 (36.9)	33 (21.0)	14 (8.9)	18 (11.5)
Formal meetings and discussions with other beginning teachers	148 (72.1)	41 (27.7)	50 (33.8)	31 (20.9)	13 (8.8)	6 (4.1)	7 (4.7)
Beginning teacher inservice program provided by state department of education	138 (66.3)	17 (12.3)	37 (26.8)	45 (32.6)	12 (8.7)	13 (9.4)	14 (10.1)

Table 26: Support activities provided during the first year and perceived effectiveness of activities (Continued).

Support activities provided	Teachers reporting this type of support <i>f</i> (%)	Perceptions of effectiveness by those reporting this type of support:					
		Very Effective	Effective	Some-what Effective	Some-what Ineffective	Ineffective	Very Ineffective
		<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Support from other professional organizations	123 (59.1)	22 (17.9)	36 (29.3)	40 (32.5)	14 (11.4)	7 (5.7)	4 (3.3)
Beginning teacher inservice program provided by university teacher education	117 (56.3)	12 (10.3)	43 (36.8)	40 (34.2)	12 (10.3)	7 (6.0)	3 (2.6)
Beginning teacher inservice program provided by combined effort of state department and teacher education	111 (53.4)	20 (18.0)	42 (37.8)	33 (29.7)	7 (6.3)	4 (3.6)	5 (4.5)
Informal mentoring from university teacher educator(s)	102 (49.0)	33 (32.4)	33 (32.4)	21 (20.6)	10 (9.8)	3 (2.9)	2 (2.0)
On-site visits from university teacher educator(s)	89 (42.8)	22 (24.7)	28 (31.5)	22 (24.7)	8 (9.0)	4 (4.5)	5 (5.6)

Three open-ended questions were provided at the end of Part B of the questionnaire. The first question asked teachers to list any additional support activities provided to them as a beginning teacher that were not mentioned in the above set of questions. A wide variety of responses were provided. However, respondents most frequently mentioned other teachers who provided support to them. One teacher said, "I communicated with other ag teachers throughout the state on various topics." Beginning teacher workshops presented by the state agriculture teachers association were also mentioned frequently as an additional type of support received. An example was provided by one teacher who said, "[State] Ag Teachers Association New Professionals Institute was outstanding, and during the time of the year when it is needed most." A few respondents mentioned websites that provided help to them during their first year. One teacher wrote that "web sites to help with lessons (glenroseffa.org)" were helpful. Another said:

We were given this website [<http://www.depts.ttu.edu/agriculturalteachers>] at a new teacher workshop at our conference last year. I have used this website numerous times, and continue to use it today. It is helpful from simply getting ideas, to actual lessons available through the site.

A few responses suggested that some beginning agriculture teachers are left on their own with little or no support during the first year. One teacher wrote: "I did not get any support my first year."

The second question asked participants to list the type of support that was most beneficial to them during the first year of teaching. Again, the most commonly

reported responses were those related to having other teachers who supported them, listened to them, and offered advice and ideas. One teacher said:

Having a veteran teacher to talk to is key for surviving the first year. It doesn't matter if they are not in your field, they can listen and give key advice that will keep you from losing your mind the first year. This teacher can be in your school, another school, or another state, as long as they are there to listen and give you feedback.

Another stated simply that "having someone to listen to you" was most beneficial.

The third question asked teachers to list any additional support beyond what was provided that might have been the most beneficial to increasing success during the first year. Again, a wide variety of responses were given. Most respondents asked for additional support from teachers, mentors, university teacher educators, or other beginning teachers. One teacher wrote:

The only thing that comes to mind is to be able to go back to our colleges after a few months of teaching and have a meeting with our group of student teachers to reflect what our teaching was like and to be able to have our college teachers assist us still.

Another said, "The most beneficial would have been a class in college with some one speaking to us as a second year teacher and discussing the problems that we were about to encounter."

Principal Component Analysis

Principal components analysis was conducted on the first 57 statements in Part A related to beginning teachers' perceptions of the first year experience. As the final question in Part A considers the teachers' overall experience during the first year, it was not included in the analysis. The data were analyzed using SPSS for Windows,

release 11.5. Principal components analysis was used as the extraction method and rotates using varimax rotation with Kaiser Normalization.

Principal component analysis was performed twice. First by excluding cases pair wise as replacing missing values with the mean and then without replacing missing variables. The total number of missing values was 27 with three being the highest number from any one variable. In both tests the means were exactly the same. In order to get a complete set of variables for the new factor scores, missing values were replaced by the mean.

Stevens (1996) stated that rules determining an appropriate sample size for component reliability vary from two subjects per variable to 20 subjects per variable. The sample size of the study was 208 with 58 variables analyzed, yielding an observation to variable ratio of 3.6:1. The value of the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) was .849. Hair, Anderson, Tatham, and Black (1992) suggested that MSA values at .80 or above are considered meritorious.

Both orthogonal and oblique rotations were carried out with variables loading on approximately the same number of factors regardless of rotation. Orthogonal rotation was selected due to the ease of interpreting, describing, and reporting results (Warmbrod, 2001). Varimax, an orthogonal technique was the chosen rotation to maximize the variance of the factor loadings. All variables loaded on one of 14 factors. The factor loadings of the varimax rotation are found in Appendixes N and O.

The four methods used to determine the number of factors to retain included eigenvalues equal to or greater than one, a scree plot of eigenvalues plotted against

factors to visualize changes in the slope, the combination of factors that accounted for at least 70% of the variance, and factor loadings greater than $\pm .3$ (Warmbrod, 2001).

Fourteen experience factors were extracted and named in this study including:

(a) Advising the FFA Chapter, (b) Time management and compensation, (c) Pedagogy, (d) Instructional materials and facilities, (e) Supervised Agriculture Experience Programs, (f) Teaching with Technology, (g) Community relationships and partnerships, (h) School policy and personnel relations, (i) Motivating students, (j) Relationships with parents, (k) Curriculum, (l) Student Cultural Differences, (m) Student Academic Differences, and (n) Budgeting and Finances. The eigenvalues and percentage of explained variances are summarized in Table 27.

Table 27
 Statistics for 15 Extracted Experience Factors

Factors	Eigenvalues	% of Variance	Cumulative %
Factor 1	13.28	23.30	23.30
Factor 2	5.22	9.15	32.46
Factor 3	2.94	5.16	37.62
Factor 4	2.48	4.34	41.96
Factor 5	2.26	3.97	45.93
Factor 6	1.98	3.48	49.41
Factor 7	1.80	3.15	52.56
Factor 8	1.47	2.58	55.14
Factor 9	1.36	2.39	57.53
Factor 10	1.23	2.16	59.68
Factor 11	1.17	2.05	61.73
Factor 12	1.13	1.99	63.72
Factor 13	1.08	1.90	65.62
Factor 14	1.07	1.88	67.50

In interpreting variables in a Principal Component Analysis, Hair, Anderson, Tatham, and Black (1992) suggested “factor loadings greater than $\pm .30$ are considered significant; loadings of $\pm .40$ are considered more important, and if loadings are $\pm .50$ or greater, they are considered very significant” (p. 239). For this study, an absolute value of $.30$ was considered the salient value. All variables in this study loaded on the fourteen factors at a level of $.34$ or higher.

Several variables loaded at significant levels on more than one factor. Hair, et al. (1992) explained that if the goal of the factor analysis is to identify appropriate

variables for use in subsequent statistical analyses, then the variable with the highest factor loading can be used as “a surrogate representative for a particular factor dimension” (p. 250). They explained further, “If there is one factor loading for a variable that is substantially higher than all other factor loadings, the variable with the obviously higher loading would be selected for subsequent analysis to represent the factor” (p. 250). All variables in this study with significant factor loadings on multiple factors had one factor loading that was substantially higher. Therefore, in all cases of loading on multiple factors, variables were included to represent the factor in which it had the highest loading score.

Factor 1 was labeled “Advising the FFA Chapter” and had seven variables load at .36 or higher. Six of the seven variables loaded with scores greater than .6 and the seventh variable loaded at .56. Table 28 presents the variable number from the questionnaire, the variable statement, the factor loading score, the mean and the standard deviation for each variable that loaded on Factor 1. The variable means ranged from 3.87 as the lowest and 5.20 as the lowest variable mean score.

Table 28

Factor Loadings, Means (*M*), and Standard Deviations (*SD*) for Factor 1: Advising the FFA Chapter

Variable Number	Variable Description	Factor Loading	<i>M</i>	<i>SD</i>
Q6. -C1	Managing the overall activities of the local FFA chapter	0.79	4.56	1.39
Q1. -C12	Working with students in the FFA	0.75	5.18	1.29
Q6. -C7	Motivating students in FFA	0.72	4.55	1.33
Q6. -C2	Completing FFA forms and award applications	0.67	3.87	1.51
Q1. -C11	Working with my students outside of class	0.67	5.20	0.97
Q6. -C4	Preparing competent teams for FFA Career Development Events	0.64	4.24	1.40
Q1. -C13	Recruiting students into agricultural education	0.56	4.42	1.42

Factor 2 was labeled "Time Management and Compensation." This factor had six variables with five of the six loading at a .6 or above and the sixth loading at .47.

Table 29 shows this data.

Table 29

Factor Loadings, Means (*M*), and Standard Deviations (*SD*) for Factor 2: Time Management and Compensation

Variable Number	Variable Description	Factor Loading	<i>M</i>	<i>SD</i>
Q3. -C4	Personal time management	0.81	3.53	1.20
Q3. -C5	Balancing professional and personal responsibilities	0.80	3.47	1.22
Q3. -C3	Preparation time	0.77	3.45	1.12
Q3. -C2	Managing teaching load	0.74	3.70	1.07
Q3. -C1	Salary in relationship to time required	0.64	3.47	1.32
Q5. -C6	Completing paper work and meeting required deadlines	0.47	3.96	1.17

The data related to factor 3, named "Pedagogy" are contained in Table 30.

Three of the seven variables loaded at .6 or higher, while the fourth, fifth, and sixth variables loaded higher than .5. The seventh variable loaded at .47. The mean values for the variables included in Factor 3 ranged from 4.07 to 5.01.

Table 30

Factor Loadings, Means (*M*), and Standard Deviations (*SD*) for Factor 3: Pedagogy

Variable Number	Variable Description	Factor Loading	<i>M</i>	<i>SD</i>
Q2. -C4	Strategies for quality instruction	0.73	4.31	0.89
Q2. -C5	Targeting instruction for learning level of students	0.62	4.07	0.89
Q2. -C7	Teaching students problem-solving and decision making skills	0.62	4.31	1.03
Q2. -C6	Teaching using experiments/inquiry	0.57	4.08	1.24
Q2. -C8	Assessment and evaluation of student performance	0.55	4.40	0.92
Q2. -C3	Lesson planning	0.52	4.18	0.95
Q2. -C12	Professional development opportunities	0.36	5.01	0.97

Factor 4 was named "Instructional Materials and Facilities." Only four variables loaded on Factor 4, with the first three loading at .86 or higher. The fourth variable loaded at .58. The mean values for the variables ranged from 3.81 to 4.38.

Table 31 summarizes the data.

Table 33 shows the factor loading scores for Factor 6, Teaching with Technology. Teaching with Technology had only three statements, but all loaded at .75 or higher. These variables had mean values ranging from 4.44 to 4.68.

Table 33

Factor Loadings, Means (*M*), and Standard Deviations (*SD*) for Factor 6: Teaching with Technology

Variable Number	Variable Description	Factor Loading	<i>M</i>	<i>SD</i>
Q2. -C10	Using multimedia in teaching	0.81	4.65	1.36
Q2. -C11	Keeping technically competent in new agricultural knowledge and skills	0.76	4.68	1.17
Q2. -C9	Using computers in classroom teaching	0.75	4.44	1.54

Factor 7 was named "Community Relationships and Partnerships." Five variables loaded on this factor at .53 or higher. The mean values for these experience statements ranged from 3.02 to 4.50. Table 34 shows the variable statements, loadings, means, and standard deviation for the variables loading on Factor 7.

