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Identifying the Roles and Challenges of Female Agricultural Teachers Employed in Illinois: A Descriptive Study

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IDENTIFYING THE ROLES AND CHALLENGES OF
FEMALE AGRICULTURAL TEACHERS EMPLOYED IN ILLINOIS:
A DESCRIPTIVE STUDY

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IDENTIFYING THE ROLES AND CHALLENGES OF
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Abstract

In 1980, one of the first female high school agriculture teachers opened the door to her classroom at Arthur High School, Arthur, Illinois. Since that time, the number of female high school agriculture teachers has grown significantly. A descriptive study was conducted to identify and describe the roles and challenges of female high school agricultural teachers employed in Illinois. The results of the study can be used as a preparation tool for those females who decide to pursue agricultural education as a career, and can be used to encourage more female students to enter this challenging career. This study also describes the demographics, background, and support given to female teachers of agriculture in Illinois prior to and after college. Almost half the current female high school agriculture teachers are under the age of 30, and 52% of these teachers are instructors of Agricultural Mechanization, a once male-dominated area of instruction.

Introduction

In 1980, one of the first female high school agriculture teachers opened the door to her own classroom at Arthur High School, Arthur, Illinois. The positive but slow increase of women in nontraditional occupations was put into perspective as Whittington (1990) stated, “women in agriculture are role models for each other, for aspiring nontraditional agriculturists, and for nontraditional occupations outside of agriculture” (p. 20). Since this time, the number of female high school agriculture teachers has grown. Changes in the expectations that society holds for women, the women’s movement, new laws which prohibit sex discrimination, and the implementation of career education are reasons that females decided to enter this field (Curry, 1975). Females are showing a high degree of interest in agricultural education. There are currently 51 (14%) female high school agriculture teachers in Illinois out of 359 total teachers providing agricultural instruction.

Foster (2001) wrote, “In a traditional male dominated field, like agricultural education, artificial barriers based on attitudinal bias often prevent qualified women from reaching their potential.... there are very few role models for young women entering the profession” (p. 386). Whent (1993) goes on to say that probably the most common bias toward women in agricultural education is the expectation that women in agriculture want to, or are capable of, teaching only horticulture. Based on these biases, a need is established to determine what perceptions are regarding Illinois female teachers as they proceed in their career path that could be beneficial to them as teachers. A descriptive study was used to identify the roles and challenges of female high school agricultural teachers employed in Illinois. The results of the study can be used as a preparation tool for those females who decide to pursue agricultural education as well as a way to encourage more female students to enter this challenging career.

Theoretical Framework

America’s classrooms have always been diverse in terms of ethnicity, socio-economic status, gender, and other variables (Wakefield & Talbert, 1999). In 1917, the Smith Hughes Act provided for the college training of teachers of agriculture for secondary schools (Kren, 1975). However, it was not until Title IX of the 1972 Educational Amendments when the doors opened wider for females in agricultural education. Title IX of the 1972 Educational Amendments prohibits discrimination based on sex under any education program or activity receiving Federal financial assistance (Kren, 1975). Even with the passing of Title IX, females were still experiencing biases as professionals in agricultural education. Ogbu (1978) stated that minorities usually experience greater and more persistent difficulties in the educational system. Many educators seem to be unaware of their embedded biases against women who are employed in agricultural education, and some educators did not perceive females as minorities (Whent, 1993).

Foster, Pikkert, and Husmann (1991) conducted a study looking at self-perception of gender bias among women agriculture teachers in a six state region. They concluded that female teachers express satisfaction in their current positions; however, gender bias was viewed as a definite deterrent to women entering the agricultural education profession.

Gregg, Hampton, and Juergenson (1975) conducted a study on 20 female agriculture teachers in California. The study showed that: (a) women do not have any more problems in the classroom than do men, (b) women are accepted in the community, (c) personal problems involving students are the same for females as males, (d) female agriculture teachers are accepted by students, and (e) female agriculture teachers are as technically and professionally competent as their male counterparts.

Bass (1977) conducted a study to identify attitudes towards women as agriculture teachers. Results indicated that the respondents agreed females could manage all areas with an exception of large animals and agricultural machinery. Ninety-six percent of the female respondents as well as 81.4% of the male respondents agreed that females had good classroom control and that females could be accepted in the community.

Ries and McCracken (1980) examined the perception of sexual bias and if this is an influence for females deciding whether or not to teach vocational agriculture. According to the findings, 60% of female high school agriculture teachers are happy with their career choice and 80% would recommend this career to other women. There was about 40% of the female high school agriculture teachers surveyed that believed other teachers find it difficult accepting a female vocational agriculture teacher.