Table 34

Factor Loadings, Means (*M*), and Standard Deviations (*SD*) for Factor 7: Community Relationships and Partnerships

Variable Number	Variable Description	Factor Loading	<i>M</i>	<i>SD</i>
Q4. -C8	Utilizing an advisory committee to provide guidance to the agricultural program	0.70	3.02	2.24
Q4. -C9	Identifying and building support from resource people and agricultural industries within the community	0.69	4.29	1.43
Q4. -C11	Developing and implementing a public relations program	0.60	3.56	1.81
Q4. -C7	Developing partnerships with parents, organizations, alumni groups, and community adult groups	0.58	4.50	1.35
Q4. -C12	Marketing the local agricultural education program	0.53	4.27	1.26

Table 35 shows the loadings for the five variables that loaded on Factor 8, School Policy and Personnel Relationships. Three of the six variables loaded at .65 or higher, with the fourth loading at .57 and the fifth at .49. The mean values for these variables ranged from 4.27 to 5.45.

Table 35

Factor Loadings, Means (*M*), and Standard Deviations (*SD*) for Factor 8: School Policy and Personnel

Variable Number	Variable Description	Factor Loading	<i>M</i>	<i>SD</i>
Q4. -C4	Relationships with administrators	0.69	4.85	1.18
Q4. -C5	Relationships with guidance counselors	0.66	4.58	1.25
Q4. -C3	Relationships with colleagues	0.65	5.06	0.92
Q4. -C6	Relationships with school staff (i.e., secretaries, custodians, cooks, etc.)	0.57	5.45	0.75
Q5. -C5	Dealing with school policies and rules	0.49	4.27	1.10

Five variables loaded on Factor 9 which was named "Classroom management and student motivation." Table 36 depicts the variable statements, loadings, means, and standard deviation for this factor.

Table 36

Factor Loadings, Means (*M*), and Standard Deviations (*SD*) for Factor 9: Classroom Management and Student Motivation

Variable Number	Variable Description	Factor Loading	<i>M</i>	<i>SD</i>
Q1. -C10	Working with students within the classroom	0.62	4.87	0.83
Q1. -C9	Motivating students in the classroom	0.59	4.34	1.02
Q1. -C8	Working with students in your classes who don't want to be there	0.54	3.24	1.20
Q1. -C1	Dealing with problem student behavior	0.52	3.90	1.10
Q1. -C7	Dealing with student gender differences	0.39	4.79	1.15

Table 37 shows the loadings for the two variables that loaded on Factor 10, Relationships with Parents. Both variables loaded at .79 and had mean values of

Table 37

Factor Loadings, Means (*M*), and Standard Deviations (*SD*) for Factor 10: Relationships with Parents

Variable Number	Variable Description	Factor Loading	<i>M</i>	<i>SD</i>
Q4. -C2	Conducting parent-teacher conferences	0.79	4.25	1.33
Q4. -C1	Dealing with students' parents	0.79	4.41	1.05

Factor 11 was named "Content Knowledge and Curriculum Development."

Three variables loaded on this factor with loading factors ranging from .52 to .59. The

mean values for these variables ranged from 4.38 to 4.70. Data for this factor are shown in Table 38.

Table 38

Factor Loadings, Means (*M*), and Standard Deviations (*SD*) for Factor 11: Content Knowledge and Curriculum Development

Variable Number	Variable Description	Factor Loading	<i>M</i>	<i>SD</i>
Q2. -C1	Knowledge of subject matter	0.59	4.70	0.86
Q1. -C3	Helping students work through personal problems	0.57	4.49	1.36
Q2. -C2	Curriculum development	0.52	4.38	0.95

Two variables loaded on Factor 12 labeled "Cultural Differences." Both variables loaded at .65 or higher with mean values of 3.57 and 4.54. Data for this factor are provided in Table 39.

Table 39

Factor Loadings, Means (*M*), and Standard Deviations (*SD*) for Factor 12: Cultural Differences

Variable Number	Variable Description	Factor Loading	<i>M</i>	<i>SD</i>
Q1. -C4	Teaching students with cultural differences	0.85	3.57	2.10
Q1. -C5	Teaching students with socio-economic differences	0.65	4.54	1.16

Table 40 depicts the descriptions, factor loadings, means, and standard deviations for the variables that loaded on Factor 13. This factor, named "Student

Academic Differences,” contains three variables, which loaded at .60, -.52, and .34.

Mean values for these variables were 3.38, 4.08, and 4.19.

Table 40

Factor Loadings, Means (*M*), and Standard Deviations (*SD*) for Factor 13: Student Academic Differences

Variable Number	Variable Description	Factor Loading	<i>M</i>	<i>SD</i>
Q1. -C6	Teaching students with learning disabilities	0.60	4.08	1.24
Q4. -C10	Dealing with the reputation of the previous agriculture teacher	-0.52	3.38	1.81
Q1. -C2	Dealing with student academic differences	0.34	4.19	0.91

Only one variable loaded on Factor 14, named “Finances and Budgeting.”

This variable loaded at .65 but as it was the only variable to load on this factor, it was not included in any subsequent analyses. The description, mean, factor loading, and standard deviation for Factor 14 are presented in Table 41.

Table 41

Factor Loadings, Means (*M*), and Standard Deviations (*SD*) for Factor 14: Finances and Budgeting

Variable Number	Variable Description	Factor Loading	<i>M</i>	<i>SD</i>
Q5. -C7	Developing and managing the budget and finances of the agricultural program	0.65	3.93	1.47

Relationships of demographic and support variables to the first year experience

Research question six asked about the relationship between selected characteristics of the beginning teacher and the perceptions of the first year experience. Canonical correlation analysis was chosen as the method for analyzing the data in an attempt to determine if a relationship existed and at what levels each of the variables made contributions to the relationship. This form of data analysis was chosen as it is a "multivariate statistical model that facilitates the study of interrelationships among sets of multiple criterion (dependent) variables and multiple predictor (independent) variables" (Hair, Anderson, Tatham, & Black, 1992, p. 193). As research question six, seven, and eight were aimed at exploring relationships among multiple dependent and independent variables, canonical correlation was selected as the data analysis method for all three questions.

Canonical correlation derives linear combinations of variables from each of the sets that maximize the correlation between the two sets. The first linear combination, or pair of canonical variates, accounts for the maximum amount of the relationship between the two sets of variables, with the second pair of variates accounting for the maximum amount of the relationship not accounted for by the first linear combination. Each of the successive linear combinations accounts for the highest intercorrelation based on the residual variance of the remaining sets (Hair, Anderson, Tatham, & Black, 1992).

Multiple tests of significance can be applied to each of the linear functions. Wilk's lambda is used to test the significance of the first canonical correlation. If the

first canonical correlation is considered significant, the two sets of variables are significantly associated by canonical correlation (Tabachnick & Fidell, 1989). The level of significance for canonical correlation analysis used in this study was established *a priori* at .05. Only those linear combinations with a significance level lower than .05 were selected for further interpretation (Hair, Anderson, Tatham, & Black, 1992).

Results of canonical correlation analysis (Table 42) suggested evidence of a relationship between the characteristics of the respondents and the perceived experiences of the first year (Wilk's Lambda = .279, $p = .03$). Only one of the 14 canonical roots was considered significant at the .05 level, accounting for approximately 31 percent of the relationship.

Interpreting the importance of each variable in the canonical relationship entails examining the sign and magnitude of the canonical cross-loadings assigned to each variable in computing the canonical functions. Variables with higher cross-loading values contribute more to the functions. Weights with opposite signs represent an inverse relationship and weights with the same signs represent a direct relationship. The use of cross-loadings in interpreting the importance of variables in canonical relationships is preferred over the use of the canonical weights or canonical loadings (Hair, Anderson, Tatham, & Black, 1992).

Table 42

Canonical Correlation tests of significance between the characteristics of beginning teachers and the experiences of the first year

Multivariate Tests of Significance					
Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. Of F
Pillais	1.156	1.20	196.0	2604.0	.04
Hotellings	1.422	1.24	196.0	2396.0	.02
Wilks	.279	1.22	196.0	1751.1	.03
Roys	.310				

Eigenvalues and Canonical Correlations for Canonical Roots					
Root	Eigen- value	Pct.	Cum. Pct.	Canon Cor.	Sq. Cor.
1	.449	31.61	31.61	.557	.310
2	.247	17.39	49.00	.445	.198
3	.203	14.26	63.26	.411	.169
4	.135	9.52	72.78	.345	.119
5	.128	8.98	81.76	.337	.113
6	.071	5.00	86.76	.258	.066
7	.061	4.26	91.02	.239	.057
8	.051	3.60	94.62	.221	.049
9	.035	2.44	97.06	.183	.033
10	.018	1.29	98.35	.134	.018
11	.015	1.07	99.42	.122	.015
12	.005	.36	99.78	.071	.005
13	.003	.23	100.00	.057	.003
14	.000	.00	100.00	.003	.000

Table 42 (continued)

Dimension Reduction Analysis						
Roots	Wilks L.	F	Hyp. DF	Error DF	Sig. of F	
1 to 14	.279	1.22	196.0	1751.1	.03*	
2 to 14	.404	.99	169.0	1634.3	.51	
3 to 14	.504	.88	144.0	1516.7	.84	
4 to 14	.606	.76	121.0	1398.3	.97	
5 to 14	.689	.684	100.0	1279.1	.99	
6 to 14	.776	.57	81.0	1159.3	.99	
7 to 14	.832	.53	64.0	1038.9	.99	
8 to 14	.882	.47	49.0	918.3	.99	
9 to 14	.927	.38	36.0	797.6	1.00	
10 to 14	.959	.31	25.0	677.6	1.00	
11 to 14	.977	.27	16.0	559.7	.99	
12 to 14	.992	.17	9.0	448.0	.99	
13 to 14	.997	.15	4.0	370.0	.96	
14 to 14	.999	.00	1.0	186.0	.97	

*Canonical root considered significant

As shown in Table 43, the canonical cross-loadings of the first root, or pair of canonical variates, suggested that increased age (.828), lack of a Bachelor's degree in agricultural education (-.740), lack of FFA experience as a youth (-.514), and teacher certification other than by traditional means (.485) were more closely related to negative experiences in the areas of FFA (-.770), supervised agriculture experience programs (-.531), and teaching with technology (-.420).

Table 43

Canonical cross-loadings for the characteristics of beginning teachers and experiences of the first year.

Canonical Cross-loadings for Criterion (Dependent) Variables	
Variable – Experiences of the first year of teaching	Root Retained
	1
Overall experience	.074
FFA	-.770
Time management	.069
Pedagogy	-.217
Instructional materials	.078
Supervised Ag. Experience	-.531
Teaching with Technology	-.420
Community relationships	-.192
School relationships	.106
Classroom management	-.104
Parent relationships	.108
Curriculum	.087
Cultural Differences	.135
Academic Differences	-.056

Canonical Cross-loadings for Predictor (Independent) Variables	
Variable – Characteristics of beginning teachers	Root Retained
	1
Number of teachers in the program	-.125
Gender	.079
Age	.828
Associates Degree/Certificate	.109
Bachelor's degree in Ag Ed	-.740
Bachelor's degree outside of Ag Ed	.399
Post-baccalaureate work	.072
Master's degree	.280

Table 43 (continued)

Canonical Cross-loadings for Predictor (Independent) Variables	
Variable – Characteristics of beginning teachers	Root Retained
Other Graduate work	.092
Employment in industry more than 1 yr	.407
Type of teaching certificate held	.485
4-H participation	-.181
FFA participation	-.514
Other relevant activities participation	-.166

Research question seven was designed to examine the relationship between the types of support received during the first year of teaching and the perceptions of the first year experience. Canonical analysis was also chosen as the method for analyzing the data in an attempt to determine if a relationship existed and at what levels each of the variables made contributions to the relationship. Results of Canonical Correlation Analysis (Table 44) suggested evidence of a relationship between the frequency and effectiveness of support provided to beginning teachers and the perceived experiences of the first year (Wilk's Lambda = .1.23, $p = .01$). Only one of the 14 canonical roots was considered significant at the .05 level, accounting for approximately 25 percent of the relationship.

Table 44

Canonical Correlation tests of significance between the support provided during the first year and the experiences of the first year

Multivariate Tests of Significance					
Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. Of F
Pillais	1.439	1.21	238.0	2506.0	.02
Hotellings	1.809	1.25	238.0	2298.0	.01
Wilks	.201	1.23	238.0	1837.3	.01
Roys	.315				

Eigenvalues and Canonical Correlations for Canonical Roots					
Root	Eigen- value	Pct.	Cum. Pct.	Canon Cor.	Sq. Cor.
1	.459	25.37	25.37	.561	.315
2	.369	20.37	45.74	.519	.269
3	.283	15.66	61.40	.470	.221
4	.162	8.97	70.37	.374	.140
5	.130	7.16	77.53	.339	.115
6	.104	5.75	83.28	.307	.094
7	.079	4.35	87.63	.270	.073
8	.074	4.10	91.73	.263	.069
9	.063	3.49	95.22	.244	.059
10	.039	2.14	97.35	.193	.037
11	.026	1.46	98.81	.160	.026
12	.015	.85	99.66	.123	.015
13	.005	.26	99.92	.069	.005
14	.001	.08	100.00	.037	.001

Table 44 (continued)

Dimension Reduction Analysis						
Roots	Wilks L.	F	Hyp. DF	Error DF	Sig. of F	
1 to 14	.201	1.23	238.0	1837.3	.01*	
2 to 14	.293	1.07	208.0	1723.8	.26	
3 to 14	.401	.91	180.0	1609.1	.79	
4 to 14	.514	.77	154.0	1493.2	.98	
5 to 14	.598	.70	130.0	1376.0	.99	
6 to 14	.675	.65	108.0	1257.4	.99	
7 to 14	.745	.59	88.0	1137.3	.99	
8 to 14	.804	.55	70.0	1015.6	.99	
9 to 14	.864	.48	54.0	891.8	.99	
10 to 14	.918	.38	40.0	765.6	1.00	
11 to 14	.954	.30	28.0	636.0	1.00	
12 to 14	.979	.21	18.0	501.1	1.00	
13 to 14	.994	.11	10.0	356.0	1.00	
14 to 14	.999	.06	4.0	179.0	.99	

*Canonical root considered significant

As shown in Table 45, the canonical cross-loadings of the first root, or pair of canonical variates, suggested that a lack of or ineffective meetings and discussions with other beginning teachers (informal, -.688; formal, -.477) and a lack of or ineffective support from the state agriculture teachers association (-.564) were more closely related to negatively perceived experiences related to pedagogy (-.672), school relationships (-.614), FFA advising (-.521), and teaching with technology (-.492).

Table 45

Canonical cross-loadings for the support provided to respondents during the first year and experiences of the first year.

Canonical Cross-loadings for Criterion (Dependent) Variables	
Variable – Experiences of the first year of teaching	Root Retained
	1
Overall experience	-.352
FFA	-.521
Time management	-.412
Pedagogy	-.672
Instructional materials	-.294
Supervised Ag. Experience	-.314
Teaching with Technology	-.492
Community relationships	-.368
School relationships	-.614
Classroom management	-.234
Parent relationships	-.042
Curriculum	-.441
Cultural Differences	-.422
Academic Differences	-.318

Canonical Cross-loadings for Predictor (Independent) Variables	
Variable – Support provided during first year	Root Retained
	1
Mentor – non-ag, in-school, assigned	-.167
Mentor – non-ag, in-school, self-selected	-.382
Mentor – ag, outside school, assigned	-.038
Mentor – ag, outside school, self-selected	-.369
Mentor – ag, in-school, assigned	-.139
Mentor – ag, in-school, self-selected	-.375
Inservice program – state department	-.348

Table 45 (continued)

Canonical Cross-loadings for Predictor (Independent) Variables	
Variable – Support provided during first year	Root Retained
	1
Inservice program – school district	.005
Inservice program – university	-.083
Inservice program – combined effort	-.339
Informal discussions with other teachers	-.688
Formal discussions with other teachers	-.477
On-site visits from university	-.046
Informal mentoring from university	-.236
LPS Guide CD-ROM	-.411
State Ag Teachers Association support	-.564
Other Professional organization support	-.211

Research question eight sought to determine the nature of the relationship between the experiences of the first year of teaching and the likelihood of teaching secondary agriculture in the future. Results of Canonical Correlation Analysis (Table 46) produced evidence of a relationship between the experiences of the first year and the likelihood of teaching secondary agriculture in the future (Wilk's Lambda = .473, $p < .01$). Three of the five canonical roots were considered significant at the .05 level with root one accounting for 24.4% of the relationship, root two for 18.7%, and root three accounting for 16.2% of the relationship.

Table 46

Canonical Correlation tests of significance between experiences of the first year and the likelihood of teaching secondary agriculture in the future.

Multivariate Tests of Significance					
Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. Of F
Pillais	.750	2.32	70.0	920.0	<.01
Hotellings	.918	2.34	70.0	892.0	<.01
Wilks	.437	2.34	70.0	861.1	<.01
Roys	.244				

Eigenvalues and Canonical Correlations for Canonical Roots

Root	Eigenvalue	Pct.	Cum. Pct.	Canon Cor.	Sq. Cor.
1	.323	35.34	35.24	.494	.244
2	.230	25.08	60.32	.433	.187
3	.193	21.02	81.34	.402	.162
4	.104	11.33	92.67	.307	.094
5	.067	7.33	100.00	.251	.063

Dimension Reduction Analysis

Roots	Wilks L.	F	Hyp. DF	Error DF	Sig. of F
1 to 5	.437	2.34	70.0	861.1	<.01*
2 to 5	.578	2.05	52.0	703.1	<.01*
3 to 5	.711	1.83	36.0	538.5	<.01*
4 to 5	.849	1.42	22.0	366.0	.10
5 to 5	.937	1.24	10.0	184.0	.27

*Canonical root considered significant

As shown in Table 47, the canonical cross-loadings of the first root, or pair of canonical variates, suggested a stronger correlation between a lower likelihood of teaching secondary agriculture in twenty years (-.662) and negative experiences in the areas of time management (-.536) and school relationships (-.523). The second root suggested a stronger correlation between a higher likelihood of teaching in one year (.530) and positive community relationships (.392). The third root suggested that a relationship between a lower likelihood of teaching in the future was most closely linked to negative perceptions of the overall first year experience (-.777) followed by negative experiences with classroom management (-.768), negative experiences in teaching students with academic differences (-.580), negative experiences related to pedagogy (-.580), and negative experiences with community relationships (-.578).

Table 47

Canonical Cross-loadings for the experiences of the first year and the likelihood of teaching secondary agriculture in the future.

Variable – Likelihood of teaching in:	Canonical Cross-loadings for Criterion (Dependent) Variables		
	Roots Retained		
	1	2	3
One year	-.177	.530	-.601
Three years	-.280	.048	-.639
Five years	-.099	.032	-.844
Ten years	-.414	.053	-.545
Twenty years	-.662	-.031	-.598

Table 47 (continued)

Variable – Experiences of the first year of teaching	Canonical Cross-loadings for Predictor (Independent) Variables		
	Roots Retained		
	1	2	3
Overall experience	-.110	.111	-.777
FFA	-.129	.157	-.523
Time management	-.536	-.123	-.415
Pedagogy	-.302	-.332	-.580
Instructional materials	.171	-.117	-.346
Supervised Ag. Experience	-.246	.303	-.253
Teaching with Technology	-.152	-.070	-.478
Community relationships	-.068	.392	-.578
School relationships	-.523	-.209	-.342
Classroom management	-.097	-.132	-.768
Parent relationships	.177	-.069	-.421
Curriculum	-.039	-.370	-.385
Cultural Differences	-.151	-.193	-.043
Academic Differences	-.033	-.433	-.580

Summary

This chapter reported the results of statistical analysis on the data collected for the research project. The following statements summarize the major findings:

1. The secondary agriculture teachers from across the nation who were in their second year of teaching during the 2003-2004 academic year who responded to the questionnaire were, on average, 27 years of age, held a bachelor's degree in agricultural education (77.9%), held a teacher certification obtained through a traditional agricultural education teacher preparation program (84.1%), and had

participated in FFA (84.6%) and 4-H (68.8%) as a youth. Just under half of the respondents were female (47.1%) and less than two percent of respondents reported a racial or ethnic identity other than white, European American, non-Hispanic.

2. The average program in which respondents taught during their first year was located in a comprehensive high school (80.3%) with a school enrollment of 679 students, and was a single teacher agriculture program (60.6%) with approximately 130 students enrolled, an FFA membership rate of 68 percent, SAE participation rate of 46 percent. Most participants reported receiving an FFA stipend (52.4%) and an extended contract (79.8%) for additional responsibilities associated with their position.

3. In response to a question that asked participants to rate the likelihood of teaching secondary agriculture in the future, most (88.9%) reported that they were either likely or highly likely to be teaching secondary agriculture one year from the time of the survey. Nearly three-fourths (73.6%) responded that they were likely or highly likely at three years, 61 percent at five years, less than half (44.7%) at ten years, and only about 32 percent were likely or highly likely to be teaching secondary agriculture at twenty years from the time of survey.

4. The majority of respondents had positive or very positive experiences in working with students with the exceptions of motivating students in the classroom, teaching students with learning disabilities, dealing with problem behavior, and working with students in class who don't want to be there. Slightly over one-fourth of respondents reported negative or very negative experiences in working with students in class who don't want to be there.

5. Positive or very positive experiences were reported by the majority of respondents in the area of pedagogy and curriculum except for in the areas of curriculum development, lesson planning, targeting instruction for learning level of students, strategies for quality instruction, teaching using experiments and inquiry, and assessment and evaluation of student performance. No more than five percent of respondents reported negative or very negative experiences in this area.

6. Fewer than 25 percent of respondents reported positive or very positive perceptions for all statements related to time management and compensation and about one-fourth of respondents reported negative or very negative perceptions toward the salary offered in relationship to the amount of time required.

7. Participants reported generally positive experiences in their relationships with school staff, colleagues, administrators, and guidance counselors. Most participants also responded positively to statements about developing partnerships in the community and in working with parents. About 40 percent reported negative experiences in dealing with the reputation of the previous agriculture teacher.

8. Experiences related to FFA advising were perceived by the majority of participants as positive or very positive. Fewer than half reported positive or very positive experiences in supervising and motivating students in SAE programs, in assisting with record keeping, and in developing relevant SAE programs for students.

9. More than half of participants (59.6%) reported positive or very positive perceptions of their overall first year experience. Only about 11 percent responded that their first year was somewhat negative, negative or very negative.

10. A majority of respondents (62.5%) reported receiving support during the first year from an assigned non-agriculture teacher mentor who taught in the same school as the beginning teacher. Fewer than half of those receiving this type of support viewed it as effective or very effective. The form of mentoring most frequently perceived as effective or very effective (79.6%) was provided by an agriculture teacher in another school who was chosen by the beginning teacher. Just over half of the respondents reported this type of mentoring.

11. Support provided by state agriculture teachers associations was reported by 87.5 percent of participants and was perceived as effective or very effective by 63.7 percent of those receiving this type of support. Other types of support perceived as effective or very effective by most participants included meetings and discussions with other beginning teachers, and informal mentoring and on-site visits from university teacher educators.

12. There was evidence of a relationship between the characteristics of respondents and the perceptions of their first year experience (Wilk's Lambda = .279, $p = .03$). Characteristics included the number of teachers in the program, gender, age, education level achieved, type of teaching certificate held, and participation in FFA, 4-H, and other relevant activities.

13. Results of Canonical Correlation analysis suggested evidence of a relationship between the frequency and effectiveness of support provided to beginning teachers and the perceived experiences of the first year (Wilk's Lambda = .123, $p = .01$).

14. Evidence of a relationship was also found between the perceived experiences of the first year and the likelihood of teaching secondary agriculture in the future (Wilk's Lambda = .473, $p < .01$).