Cano and Miller (1992) conducted a gender analysis of job satisfaction, job satisfier factors, and job dissatisfaction factors of agricultural education teachers. There were 37 female

and 299 male secondary agriculture teachers from Ohio surveyed. They described demographic characteristics of secondary agriculture teachers by gender. Cano and Miller found that female agriculture teachers were significantly younger, had less years of teaching experience, and had been in their current position for a shorter period of time. In another similar study, Cano (1990) sought to reveal the attitude and perception of male vocational agriculture teacher's towards female vocational agriculture teachers. The results suggested that there was some agreement among male agriculture teachers, a 7.36 on a 10-point scale, that female agriculture teachers were competent teachers in agricultural courses.

Purpose and Objectives

This study was conducted to identify the roles and challenges of female high school agricultural teachers employed in Illinois. The results of the study can be used as a preparation tool for those females who decide to pursue agricultural education as well as a way to encourage more female students to enter this challenging career.

The specific objectives of the study were to:

1. Determine the demographics of female high school agriculture teachers in Illinois.
2. Determine the background and support given to female agricultural teachers prior to and after college, and to identify the support they receive as agricultural education teachers.
3. Determine what areas of curriculum are viewed as most difficult to instruct.

Methods/Procedures

A census was conducted utilizing the Illinois Agricultural Directory published annually through the Illinois Association of Vocational Agriculture Teachers (IAVAT). The target population was the 51 female high school agricultural teachers in Illinois listed in this directory.

A questionnaire was researcher-developed and reviewed for content and clarity by a panel of experts at Southern Illinois University composed of agricultural education faculty, and faculty teaching in the Plant, Soil and General Agriculture Department. The research instrument was validated and field tested by a group of female high school agriculture teachers as subjects to assist in identifying content specific questions relating to the study.

The final questionnaire used to collect data was mailed to the 51 female agricultural teachers listed in the directory. Follow up included a second mailing, telephone calls and email contact. Each of the envelopes contained a cover letter, a copy of the survey, and a stamped, self-addressed envelope for return to the researcher. The instrument was coded to allow for follow-up. The subjects were provided with a stamped, self-addressed envelope to ensure confidentiality of the data. The final usable response rate was 61% (N=31).

The questionnaire was researcher-developed, four pages in length, consisting of two parts. The first section asked the participants general descriptive questions and the second section consisted of the questionnaire. The descriptive section relates to the grade levels and curriculum taught, population of the community, and population and gender of the students. The questionnaire section consists of background in agriculture prior to college, community support, agriculture curriculum, enjoyable aspects of teaching agriculture, and the source of encouragement to pursue agricultural education at the college level with a five point Likert-type scale ranging from strongly disagree to strongly agree. Data were analyzed using Statistical Package for the Social Sciences. Descriptive parameters, including frequencies and percentages, were used to analyze the data.

Results/Findings

Objective one: Demographics

Data were gathered concerning educational level, age, years of teaching, grade levels taught, population of community, population of school, number of agriculture teachers in the school, average class size, average number of students each week, and subject areas taught (see Tables 1 to 9). The educational levels of these female high school agriculture teachers were 48% holding a B.S. and 52% a M.S. degree. Forty-eight percent of the teachers were under the age of 30, 19% between the ages of 31 to 40, and the remaining 32% between the ages of 41 to 60.

Table 1.
Educational levels of the Responding Female High School Agriculture Teachers (N=31)

Educational Level	No.	%
Bachelor of Science	15	48
Master of Science	16	52
Ph.D.	0	0

Table 2.
Ages of the Responding Female High School Agriculture Teachers (N=31)

Ages	No.	%
Under 30	15	48
31-40	6	19
41-50	5	16
51-60	5	16
Over 60	0	0

The responding female high school agriculture teachers educate students from grades seventh to twelfth. There are 23% teaching seventh grade, 29% teaching eighth grade, 94% teaching both ninth and tenth grade, 100% teaching eleventh grade, and 97% teaching twelfth grade. The majority (68%) of the female high school agriculture teachers are in their first five

years of teaching. Class sizes for these female high school agriculture teachers range from 1 to 30 with the range of 11 to 20 students holding the most percentage with 68%. The subject areas taught include: agricultural business (58%), horticulture (77%), agricultural mechanization (52%), agricultural resources (13%), and agricultural science (74%).