CHAPTER 5

FINDINGS, CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

Chapter 4 described the statistical treatment, analysis of data and the results of the study. The purpose of this chapter is to present a summary of the procedures and findings and present the conclusions, discussion, and recommendations for future research.

The purpose of this exploratory quantitative study was to describe the perceptions of the first year experience of teaching secondary agriculture and to explore the relationships between these perceptions, the characteristics of beginning agriculture teachers, and the types of support provided to beginning teachers. An additional focus of the study was to explore the relationship between the level of commitment to teaching and the perceptions of the first year experience. The following questions guided the study:

1. What are the demographic characteristics of beginning agriculture teachers and the schools in which they taught?
2. What is the experience of the first year of teaching secondary agriculture in terms of positive and negative perceptions?
3. What types of support programs are provided for first year secondary agriculture teachers?
4. What is the perception of the effectiveness of the support programs provided?

5. How likely are beginning secondary agriculture teachers to remain in the profession?
6. How do the demographic characteristics relate to the positive and negative perceptions of the first year experience?
 - b. *Ho*: There is no relationship between the demographic characteristics and the positive and negative perceptions of the first year experience.
7. How do the support programs provided for first year secondary agriculture teachers relate to the positive and negative perceptions of the first year experience?
 - b. *Ho*: There is no relationship between the support programs provided for first year secondary agriculture teachers and the positive and negative perceptions of the first year experience.
8. How do the positive and negative perceptions of the first year of teaching secondary agriculture relate to the reported likelihood of the teacher remaining in the profession?
 - b. *Ho*: There is no relationship between the positive and negative perceptions of the first year of teaching secondary agriculture and the reported likelihood of the teacher remaining in the profession.

The target population for this study was defined as all secondary agriculture teachers from across the U.S. who had completed one full year of teaching and were in their second year of teaching agriculture during the 2003-2004 academic year.

Secondary agriculture teachers were defined as having a teaching assignment

consisting of more than 50 percent agricultural education. The entirety of the population was selected instead of sample due to the relatively small population size.

The instrument used in this study was specifically developed to identify the perceptions of the first year experience in teaching secondary agriculture. Participants were asked to respond to 58 statements about their first year using a seven-point Likert-type scale ranging from very positive to very negative. Other questions in the questionnaire were included to determine the frequency and perceived effectiveness of various beginning teacher support activities, to determine the likelihood of the respondent to teach agriculture in the future, and to collect information about the characteristics of the teachers and the programs in which they taught during the first year.

The instrument was constructed specifically for this study and was developed based upon related literature and previous studies (Appendix A). A panel of experts ($N = 11$; Appendix D) examined the instrument for content validity and readability. The instrument was pilot tested with a group ($N = 16$) of secondary agriculture teachers in their third and fourth years of teaching.

The questionnaire was provided to participants electronically through the Internet. E-mail notices and letters were sent to the entire population which included the URL to the website on which the survey was located. Usable responses were received from 208 teachers for an overall response rate of 41.27%. When analyzing all scaled items in the instrument for internal consistency, the overall alpha score was .92. A diligent attempt was made to obtain responses from a sample of teachers drawn

from the population who had not responded to the questionnaire. Only seven additional responses were received. These responses were combined with those of respondents considered late responders. The responses to the scaled items of this combined group were compared with the responses to the scaled items of those considered early respondents using independent *t* tests. No evidence of a difference was found between the two groups at the .05 alpha level.

Findings

Research question one sought to describe selected demographic variables for the beginning secondary agriculture teachers in the United States during the 2003-2004 academic year. The demographic information was reported on the individual characteristics of the respondent and characteristics of the school and program in which the teacher taught during the first year of teaching. Demographic information for the individual participants indicated that the mean age of the population was 27 years old. Fifty-two percent of the respondents were male, and 98 percent reported that their racial or ethnic identity was best described as "White, European American, Non-Hispanic." Approximately one-third of the respondents had completed a certificate program or associated degree, 77.9 percent had completed a Bachelor's degree in agricultural education, 27.4 percent completed a Bachelor's degree in an area other than agricultural education and 18.8 percent had completed a Master's degree. Thirty one percent of respondents reported full-time employment experience in an agriculture or natural resources career other than teaching for longer than one year. Eighty-four percent of participants received teacher certification or licensure

through completion of a traditional agricultural education teacher preparation program while 5.3 percent held a certification obtained through an alternative certification program. Temporary certificates were held by 6.7 percent who were also working toward alternative certification. Participation in FFA as youth was reported by 84.6 percent of the respondents, with 68.8 percent reporting participation in 4-H. Only 8.2 percent had not participated in either 4-H or FFA.

The demographic information summarized at the school and program level showed that 80.3 percent of the programs in which participants taught during their first year were located in comprehensive high schools having an average student enrollment of 679. Sixty percent of the participants taught in programs with one agriculture teacher, while 22.1 percent taught in a program with two teachers, and 17.3 percent taught in programs with three or more agriculture teachers. Agriculture programs had an average student enrollment of 130 with a range from 10 to 680 students. FFA membership averaged 67.7 percent and average participation in supervised agriculture experience programs was 45.7 percent. Over half (52.4%) of the respondents reported receiving a stipend for FFA advising duties and 79.8 percent reported receiving an extended days contract for additional responsibilities.

The second research question sought to determine the experience of the first year of teaching secondary agriculture in terms of positive and negative perceptions. More than half of participants (59.6%) reported positive or very positive perceptions of their overall first year experience. Only about 11 percent responded that their first year was somewhat negative, negative or very negative.

The majority of respondents had positive or very positive experiences in working with students with the exceptions of motivating students in the classroom, teaching students with learning disabilities, dealing with problem behavior, and working with students in class who don't want to be there. Slightly over one-fourth of respondents reported negative or very negative experiences in working with students in class who don't want to be there.

Positive or very positive experiences were reported by the majority of respondents in the area of pedagogy and curriculum except for in the areas of curriculum development, lesson planning, targeting instruction for learning level of students, strategies for quality instruction, teaching using experiments and inquiry, and assessment and evaluation of student performance. No more than five percent of respondents reported negative or very negative experiences in this area.

Fewer than 25 percent of respondents reported positive or very positive perceptions for all statements related to time management and compensation, and about one-fourth of respondents reported negative or very negative perceptions toward the salary offered in relationship to the amount of time required.

Participants reported generally positive experiences in their relationships with school staff, colleagues, administrators, and guidance counselors. Most also responded positively to statements about developing partnerships in the community and in working with parents. About 40 percent reported negative experiences in dealing with the reputation of the previous agriculture teacher.

Experiences related to FFA advising were perceived by the majority of participants as positive or very positive. Fewer than half reported positive or very positive experiences in supervising and motivating students in SAE programs, in assisting with record keeping, and in developing relevant SAE programs for students.

Research question three asked participants to identify types of support received during the first year of teaching. A majority of respondents (62.5%) reported receiving support during the first year from an assigned non-agriculture teacher mentor who taught in the same school as the beginning teacher. Other forms of support received included mentoring by an agriculture teacher in another school who was chosen by the beginning teacher ($f = 56.7\%$), mentoring by a non-agriculture teacher who taught in the same school and was selected by the beginning teacher ($f = 41.8\%$), support from state agriculture teachers associations ($f = 87.5\%$), informal and formal meetings and discussions with other beginning teachers (informal $f = 86.5\%$; formal $f = 72.1\%$), the Local Program Success Guide and Beginning Teacher Survival Kit CD-ROM ($f = 78.4\%$), and beginning teacher inservice programs provided by the local school district ($f = 75.5\%$), the state department of education ($f = 66.3\%$), university teacher education ($f = 56.7\%$), or a combined effort by the state department and university teacher education program ($f = 53.4\%$). Fewer than half of the participants reported informal mentoring or on-site visits from university teacher educators.

Research question four sought to determine the perceived effectiveness of the support received. The form of mentoring most frequently perceived as effective or

very effective (79.6%) was provided by an agriculture teacher in another school who was chosen by the beginning teacher. Support provided by state agriculture teachers was perceived as effective or very effective by 63.7 percent of those receiving this type of support. Other types of support perceived as effective or very effective by most participants included meetings and discussions with other beginning teachers, and informal mentoring and on-site visits from university teacher educators.

The goal of research question five was to determine how likely beginning teachers were to remain teaching secondary agriculture at various points in the future. Most (88.9%) reported they were either likely or highly likely to be teaching secondary agriculture one year from the time of the survey. Nearly three-fourths (73.6%) responded they were likely or highly likely at three years, 61 percent at five years, less than half (44.7%) at ten years, and only about 32 percent were likely or highly likely to be teaching secondary agriculture at twenty years from the time of survey. Twenty five percent of participants reported that it was unlikely or highly unlikely they would be teaching secondary agriculture twenty years from the time of the survey and 16.2 percent perceived they were unlikely or highly unlikely to be teaching secondary agriculture ten years from the survey.

Research question six explored the relationship between characteristics of the participants and the perceived experiences of their first year of teaching, and include the null hypothesis, "*H₀*: There is no relationship between the demographic characteristics and the positive and negative perceptions of the first year experience." The null hypothesis was rejected as evidence of a relationship between the

characteristics of respondents and the perceptions of their first year experience was found (Wilk's Lambda = .279, $p = .03$). Characteristics included the number of teachers in the program, gender, age, education level achieved, type of teaching certificate held, and participation in FFA, 4-H, and other relevant activities.

Research question seven sought to determine how the support programs provided for first year secondary agriculture teachers relate to the positive and negative perceptions of the first year experience. It included the null hypothesis, "*H₀*: There is no relationship between the support programs provided for first year secondary agriculture teachers and the positive and negative perceptions of the first year experience." The null hypothesis was rejected as the results of Canonical Correlation analysis suggested evidence of a relationship between the frequency and effectiveness of support provided to beginning teachers and the perceived experiences of the first year (Wilk's Lambda = .1.23, $p = .01$).

The final research question explored how the positive and negative perceptions of the first year of teaching secondary agriculture related to the reported likelihood of the teacher remaining in the profession, and included the null hypothesis: "*H₀*: There is no relationship between the positive and negative perceptions of the first year of teaching secondary agriculture and the reported likelihood of the teacher remaining in the profession." The null hypothesis was rejected as evidence of a relationship was also found between the perceived experiences of the first year and the likelihood of teaching secondary agriculture in the future (Wilk's Lambda = .473, $p < .01$).

Conclusions

The conclusions of this study were based on the responses from the beginning secondary agriculture teachers participating in the study. Generalization beyond the population for this study is not statistically appropriate. Based on the findings of this study, the following conclusions were formulated:

Objective 1

A higher proportion of participants in this study were females as compared to the general population of secondary agriculture teachers. A very low percentage of participants reported diverse cultural or ethnic backgrounds.

Objective 2

Results indicate that the majority of beginning teachers have positive perceptions regarding the overall experience of their first year of teaching. The majority of the participants held positive perceptions of their experiences in working with students. However, student motivation in the classroom, dealing with problem behaviors, and dealing with student academic differences were not perceived as positive or very positive experiences by a majority of participants.

While no more than five percent of participants held negative or very negative perceptions of experiences related to pedagogy and curriculum, fewer than half held positive perceptions toward targeting instruction for the learning level of students, lesson planning, teaching with experiments and inquiry, assessment of student performance, teaching problem solving, and curriculum development.

Time management, particularly preparation time and balancing professional and personal responsibilities was not perceived positively by participants. FFA advising experiences were perceived positively by the majority of respondents, while statements related to supervision of agricultural experience programs were viewed positively by fewer than half of the teachers.

Thirteen significant factors were identified that underlie the experience of the first year secondary agriculture teacher. These included advising the FFA chapter, time management, pedagogy, teaching with technology, instructional materials, supervised agriculture experience programs, school personnel relations, student motivation, relationships with parents, community relationships, curriculum, student cultural differences, and student academic differences.

Objective 3

Most of the participants received support during their first year, either through mentoring or other forms of support. Results suggest that some beginning teachers did not receive support during their first year.

Objective 4

Support provided by mentors who were chosen by the beginning teacher was perceived as effective more frequently than was support provided by mentors who were assigned. This was consistent for both agriculture and non-agriculture teacher mentors.

Although support from the university teacher education program was reported by fewer than half of the participants, it was perceived as effective or very effective by a majority of those receiving this type of support.

State agriculture teachers associations provided support to 87.5 percent of respondents. The support provided by these groups was perceived as effective or very effective by a majority of teachers.

Objective 5

A majority of participants were unsure of their long-term commitment to teaching secondary agriculture. Although nearly 90 percent reported that they were likely or highly likely to be teaching secondary agriculture one year from the survey, fewer than half reported that they were likely or highly likely to be teaching at ten years, and less than one third at twenty years.

Objective 6

Although the experience varies by teacher, the results of this study indicate that teacher characteristics, particularly age, previous FFA experience, and completion of a traditional agricultural education program, are related to the perceptions of the first year experience.

Objective 7

Results suggest that a lack of support or support provided to beginning teachers that is perceived as ineffective is related to more negative perceptions of the first year experience.

Objective 8

Results of this study indicate that negative perceptions of the first year experience are related to a lower likelihood of teaching secondary agriculture in the future.

Discussion and Implications

This section provided for the discussion and presentation of implications regarding the conclusions of the study. The conclusions are presented by objective.

Objective 1

The higher proportion of female agriculture teachers in this population is consistent with the most recent National Study of the Supply and Demand for Teachers of Agricultural Education (Camp, Broyles & Skelton, 2002) in that the percentage of female agriculture teachers is increasing. The low percentage of participants reporting diverse cultural or ethnic backgrounds was also consistent with the supply and demand study, implying the need for increased efforts in recruiting “qualified agriculture teachers who represent the demographics of the nation” (National Council for Agricultural Education, 2000).

Objective 2

The indication that most beginning teachers have positive perceptions regarding the overall experience of their first year of teaching is promising. Although some factors related to the experience were not perceived positively, most perceived their overall experience positively. The positive experiences in working with students reported by participants were consistent with the findings of the qualitative study that served to inform the instrument for this study (Warnick, Thompson, & Gummer, 2003). Less than positive experiences expressed in the areas of student motivation in the classroom, dealing with problem behaviors, and dealing with student academic differences were also consistent with the previous studies (Veenman, 1984), .

The findings indicate that teachers felt generally prepared in the areas related to pedagogy and curriculum. However, improvements should be made to preservice programs and to beginning teacher support programs to assist teachers with targeting instruction for the learning level of students, lesson planning, teaching with experiments and inquiry, assessment of student performance, teaching problem solving, and curriculum development. Difficulties in these areas were also reported in studies by Adams and Krokover (1997), Howey (1988), Mundt and Connors (1999), and Veenman (1984). Professional development opportunities should be implemented to reinforce these pedagogical and curricular issues typically addressed in preservice programs, particularly as beginning teachers face the “realities” of the classroom.

Time management and the balance of personal and professional responsibilities was the least positively perceived factor in the study. These findings concur with other studies regarding the challenges and needs of beginning teachers (Mundt, 1991, Warnick, Thompson, & Gummer, 2003). Beginning teachers should be provided with strategies to help them manage the time and for reevaluating the expectations placed upon them by themselves and by the school and communities in which they teach.

Objectives 3 and 4

Support for beginning agriculture teachers should continue, but should not be limited to mentoring alone, especially not just one form of mentoring. Beginning teachers should be encouraged to select their own mentors to provide support throughout the year. However, an assigned mentor may be necessary especially during the first few months of the school year until the beginning teacher identifies mentors with which he or she feels comfortable.

More teacher education institutions should provide mentoring to beginning teachers. Mentoring from teacher education programs was perceived as effective or very effective by a majority of those who reported receiving this type of support. However, fewer than half of the beginning teachers participating in this study reported receiving support from teacher education programs. Teacher educators should look for opportunities with which they could provide support to beginning teachers. Contact with beginning teachers allows the teacher educator the opportunity to reinforce concepts taught in the preparation program and to encourage reflection on teaching

practices. Although the time and resources of teacher education programs are limited, this contact could come through the use of coursework provided for continuing licensure, through telephone and e-mail conversations, through professional development conferences, or through brief visits while supervising student teachers in the area.

State agriculture teachers associations should recognize and capitalize on their role in the development of beginning teachers. Whether by planning or by chance, over 85 percent of beginning teachers felt supported by the agriculture teachers association during their first year. State associations should be informed of their role in providing support to beginning teachers and should continue to look for opportunities to provide mentorship and support to beginning teachers, both formally and informally.

Objective 5

A large difference exists in the number of teachers who reported a high likelihood of teaching one year from now versus those who plan to teach at 10 years. The difference is even larger at twenty years from the time of the survey.

Objective 6

Although little can be done to alter demographic characteristics of individuals, extra support can be provided to those individuals who are identified as members of groups associated with increased negative perceptions toward the first year of teaching. For instance, teachers without FFA experience may need additional support

in their preservice teacher education programs and through professional development in their first few years of teaching to improve the perceptions of working with students in the FFA. Collegiate FFA might provide opportunities through which preservice teachers without an FFA background might gain experience. Older teachers who may not be as comfortable or familiar with the use of technology in the classroom may need additional workshops or mentoring to improve their perceptions in this area. The relationship between teacher characteristics and the perceptions of the first year suggested in this study provides a framework for providing these types of additional support activities specifically targeted to meet the needs of the teacher.

Objective 7

As negative perceptions of the first year of teaching are related to a lack of support or support that is perceived as ineffective, it is important for teacher educators and state leaders to help ensure that beginning agriculture teachers are receiving support during their first few years and that the support they receive is effective. Mentors should receive training on effective mentoring practices and professional development activities should be targeted to meet the needs of the beginning teachers in the cohort.

Objective 8

The relationship between the perceptions of the first year experience and the likelihood of remaining in the profession supports Gold's (1996) adaptation of the

theory of imprinting. The results of this study are consistent with the following statement::

“When initial experiences are pleasurable, the imprinting is mainly positive and the transference is positive; however, when the first experiences are negative, paired with feelings of discouragement and discomfort, the imprinting is negative, and these feelings and behaviors are elicited in similar circumstances in the future. In many instances, continued reinforcement of unpleasant experiences may result in a decision to end a teaching career” (p. 548).

Those providing support to beginning teachers should examine methods improve the perceptions of the first year experience. Additional support in specifically targeted areas may be necessary.

Recommendations for Future Research

The following areas are recommended for future research:

1. A follow up study with this population in an attempt to determine some characteristics about the non-respondents might provide additional support to this study.
2. Future research is needed to validate the experience factors extracted in this study. New studies may choose not to include experience Factor 14 (budgeting) as reliability on this variable is questionable.
3. Following the model proposed by Miles and Huberman (1994), additional qualitative and quantitative data can serve to deepen and test the findings of this quantitative study. It is recommended that further studies be long-term, collecting data prior to the first teaching experience and at various points throughout the first

year and even into the first few years of teaching. Data should be collected through a variety of methods including, interviews, surveys, observations, and document analysis. Reflection journaling by teachers throughout the year might provide a rich source of data. This could be implemented as part of continuing licensure coursework while providing opportunities for support from university teacher education programs. Further studies should seek out alternate explanations regarding the first year experience.

4. Future research is needed to determine the perceptions of the first year experience of, support provided to, and characteristics of those individuals who decide not to return to teaching after the initial year. These perceptions might provide university teacher educators, mentor teachers, school administrators, state department staff, and professional organizations with the types of information needed to provide effective instruction and support for preservice and inservice teachers.

5. Further research is needed to compare the perceptions of administrators and beginning teachers regarding the experiences of the beginning teachers' initial year of teaching. Information from this research may provide information to help facilitate more effective support from school administrators.

6. Research aimed at determining the teaching experiences and characteristics of teachers at other stages in their careers might provide useful information for developing effective programs and support for preservice and beginning inservice teachers.

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APPENDIXES

APPENDIX A

Beginning Agriculture Teacher Survey

This survey instrument is intended for teachers who have completed one year of teaching secondary agriculture and are currently in their second year. The goal of the survey is to obtain information about the experiences of the first year teacher and about the support provided during that first year.

Part A - Experiences of the First Year

1. Please select from the scale the number that best describes your overall experience during your first year of teaching with regard to each of the following components. If you have no basis for response, please choose N/A.

	Very Positive	Positive	Somewhat Positive	Somewhat Negative	Negative	Very Negative	
a. Dealing with problem student behavior	6	5	4	3	2	1	N/A
b. Dealing with student academic differences	6	5	4	3	2	1	N/A
c. Helping students work through personal problems	6	5	4	3	2	1	N/A
d. Teaching students with cultural differences	6	5	4	3	2	1	N/A
e. Teaching students with socio-economic differences	6	5	4	3	2	1	N/A
f. Teaching learning disabled students	6	5	4	3	2	1	N/A
g. Dealing with student gender differences	6	5	4	3	2	1	N/A
h. Working with students in your classes who don't want to be there	6	5	4	3	2	1	N/A
i. Motivating students in the classroom	6	5	4	3	2	1	N/A
j. Working with students within the classroom	6	5	4	3	2	1	N/A
k. Working with my students outside of class	6	5	4	3	2	1	N/A
l. Working with students in the FFA	6	5	4	3	2	1	N/A
m. Recruiting students into agricultural education	6	5	4	3	2	1	N/A

2. Please select from the scale the number that best describes your overall experience during your first year of teaching with regard to each of the following components. If you have no basis for response, please choose N/A.

	Very Positive	Positive	Somewhat Positive	Somewhat Negative	Negative	Very Negative	
a. Knowledge of subject matter	6	5	4	3	2	1	N/A
b. Curriculum development	6	5	4	3	2	1	N/A
c. Lesson planning	6	5	4	3	2	1	N/A
d. Strategies for quality instruction	6	5	4	3	2	1	N/A
e. Targeting instruction for learning level of students	6	5	4	3	2	1	N/A
f. Teaching using experiments/inquiry	6	5	4	3	2	1	N/A
g. Teaching students problem-solving and decision making skills	6	5	4	3	2	1	N/A
h. Assessment and evaluation of student performance	6	5	4	3	2	1	N/A
i. Using computers in classroom teaching	6	5	4	3	2	1	N/A
j. Using multimedia in teaching	6	5	4	3	2	1	N/A
k. Keeping technically competent in new agricultural knowledge and skills	6	5	4	3	2	1	N/A
l. Professional development opportunities	6	5	4	3	2	1	N/A

3. Please select from the scale the number that best describes your overall experience during your first year of teaching with regard to each of the following components. If you have no basis for response, please choose N/A.

	Very Positive	Positive	Somewhat Positive	Somewhat Negative	Negative	Very Negative	
a. Salary in relationship to time required	6	5	4	3	2	1	N/A
b. Managing teaching load	6	5	4	3	2	1	N/A
c. Preparation time	6	5	4	3	2	1	N/A
d. Personal time management	6	5	4	3	2	1	N/A
e. Balancing professional and personal responsibilities	6	5	4	3	2	1	N/A

4. Please select from the scale the number that best describes your overall experience during your first year of teaching with regard to each of the following components. If you have no basis for response, please choose N/A.

	Very Positive	Positive	Somewhat Positive	Somewhat Negative	Negative	Very Negative	
a. Dealing with students' parents	6	5	4	3	2	1	N/A
b. Conducting parent-teacher conferences	6	5	4	3	2	1	N/A
c. Relationships with colleagues	6	5	4	3	2	1	N/A
d. Relationships with administrators	6	5	4	3	2	1	N/A
e. Relationships with guidance counselors	6	5	4	3	2	1	N/A
f. Relationships with school staff (i.e., secretaries, custodians, cooks, etc.)	6	5	4	3	2	1	N/A
g. Developing partnerships with parents, organizations, alumni groups, and community adult groups	6	5	4	3	2	1	N/A
h. Utilizing an advisory committee to provide guidance to the agricultural program	6	5	4	3	2	1	N/A
i. Identifying and building support from resource people and agricultural industries within the community	6	5	4	3	2	1	N/A
j. Dealing with the reputation of the previous agriculture teacher	6	5	4	3	2	1	N/A
k. Developing and implementing a public relations program	6	5	4	3	2	1	N/A
l. Marketing the local agricultural education program	6	5	4	3	2	1	N/A

5. Please select from the scale the number that best describes your overall experience during your first year of teaching with regard to each of the following components. If you have no basis for response, please choose N/A.