Table 3.
Grades Levels Taught by the Responding Female High School Agriculture Teachers (N=31)

Grade Levels	No.	%
7	7	23
8	9	29
9	29	94
10	29	94
11	31	100
12	30	97

Table 4.
The Number of Years Teaching of the Responding Female High School Agriculture Teachers (N=31)

Number of Years	No.	%
0 to 5	21	68
6 to 11	3	10
12 to 17	3	10
18 to 23	1	3
Over 23	3	10

Table 5.
Class Size of the Responding Female High School Agriculture Teachers (N=31)

Class Size	No.	%
1 to 10	4	13
11 to 20	21	68
21 to 30	6	19

Table 6.
Subject Areas Taught by the Responding Female High School Agriculture Teachers (N=31)

Subject Areas	No.	%
Agricultural Business	18	58
Horticulture	24	77
Agricultural Mechanization	16	52
Agricultural Resources	4	13
Agricultural Science	23	74
Other	12	39

Fourteen (45%) of the respondents stated they live in a community with less than 6,000 people. In addition, 11 (35%) stated their school's population is less than 200 students, with eight (26%) stating they teach in schools with over 800 students. Of the 31 female teachers that responded, 24 (77%) teach in a one-teacher department with 12 (39%) stating they see between 51-75 students a week.

Table 7.
Population of Community of the Responding Female High School Agriculture Teachers (N=31)

Population Size	No.	%
1 to 999	7	23
1,000 to 5,999	14	45
6,000 to 10,999	0	0
11,000 to 16,999	2	6
Over 17,000	8	26

Table 8.

Population of the School of the Responding Female High School Agriculture Teachers (N=31)

Population Size	No.	%
1 to 199	11	35
200 to 399	7	23
400 to 599	3	10
600 to 799	2	6
Over 800	8	26

Table 9.

Total Students Each Week of the Responding Female High School Agriculture Teachers (N=31)

Number of Students	No.	%
1 to 50	4	13
51 to 75	12	39
76 to 100	9	29
Over 100	6	19

Objective two: Background and support for female agricultural teachers

Respondents were asked to circle a number from one to five concerning their participation in high school agriculture classes, high school FFA, and whether or not they lived on a grain/livestock farm prior to college, using one for strongly disagree and five being strongly agree (see Table 10). Fifty-two percent of the 31 responded they strongly agreed their background of living on a grain/livestock farm was important to their success as an agriculture teacher whereas 39% strongly disagreed with this statement. The respondents' answers for their participation in agriculture classes and FFA while in high school were closely related to those answers about living on a grain/livestock farm. There were also 52% that strongly agreed that

participating in high school agriculture classes and FFA was important in their background (see Table 10).

Table 10.
Background in Agriculture Prior to College of the Responding Female High School Agriculture Teachers (N=31)

Background	1 %	2 %	3 %	4 %	5 %
Lived on a Grain/Livestock Farm	39	3	3	3	52
Participated in Agriculture Classes	31	3	3	13	52
Participated in FFA	32	3	6	6	52

Scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Respondents were asked to circle a number from one to five concerning their encouragement to pursue agricultural education at the collegiate level, using one for strongly disagree and five being strongly agree. The answers of the respondents were varied across the board. There were 26% of the female high school agriculture teachers that strongly disagreed that they were encouraged to enter agricultural education at the college level by their parents with 32% being FFA neutral, and 10% strongly agreeing with this statement. Twenty-one percent of the respondents strongly disagreed they were encouraged by their high school agriculture teacher, 24% remained neutral, and 24% strongly agreed with this statement. Twenty-six percent of the teachers strongly agreed they were encouraged once they entered college by their professor while, 16% strongly disagreed, and 24% remained neutral (see Table 11).

Table 11.
Encouragement to Pursue Agricultural Education at the Collegiate Level of the Responding Female High School Agriculture Teachers (N=29)

Encouragement	1 %	2 %	3 %	4 %	5 %
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Encouraged by Parents	26	13	32	19	10
Encouraged by High School Agriculture Teacher	21	7	24	24	24
Encouraged by College Professor	16	3	24	32	26

Percentages do not total 100 due to questions not completed by 2 agriculture teachers.
 Scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Respondents were asked to circle a number from one to five concerning their support from different avenues in the community, using one for strongly disagree and five being strongly agree. The responding female high school agriculture teachers felt they received good support from all three of these avenues. A majority of the respondents either strongly agreed or agreed that farmers, agricultural businesses, and parents supported their program (see Table 12).

Table 12.
Community Support of the Responding Female High School Agriculture Teachers (N=31)

Community Support	1	2	3	4	5
	%	%	%	%	%
Farmers	13	0	10	42	35
Agricultural Businesses	3	6	13	45	32
Parents	3	3	16	48	29

Scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Objective three: Most difficult curriculum area for Illinois female agricultural teachers