	Very Positive	Positive	Somewhat Positive	Somewhat Negative	Negative	Very Negative	
a. Organizing and managing safe and attractive facilities	6	5	4	3	2	1	N/A
b. Availability of materials and supplies	6	5	4	3	2	1	N/A
c. Availability of equipment	6	5	4	3	2	1	N/A
d. Repair and replacement of laboratory/shop equipment	6	5	4	3	2	1	N/A
e. Dealing with school policies and rules	6	5	4	3	2	1	N/A
f. Completing paper work and meeting required deadlines	6	5	4	3	2	1	N/A
g. Developing and managing the budget and finances of the agricultural program	6	5	4	3	2	1	N/A

6. Please select from the scale the number that best describes your overall experience during your first year of teaching with regard to each of the following components. If you have no basis for response, please choose N/A.

	Very Positive	Positive	Somewhat Positive	Somewhat Negative	Negative	Very Negative	
a. Managing the overall activities of the local FFA chapter	6	5	4	3	2	1	N/A
b. Completing FFA forms and award applications	6	5	4	3	2	1	N/A
c. Developing relevant SAE programs for students	6	5	4	3	2	1	N/A
d. Preparing competent teams for FFA Career Development Events	6	5	4	3	2	1	N/A
e. Assisting students with record keeping	6	5	4	3	2	1	N/A
f. Supervising SAE programs	6	5	4	3	2	1	N/A
g. Motivating students in FFA	6	5	4	3	2	1	N/A
h. Motivating students in SAE programs	6	5	4	3	2	1	N/A

7. Please select the answer that best describes your experience.

	Very Positive	Positive	Somewhat Positive	Somewhat Negative	Negative	Very Negative	
How would you describe your first year experience as a whole?	6	5	4	3	2	1	N/A

8. What was the most difficult problem you faced during your first year of teaching? (If providing more than one response, please place them in order of importance to you.)

9. What was the most successful experience of your first year of teaching? (If providing more than one response, please place them in order of importance to you.)

Part B - Support Programs for Beginning Teachers

10. The following questions refer to mentoring activities that may have been provided to you as a beginning teacher. Please respond by selecting the number corresponding to your opinion regarding the effectiveness of support provided to you as a first year teacher. If you did not participate in the activity or if they were not available to you, please mark N/A.

	Not Available	Very Effective	Effective	Somewhat Effective	Somewhat Ineffective	Ineffective	Very Ineffective
a. Mentoring from a non-agriculture teacher in your school who was assigned to you	N/A	6	5	4	3	2	1
b. Mentoring from a non-agriculture teacher in your school whom you chose	N/A	6	5	4	3	2	1
c. Mentoring from an agriculture teacher in another school who was assigned to you	N/A	6	5	4	3	2	1
d. Mentoring from an agriculture teacher in another school whom you chose	N/A	6	5	4	3	2	1
e. Mentoring from an agriculture teacher in your school who was assigned to you	N/A	6	5	4	3	2	1
f. Mentoring from an agriculture teacher in your same school whom you chose	N/A	6	5	4	3	2	1

11. The following questions refer to support activities that may be provided to beginning teachers. Please respond by selecting the number corresponding to your opinion regarding the effectiveness of support provided to you as a first year teacher. If you did not participate in the activity or if they were not available to you, please mark N/A.

	Not Available	Very Effective	Effective	Somewhat Effective	Somewhat Ineffective	Ineffective	Very Ineffective
a. Beginning teacher inservice program provided by the state department of education	N/A	6	5	4	3	2	1
b. Beginning teacher inservice program provided by your school district	N/A	6	5	4	3	2	1
c. Beginning teacher inservice program provided by a university teacher education program	N/A	6	5	4	3	2	1
d. Beginning teacher inservice program provided by a combined effort of state department of education and university teacher education program	N/A	6	5	4	3	2	1
e. Informal meetings and discussions with other beginning teachers	N/A	6	5	4	3	2	1
f. Formal meetings and discussions with other beginning teachers	N/A	6	5	4	3	2	1
g. On-site visits from university teacher educator(s)	N/A	6	5	4	3	2	1
h. Informal mentoring from university teacher educator(s)	N/A	6	5	4	3	2	1
i. Local Program Success Guide and Beginning Teacher Survival Kit CD-ROM	N/A	6	5	4	3	2	1
j. Support from state agriculture teachers association	N/A	6	5	4	3	2	1
k. Support from other professional organizations	N/A	6	5	4	3	2	1

12. Please list any additional support activities provided to you as a beginning teacher that were not mentioned in the above set of questions. Please describe the effectiveness of each program you list.

13. What type of support was most beneficial to you during your first year of teaching? (If providing more than one answer, please place in order of importance to you.)

14. If you could have received additional support beyond what was provided, what type of support would have been the most beneficial to increasing your success during your first year?

Part C - Information About You

15. Which of the following best describes your CURRENT level of teaching experience?

- I am currently in my first year of teaching
- I am currently in my second year of teaching
- I am currently in my third year of teaching
- I am currently in my fourth year of teaching
- I am no longer teaching
- Other. Please specify other here: _____

16. Which of the following best describes the school in which you taught during your first year?

- Comprehensive High School
- Vocational, Technical, or Career Center
- Junior high/middle school
- Split assignment between different types of schools

17. Which of the following best describes your teaching assignment during your first year?

- Full-time with 100% agricultural education courses
- Full-time with 50-99% agricultural education courses
- Full-time with less than 50% agricultural education courses
- Part-time position
- Partial-year position

18. How many students were enrolled in the school in which you taught during your first year? _____

19. How many agricultural education instructors taught in the school in which you taught during your first year? _____

20. How many students were enrolled in the agricultural education program during your first year? _____

21. What percentage of students enrolled in the agricultural education program in which you taught during your first year were FFA members? _____%

22. What percentage of students enrolled in the agricultural education program in which you taught during your first year had a supervised agricultural experience program? _____%

23. What is your gender?

- Male
- Female
- Decline to respond

24. What is your age in years? _____

25. Which best describes your racial/ethnic identity?

- White, European American, Non-Hispanic
- Asian or Asian American
- Black, African American, Non-Hispanic
- Middle Eastern or Middle-Eastern American
- North African or North African-American
- Pacific Islander
- Hispanic or Latino American
- American Indian or Alaskan Native
- Other (Please specify other here:) _____
- Decline to respond

26. Please mark all of the following areas you have completed:

- Certificate program/Associates degree
- Bachelor's degree in agricultural education
- Bachelor's degree other than agricultural education
- Post-baccalaureate coursework
- Master's degree (M.S., Ed.M, M.A.T., etc.)
- Other graduate level training
- Full time employment for one year or longer in an agriculture or natural resources career other than teaching

27. Which of the following best describes your teacher certification status at the beginning of your first year?

- Certified through traditional agricultural education teacher preparation program
- Certified through an alternative certification program
- Temporary certification working toward alternative certification
- Temporary certification with no plans to obtain certification
- Other (Please specify other here:)

28. Describe the general reputation of the agriculture program in which you taught during your first year before you started teaching.

- Very Strong
- Strong
- Fair
- Poor
- Very Poor
- It was a new program

29. Overall, the number of students I was asked to teach in each class during my first year was:

- Too large to manage
- Large but manageable
- Just right
- Small
- Much too small

30. On average, how many students were in each of the classes you taught during your first year? _____

31. Did you participate in 4-H as a youth?

Yes

No

32. If you answered yes to the previous question, how many years did you participate? _____

33. Did you participate in FFA/agricultural education as a youth?

Yes

No

34. If you answered yes to the previous question, how many years did you participate? _____

35. Did you participate in other activities as a youth which were relevant to your job as an FFA advisor (i.e., public speaking, student government, etc.)?

Yes

No

36. If you answered yes to the previous question, please list those activities in which you were involved.

37. Did you receive an FFA stipend during your first year?

Yes

No

38. Did you receive an extended days contract for advising and/or supervision during your first year?

Yes

No

39. If you answered "Yes" to the previous question, how many days pay did you receive in addition to your standard teaching contract? _____

40. In which state did you teach during your first year? _____

41. How likely are you to be teaching secondary agriculture at each of the following times?

	Highly Likely	Likely	Somewhat Likely	Somewhat Unlikely	Unlikely	Highly Unlikely	N/A
One year from now	6	5	4	3	2	1	N/A
Three years from now	6	5	4	3	2	1	N/A
Five years from now	6	5	4	3	2	1	N/A
Ten years from now	6	5	4	3	2	1	N/A
Twenty years from now	6	5	4	3	2	1	N/A

*Appendix B**E-mail to State Supervisors of Agricultural Education*

Dear _____,

We are planning to conduct a national study on the problems and successes encountered by beginning teachers in agricultural education. It is our hope that the results from this study will be used to improve the support programs implemented to assist beginning teachers in agricultural education.

In order to accomplish this, we need your help in identifying teachers in your state to participate in the study. **You are the only person in your state to receive this e-mail.** If you are not the contact person for this information, please notify us of the appropriate individual to contact.

We would like to survey teachers who have completed one year of teaching with at least a 50% assignment in agricultural education and are currently in their second year of teaching high school agriculture. If you could, please provide us with the following information:

- Name of all teachers in your state meeting the above criteria (a random sample will be drawn from the entire group)
- E-mail address
- School name, and mailing address

We will not use the information for anything other than this research project and Institutional Review Board protocol will be followed. Please e-mail the information to brian.warnick@oregonstate.edu or mail it to the address below. If possible, we would like to have this information by October 3. If you have questions or concerns, please feel free to e-mail or call us at 541-737-1338.

Your assistance is greatly appreciated.

Sincerely,

Brian Warnick
Instructor
Oregon State University
112 Strand Agriculture Hall
Corvallis, Oregon 97331-2212
(541) 812-9262

Dr. Greg Thompson
Associate Professor
Oregon State University

Appendix C
Original Population Reported by State

State	Names and contact information provided by:	Number of teachers reported
Alabama	State Staff	7
Alaska	Teacher Educator	0
Arizona	State Staff/Teacher Educator	17
Arkansas	State Staff	10
California	Teacher Educator	37
Colorado	State Staff	7
Connecticut	State Staff	2
Delaware	State Staff	3
Florida	Teacher Educator	35 (+17*)
Georgia	State Staff	30
Hawaii	State Staff	0
Idaho	State Staff	3
Illinois	State Staff	16
Indiana	State Staff	9
Iowa	State Staff	15
Kansas	Teacher Educator	14
Kentucky	State Staff	23
Louisiana	State Staff	11
Maine	State Staff	1
Maryland	Teacher Educator	0
Massachusetts	State Staff	0
Michigan	Teacher Educator	5
Minnesota	Teacher Educator	13
Mississippi	Teacher Educator	6
Missouri	State Staff	25
Montana	State Staff	5
Nebraska	State Staff	14
Nevada	State Staff	2
New Hampshire	State Staff	0
New Jersey	State Staff	1
New Mexico	Teacher Educator	8
New York	State Staff	12
North Carolina	State Staff	25
North Dakota	State Staff	5
Ohio	State Staff	29
Study population by state (continued).		
State	Names and contact	Number of teachers

	information provided by:	reported
Oregon	Teacher Educator	8
Pennsylvania	State Staff	15
Rhode Island	State Staff	0
South Carolina	State Staff	9
South Dakota	State Staff	11
Tennessee	State Staff	9
Texas	Teacher Educator	83
Utah	State Staff	8
Vermont	State Staff	2
Virginia	State Staff	15
Washington	Teacher Educator	13
West Virginia	State Staff	6
Wisconsin	Teacher Educator	15
Wyoming	State Staff	7
Total		614 (631*)

*Florida's originally identified population of 17 teachers was actually the third year teachers in the state. The second population provided, matching the population parameters for the study, included a total of 35 teachers.

*Appendix D**Panel of Experts*

Dr. R. Lee Cole
Professor and Chair
Department of Agricultural Education
and General Agriculture
Oregon State University

Mr. William L. Deimler
Specialist, Agricultural Education
Applied Technology Education
Utah State Office of Education

Dr. Wayne L. Fanno
Assistant Professor and Distance
Education Coordinator
Department of Agricultural Education
and General Agriculture
Oregon State University

Dr. Bradley C. Greiman
Assistant Professor
Division of Agricultural, Food, and
Environmental Education
Department of Work, Community, and
Family Education
University of Minnesota

Dr. Edith S. Gummer
Assistant Professor
Department of Science and
Mathematics Education
Oregon State University

Dr. W. Scot Headley
Associate Professor
School of Education
George Fox University

Dr. Richard M. Joerger
Assistant Professor
Division of Agricultural, Food, and
Environmental Education
Department of Work, Community, and
Family Education
University of Minnesota

Dr. Charles C. Langford
Associate Professor
Department of Sociology
Oregon State University

Dr. B. Allen Talbert
Associate Professor
Department of Youth Development
and Agricultural Education
Purdue University

Ms. Katie L. Thalman
Instructor and 2002 NAAE Region I
Outstanding Young Member Award
Recipient
North Summit High School
Coalville, UT

Dr. Gregory W. Thompson
Associate Professor
Department of Agricultural Education
and General Agriculture
Oregon State University

Appendix E
Letter to Panel of Experts

Dear _____,

I am planning to conduct a national study on the problems and successes encountered by beginning teachers in agricultural education. This study is for my doctoral dissertation in education at Oregon State University under the direction of Dr. Gregory Thompson. As a result of your knowledge and research on beginning teachers and the induction process, I am asking you to serve on the panel of experts for this study. If you are willing to do so, your role will be to review the data collection instrument we have developed for face and content validity.

As the beginning teachers will receive the survey in electronic form, this is how I want to present it to the members of the expert panel. At your earliest convenience, would you please review the instrument found at
http://surveys.bus.oregonstate.edu/BsgSurvey2_0/main.aspx?SurveyID=658

I am specifically interested in knowing which questions might create difficulty due to lack of clarity, which questions might be better left out completely, or which questions you feel I should be asking but haven't. I have provided a place for expert panel members to provide suggestions at the end of each of the three major sections. You can respond in those spaces, via e-mail, or by printing out a hard copy and mailing it with your comments to the address below, whichever you prefer.

Any suggestions you can provide would be greatly appreciated. If you have additional questions, please feel free to e-mail or call.

Thank you for your time and assistance with this study.

Sincerely,

Brian Warnick

*Appendix F**Pilot Test Participants*

Mark Alves
Winters High School
Winters, California

Kerry Moody
Pine View High School
St George, Utah

Mackenzie Behrle
Willamina High School
Willamina, Oregon

Mark Mullion
Palo Verde High School
Blythe, California

Josh Betschart
Sierra High School
Manteca, California

Megan Prewitt
Hood River Valley High School
Hood River, Oregon

Maryann Buckley
South Huntington County High School
Three Springs, Pennsylvania

Kim Randall
Sunny Hills High School
Fullerton, California

Jenna Coble
Farmersville High School
Farmersville, California

Raylene Russell
South Huntington County High School
Three Springs, Pennsylvania

Corinne Dalton
Emery High School
Castle Dale, Utah

Amiee Veldhuizen
Redwood High School
Visalia, California

Dan McNary
Monument High School
Monument, Oregon

Jonathan Velez
Sandy High School
Sandy, Oregon

Marlene Mensch
Dallas High School
Dallas, Oregon

Ann Marie Meyer
Forbes Road Jr-Sr High School
Waterfall, Pennsylvania

Appendix G

Letter to Pilot Test Participants

Dear _____ :

We are asking for your help in pilot testing an online research questionnaire before it is sent out for a national study of beginning secondary agriculture teachers. You are one of a few teachers from across the nation selected to pilot this survey instrument. Your feedback is extremely important in making sure the questionnaire is valid and reliable.

We would appreciate it if you would take a few minutes to respond to the online questionnaire found at
http://surveys.bus.oregonstate.edu/BsgSurvey2_0/main.aspx?SurveyID=677.

To access this survey you will need a password. The password you should use when asked to logon is <<Password>>

We would especially appreciate any comments you can provide that will help make taking the survey more understandable for study participants. If possible, please respond to this survey before Tuesday, December 2, 2003.

If you have any questions about the survey, please contact me at (541) 737-1338 or by e-mail at brian.warnick@oregonstate.edu. If I am not available when you call, please leave a message and I will call back.

Thank you for your help. We appreciate your cooperation.

Sincerely,

Brian Warnick, Instructor

Greg Thompson, Associate Professor

*Appendix H**Pre-notice E-mail Message / Letter*

Dear _____,

In a few days you will receive via e-mail a request to complete a questionnaire for an important national research project being conducted by researchers at Oregon State University.

It concerns the experiences of beginning teachers in agricultural education, and about the types of support provided to first year teachers.

I am writing in advance because we have found many people like to know ahead of time that they will be contacted. The study is an important one that will help teacher educators as well as state and district staff better understand the experiences of beginning teachers.

Thank you for your time and consideration. It's only with the generous help of people like you that our research can be successful.

Sincerely,

Brian Warnick, Instructor

Greg Thompson, Associate Professor

Agricultural Education
Oregon State University
112 Strand Hall
Corvallis, OR 97322
(541) 737-1338

*Appendix I**Survey Cover E-mail / Letter and Consent Document*

Dear _____:

The first few years of teaching can be a particularly difficult time. A much higher percentage of teachers leave the profession during the first few years of teaching than at any other time. In order to provide appropriate professional development opportunities for beginning agriculture teachers, especially those that provide the beginning teacher with the support needed to succeed during those first years, additional information is needed.

As a secondary agriculture instructor who has completed one full year of teaching, I am asking your help in determining some of the successes and struggles of the first year of teaching as well as the support received by teachers during the first year. We would appreciate it if you would take about 20 minutes to respond to the online questionnaire found at <http://oregonstate.edu/~warnickb>. If you have trouble with that link, please try: http://surveys.bus.oregonstate.edu/BsgSurvey2_0/main.aspx?SurveyID=686

Your responses, together with others, will be combined and used for statistical summaries only. **Your participation in this study is voluntary and you may refuse to answer any question.** However, as noted in the attached letter from Dr. Larry Case, National FFA Organization Advisor, your input is important to the study and to the profession.

The answers you provide will be kept confidential to the extent permitted by law. Special precautions have been established to protect the confidentiality of your responses. In order to access the questionnaire, you will need a password. **Your password is oz2n1n5t.** This password is also used to contact those who have not returned their questionnaire, so we do not burden those who have responded. However, the computer program used for the survey removes the password from the responses as soon as your responses are submitted. Once you hit the submit button, there is no possible way to connect your responses to you. Your responses will be destroyed once the data have been tallied. There are no foreseeable risks to you as a participant in this project; nor are there any direct benefits. However, your participation is extremely valued.

If you have any questions about the survey, please contact me at (541) 737-1338 or by e-mail at brian.warnick@oregonstate.edu. If I am not available when you call, please leave a message and I will call back. If you have questions about your rights as a participant in this research project, please contact the Oregon State University Institutional Review Board (IRB) Human Protections Administrator at (541) 737-3437 or by e-mail at IRB@oregonstate.edu.

Thank you for your help. We appreciate your cooperation.

Sincerely,

Brian Warnick, Instructor

Greg Thompson, Associate Professor

Appendix J

Letter of Support from Dr. Larry Case

To Whom It May Concern:

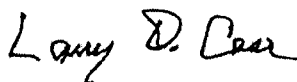
Providing a sufficient quantity of qualified agriculture teachers is the first goal of The National Strategic Plan and Action Agenda for Agricultural Education (National Council for Agricultural Education, 2000). To attain this goal, one of the objectives in the plan is to provide relevant instructional leadership and professional development opportunities for teachers. Additionally, teacher retention has been identified as part of the solution in ensuring an abundance of qualified teachers. The beginning years of teaching have been identified as a particularly difficult time with a much higher percentage of teachers leaving the profession during the first few years of teaching than at any other time. In order to provide appropriate professional development opportunities for beginning agriculture teachers, especially those that provide the beginning teacher with the support needed to succeed during those first years, additional information is needed.

A national study of the challenges and successes experienced by beginning secondary agriculture teachers is currently being conducted by researchers at Oregon State University. Information from this study will be used in developing programs of support and professional development for beginning agriculture teachers. We encourage your participation in this study.

If you have questions or would like more information about the study, please contact Brian Warnick at Oregon State University, 541-737-1338, brian.warnick@oregonstate.edu.

We hope you will participate in this important study.

Sincerely,



Larry D. Case



National FFA Center
6060 FFA Drive
P.O. Box 68960
Indianapolis, IN 46268-0960
Phone: 317-802-6060
Fax: 317-802-6061

The FFA Mission: FFA makes a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education.

NATIONAL FFA ORGANIZATION

*Appendix K**First Follow-up E-mail / Letter*

Dear _____,

Last week a link to an online questionnaire seeking your opinions about the first year of teaching secondary agriculture was sent to you.

If you have already completed and submitted the questionnaire, please accept our sincere thanks. If not, please do so today. If you no longer have the link to the questionnaire, it can be found at:

http://surveys.bus.oregonstate.edu/BsgSurvey2_0/main.aspx?SurveyID=686. Your code to gain access to the survey is <<PASSWORD>>.

Thank you again for your time and consideration.

Sincerely,

Brian Warnick, Instructor

Greg Thompson, Associate Professor

Appendix L
Second Follow-up E-mail / Letter

Dear _____,

About four weeks ago I sent a link to an online questionnaire to you and to other second year agriculture teachers in the nation that asked about your experiences of the first year of teaching secondary agriculture. To the best of our knowledge, you have not yet completed this survey.

We are writing again because of the importance that your questionnaire has for helping to get accurate results. Although we sent questionnaires to teachers in every state, it's only by hearing from nearly everyone that we can be sure that the results are truly representative.

If you are not a secondary agriculture teacher currently in your second year of teaching, or if for any reason you choose not to answer the questionnaire, please send an e-mail to brian.warnick@oregonstate.edu. Please also let us know if you have difficulty accessing or submitting the questionnaire.

Protecting the confidentiality of people's answers is very important to us, as well as the university. Although you have been assigned a unique password for gaining access to the questionnaire, those passwords are in no way linked to the responses you provide. Your code and password are removed from your responses as soon as you hit the submit button.

We hope that you will complete the questionnaire soon. If you no longer have the link to the questionnaire, it can be found at: <http://oregonstate.edu/~warnickb>

If the above link does not work, please try:

http://surveys.bus.oregonstate.edu/BsgSurvey2_0/main.aspx?SurveyID=686

Your code to gain access to the survey (logon code) is 5s2033su.

If you have any questions about the survey, please contact me at (541) 737-1338 or by e-mail at brian.warnick@oregonstate.edu. If I am not available when you call, please leave a message and I will call back. If you have questions about your rights as a participant in this research project, please contact the Oregon State University Institutional Review Board (IRB) Human Protections Administrator at (541) 737-3437 or by e-mail at IRB@oregonstate.edu.

Thank you again for your time and consideration.

Sincerely,

Brian Warnick, Instructor

Appendix M

Final Follow-up E-mail / Letter

Dear _____,

We realize that your time is limited, but we are writing again to ask for your help in responding to an online questionnaire. We would like to have the input from every second year agriculture teacher in the nation. To the best of our knowledge, you have not yet completed this survey. Although we have asked teachers in every state to complete this questionnaire, it's only by hearing from nearly everyone that we can be sure that the results are truly representative.

If you are not a secondary agriculture teacher currently in your second year of teaching, or if for any reason you choose not to answer the questionnaire, please send an e-mail to brian.warnick@oregonstate.edu. Please also let us know if you have difficulty accessing or submitting the questionnaire.