Respondents were asked to circle a number from one to five concerning the areas of difficulty in the agriculture curriculum, using one for strongly disagree and five being strongly agree. The curriculum that was in question was Agricultural Business & Management, Horticulture, Agricultural Mechanization, Agricultural Resources, Agricultural Science as well as discipline in the classroom and shop/lab area. Over half of the respondents, strongly disagreed that they had any difficulty in Agricultural Science (55%), maintaining discipline in the classroom (61%), and maintaining discipline in the lab/shop area (52%). There were 32% that

strongly disagreed about having difficulty in Agricultural Business & Management, 29% disagreed, 29% were neutral, and 10% agreed. Forty-two percent strongly disagreed, 39% disagreed, 16% were neutral, and 3% agreed that teaching Horticulture was difficult. There were 46% of the of the respondents that remained neutral about Agricultural Resources, 29% strongly disagreed, 17% disagreed, 3% agreed, and 3% strongly agreed. Agricultural Mechanization was varied a little different from the other curriculum. There were 13% that strongly disagreed, 13% disagreed, 26% remained neutral, 16% agreed, and 32% strongly agreed that Agricultural Mechanization was difficult to teach (see Table 13). The mean of the curriculum ranged from 1.61 to 3.42. The mean shows that Agricultural Science (1.61) is the least difficult for female high school agriculture teachers to teach whereas Agricultural Mechanization (3.42) is the most difficult to teach students (see Table 14).

Table 13.
Difficulty Areas of Agriculture Curriculum of the Responding Female High School Agriculture Teachers (N=31)

Agriculture Curriculum	1 %	2 %	3 %	4 %	5 %
Agricultural Business & Management	32	29	29	10	0
Horticulture	42	39	16	3	0
Agricultural Mechanization	13	13	26	16	32
Agricultural Resources	29	17	46	3	3
Agricultural Science	55	35	6	0	3
Discipline in the Classroom	61	16	16	3	3
Discipline in the Lab/Shop	52	29	6	10	3

Percentages do not total 100 due to questions not completed by agriculture teachers.
Scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Table 14.
Difficulty Areas of Agriculture Curriculum of the Responding Female High School Agriculture Teachers (N=31)

Agriculture Curriculum	Mean
Agricultural Business & Management	2.16
Horticulture	1.81
Agricultural Mechanization	3.42
Agricultural Resources	1.84
Agricultural Science	1.61
Discipline in the Classroom	1.71
Discipline in the Lab/Shop	1.84

Conclusions/Recommendations/Implications

The purpose of this study was to identify the roles and challenges of female high school agricultural teachers employed in Illinois. This study can be used as a preparation tool for those females who do decide to pursue agricultural education as well as a way to encourage more female students to enter this challenging career.

The first objective dealt with the demographics of the responding female high school agriculture teachers. It is determined that forty-eight percent of female agricultural teachers in Illinois are under the age of 30 with the remaining 52% spread over the years of 31 to 60. In comparison, 68% have taught between zero to five years with the remaining 32% having taught over 6 to 31 years. Therefore, it can be concluded that the majority of female high school agriculture teachers are in their beginning years. The subject areas taught by the responding female high school agriculture teachers include: Agricultural Business and Management, Horticulture, Agricultural Mechanization, Agricultural Resources, and Agricultural Science. Agricultural Mechanization, which is considered a male dominated skill area, is taught by 52% of the respondents.

The second objective focused on the background in agriculture of the respondents prior to college. Approximately one-half of the respondents stated that coming from a farm background

was important, whereas, 39% strongly disagreed about the important of coming from a farming background. In addition, only 31% participated in high school agriculture classes and high school FFA.

High school agriculture teachers require support from the community to build and maintain a quality agriculture program regardless of gender. Seventy-five percent of the respondents stated that that farmers, agricultural businesses, and parents strongly support their programs. Therefore, it can be concluded that female high school agriculture teachers receive a vast amount of support from the community.

There are few areas of agricultural curriculum that provide difficulty for the responding female high school agriculture teachers. Agricultural Mechanization, which is considered to be a male dominated skill area, provides difficulty to only 32% of the respondents. Discipline, which has been another concern that administrators have had in the past about female high school agriculture teachers, provides difficulty to only 3%, both in the classroom and in the lab/shop area, for these responding female high school agriculture teachers.

Foster (2001) in a comparative study, stated that women are reporting increasing levels of acceptance by administrators, but other barriers of acceptance were still a concern. Whent (1993) stated that probably the most common bias toward women in agricultural education is the expectation that they want to teach horticulture, but when given the chance women excel in animal science, agronomy, and agricultural mechanics. She goes on to mention that some women believe that teaching horticulture is their only means of obtaining an agricultural education teaching position. Based on this study conducted with Illinois female teachers, it can be determined that female teachers have the background, experience, and administrative and

community support as much as men in the profession to be effective in agricultural education, but there are still many challenges facing them.

It is recommended that continued efforts be made to support women that pursue careers in agriculture. As Whittington (1990) stated, “Women in agriculture are role models for each other, for aspiring nontraditional agriculturalists, and for nontraditional occupations outside of agriculture” (p. 20). An implication of this study is its use as a tool for those females who do decide to pursue agricultural education as well as a way to encourage more female students to enter this challenging career. A nationwide survey should be conducted focusing on areas of instruction to which female agricultural students should better prepare themselves for the profession.

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