We hope that you will complete the questionnaire soon. If you no longer have the link to the questionnaire, it can be found at: <http://oregonstate.edu/~warnickb>

If the above link does not work, please try:

http://surveys.bus.oregonstate.edu/BsgSurvey2_0/main.aspx?SurveyID=686

Your code to log on to the survey is qo2st4r7.

If you have any questions about the survey, please contact me at (541) 737-1338 or by e-mail at brian.warnick@oregonstate.edu. If I am not available when you call, please leave a message and I will call back. If you have questions about your rights as a participant in this research project, please contact the Oregon State University Institutional Review Board (IRB) Human Protections Administrator at (541) 737-3437 or by e-mail at IRB@oregonstate.edu.

Thank you again for your time and consideration.

Sincerely,

Brian Warnick, Instructor

Appendix N

Rotated Component Matrix with Varimax Rotation – Experience Factors 1 - 7

Experience Statement	Components						
	1	2	3	4	5	6	7
Q6. -C1	0.79	0.00	0.11	0.09	0.26	-0.01	0.12
Q1. -C12	0.75	-0.03	0.06	-0.08	0.29	0.17	-0.01
Q6. -C7	0.72	-0.01	0.11	0.04	0.31	0.20	0.06
Q6. -C2	0.67	0.13	0.06	0.01	0.29	0.02	0.15
Q1. -C11	0.67	0.04	0.22	0.00	0.02	0.03	0.13
Q6. -C4	0.64	0.08	0.05	0.12	0.22	0.18	0.21
Q1. -C13	0.56	-0.09	0.01	0.02	0.18	0.09	0.15
Q3. -C4	0.00	0.81	0.21	0.01	0.00	0.06	0.00
Q3. -C5	0.00	0.80	0.19	0.04	-0.01	0.17	0.03
Q3. -C3	0.01	0.77	0.12	0.18	0.13	-0.02	-0.03
Q3. -C2	-0.01	0.74	0.08	0.12	0.16	0.04	0.04
Q3. -C1	0.04	0.64	-0.14	0.23	0.00	0.03	0.06
Q5. -C6	0.06	0.47	0.35	0.21	-0.03	0.03	-0.03
Q2. -C4	0.04	0.20	0.73	0.15	0.08	0.14	0.17
Q2. -C5	0.18	0.20	0.62	0.16	-0.07	0.02	0.17
Q2. -C7	0.15	0.00	0.62	0.07	0.14	0.24	0.10
Q2. -C6	0.25	0.14	0.57	0.08	0.16	0.33	0.14
Q2. -C8	0.08	0.23	0.55	-0.09	0.17	-0.01	0.04
Q2. -C3	0.02	0.46	0.52	0.18	-0.01	-0.02	-0.02
Q2. -C12	0.31	-0.04	0.36	0.18	0.06	0.33	0.00
Q5. -C3	0.00	0.17	0.07	0.88	-0.01	0.11	0.05
Q5. -C2	0.04	0.19	0.12	0.86	-0.03	0.15	0.03
Q5. -C4	0.10	0.11	0.06	0.86	0.08	0.11	0.12
Q5. -C1	-0.06	0.03	0.13	0.58	0.08	0.18	0.15
Q6. -C6	0.31	0.10	0.10	0.04	0.84	0.06	0.11
Q6. -C8	0.34	-0.02	0.07	0.04	0.80	0.05	0.18
Q6. -C3	0.37	0.07	0.11	0.08	0.77	0.03	0.17
Q6. -C5	0.32	0.10	0.07	-0.05	0.75	0.01	0.12
Q2. -C10	0.23	0.06	0.08	0.14	0.04	0.81	0.11
Q2. -C11	0.06	0.05	0.22	0.14	-0.04	0.76	0.17
Q2. -C9	0.16	0.12	0.11	0.16	0.10	0.75	0.04
Q4. -C8	0.02	-0.02	0.17	0.13	0.16	0.02	0.70
Q4. -C9	0.24	0.04	0.17	0.13	0.21	0.13	0.69
Q4. -C11	0.32	0.06	0.00	0.11	0.21	0.14	0.60
Q4. -C7	0.45	0.02	0.09	0.00	0.08	0.13	0.58
Q4. -C12	0.33	0.04	0.11	0.06	0.10	0.18	0.53

Rotated Component Matrix with Varimax Rotation – Experience Factors 1 - 7

(Continued)

Experience Statement	Components						
	1	2	3	4	5	6	7
Q4. -C4	0.02	0.17	0.04	0.09	-0.02	0.12	0.08
Q4. -C5	-0.06	0.16	0.11	0.13	0.00	-0.11	0.10
Q4. -C3	0.16	0.12	0.18	0.16	-0.08	0.05	-0.02
Q4. -C6	0.04	-0.02	-0.04	-0.08	0.14	0.14	0.24
Q5. -C5	0.13	0.36	0.09	0.35	-0.03	-0.05	0.04
Q1. -C10	0.24	0.22	0.18	0.02	0.00	0.11	-0.03
Q1. -C9	0.32	0.12	0.27	0.11	0.08	0.11	0.20
Q1. -C8	0.13	0.18	0.26	0.18	0.04	-0.16	0.07
Q1. -C1	0.10	0.24	0.15	0.15	0.19	-0.10	0.07
Q1. -C7	0.19	0.12	0.27	-0.01	0.11	0.03	-0.25
Q4. -C2	0.07	0.11	0.12	-0.01	0.13	0.14	0.04
Q4. -C1	0.11	0.13	0.01	0.01	0.13	0.07	0.10
Q2. -C1	-0.16	0.16	0.26	0.04	0.15	0.19	0.00
Q1. -C3	0.28	-0.05	0.11	-0.07	0.03	-0.17	0.13
Q2. -C2	-0.04	0.28	0.39	0.12	0.17	0.25	-0.02
Q1. -C4	-0.03	0.11	-0.04	0.05	0.07	0.12	-0.02
Q1. -C5	0.19	-0.06	0.19	0.06	0.04	0.05	-0.06
Q1. -C6	0.08	-0.03	0.26	0.03	0.10	-0.02	0.14
Q4. -C10	0.07	-0.02	0.32	0.36	0.09	-0.08	0.27
Q1. -C2	0.13	0.28	0.19	0.14	0.08	0.00	0.12
Q5. -C7	0.21	0.15	0.08	0.29	0.05	0.10	0.11

Appendix O

Rotated Component Matrix with Varimax Rotation – Experience Factors 8-14

Experience Statement	Components						
	8	9	10	11	12	13	14
Q6. -C1	-0.03	0.06	0.10	-0.05	-0.03	0.14	0.09
Q1. -C12	0.17	0.06	0.00	-0.03	0.00	-0.03	-0.04
Q6. -C7	0.00	0.22	0.10	-0.01	-0.02	0.09	-0.11
Q6. -C2	-0.01	0.04	0.19	-0.13	0.02	0.23	0.14
Q1. -C11	0.03	-0.02	-0.09	0.18	0.23	-0.25	0.05
Q6. -C4	-0.14	0.17	-0.09	0.02	0.10	0.05	-0.02
Q1. -C13	0.17	0.23	0.13	0.05	-0.02	-0.12	0.09
Q3. -C4	0.01	0.08	-0.01	0.04	0.00	-0.09	0.16
Q3. -C5	0.11	0.08	0.02	0.02	0.03	-0.09	0.11
Q3. -C3	0.18	0.11	0.05	0.11	0.06	0.02	-0.03
Q3. -C2	0.14	0.29	0.09	0.10	-0.01	0.05	0.05
Q3. -C1	0.11	0.03	0.11	-0.12	-0.02	0.19	-0.30
Q5. -C6	0.20	-0.06	0.23	-0.22	0.11	0.14	0.27
Q2. -C4	0.05	0.08	0.06	0.22	0.05	0.04	0.02
Q2. -C5	0.03	0.29	0.05	0.11	0.07	0.10	-0.08
Q2. -C7	0.11	0.24	0.08	0.03	-0.09	-0.04	0.11
Q2. -C6	0.10	0.07	-0.08	0.04	0.14	-0.07	0.01
Q2. -C8	0.17	0.22	0.02	0.00	0.07	0.08	0.21
Q2. -C3	-0.03	0.04	0.13	0.35	0.07	0.07	-0.19
Q2. -C12	0.16	-0.18	0.10	0.09	-0.03	0.03	-0.34
Q5. -C3	0.11	0.03	-0.08	0.00	0.04	-0.03	0.04
Q5. -C2	0.06	0.04	-0.04	0.02	0.04	0.05	-0.01
Q5. -C4	0.12	0.06	0.02	0.03	0.04	-0.03	0.03
Q5. -C1	0.11	0.34	0.17	0.02	0.00	0.00	0.24
Q6. -C6	-0.05	0.02	0.04	0.09	0.04	0.00	0.08
Q6. -C8	0.04	0.14	0.05	0.05	0.08	-0.03	-0.06
Q6. -C3	-0.02	0.09	0.10	0.02	0.08	0.00	0.00
Q6. -C5	0.02	-0.01	0.17	0.04	-0.03	0.10	0.02
Q2. -C10	0.01	-0.06	0.00	0.05	0.06	0.01	0.02
Q2. -C11	-0.05	0.05	0.14	0.15	0.13	0.09	0.00
Q2. -C9	0.13	0.06	0.11	-0.12	-0.01	-0.08	0.06
Q4. -C8	-0.01	-0.07	-0.09	-0.05	-0.07	0.08	-0.17
Q4. -C9	0.08	0.08	0.12	-0.07	0.01	0.08	0.21
Q4. -C11	0.19	0.16	0.05	0.15	-0.04	-0.17	0.07
Q4. -C7	0.24	-0.02	0.25	0.14	0.02	-0.01	0.14
Q4. -C12	0.23	0.19	0.23	0.13	0.05	-0.02	0.08

Rotated Component Matrix with Varimax Rotation – Experience Factors 8 -14

(Continued)

Experience Statement	Components							
	8	9	10	11	12	13	14*	
Q4. -C4	0.69	0.13	-0.02	-0.01	0.10	0.13	0.00	
Q4. -C5	0.66	0.06	0.05	-0.08	0.05	-0.12	-0.08	
Q4. -C3	0.65	-0.03	0.12	0.16	-0.08	0.11	0.13	
Q4. -C6	0.57	0.20	0.29	0.15	0.02	0.11	0.09	
Q5. -C5	0.49	-0.12	0.24	-0.03	0.17	0.00	0.13	
Q1. -C10	0.07	0.62	0.13	0.21	0.00	-0.08	-0.02	
Q1. -C9	0.10	0.59	0.05	0.14	0.04	0.05	-0.12	
Q1. -C8	0.12	0.54	0.13	-0.07	0.29	0.04	-0.02	
Q1. -C1	0.02	0.52	0.09	0.09	0.03	0.27	0.19	
Q1. -C7	0.22	0.39	0.13	-0.26	0.27	0.06	-0.06	
Q4. -C2	0.12	0.16	0.79	0.14	0.02	0.01	0.01	
Q4. -C1	0.14	0.10	0.79	-0.04	-0.04	-0.06	0.07	
Q2. -C1	0.05	0.24	-0.05	0.59	0.09	-0.13	0.02	
Q1. -C3	0.04	0.01	0.23	0.57	0.21	0.10	0.07	
Q2. -C2	0.16	0.20	0.04	0.52	-0.12	0.17	-0.08	
Q1. -C4	0.05	0.06	-0.13	0.04	0.85	-0.03	0.05	
Q1. -C5	0.08	0.14	0.16	0.13	0.65	0.20	-0.14	
Q1. -C6	0.27	0.18	-0.04	-0.06	0.15	0.60	-0.05	
Q4. -C10	0.04	0.14	0.16	-0.17	0.02	-0.52	-0.15	
Q1. -C2	0.06	0.30	0.23	0.17	0.21	0.34	-0.12	
Q5. -C7	0.15	-0.03	0.12	0.04	-0.09	0.01	0.65*	

* Component was not included in further analysis as only one variable loaded on the factor.