

Perceptions of Agriculture Teachers and School Administrators Toward Compensation and Extended Contracts

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Abstract

Recruitment and retention of agriculture teachers is a major concern in the field of school-based agricultural education (SBAE). A major reason cited for this concern is perceived shortcomings in teacher compensation. To remedy this factor, Illinois implemented an extended contract grant program to provide agriculture teachers with additional compensation for their work outside of their normal contract time, implementing the three-circle model of SBAE instruction. The purpose of our study was to investigate the perceptions and attitudes of Illinois agriculture teachers and school administrators toward the teacher Three Circle Grant program. We designed and administered electronic questionnaires to investigate how agriculture teachers are compensated for their time, perceptions of compensation of agriculture teachers receiving and not receiving the extended contract grant, and agriculture teachers' and school administrators' attitudes towards the Three Circle Grant program. Our findings revealed that the Three Circle Grant is a major factor for agriculture teachers staying in their current teaching positions, and those teachers not receiving it want it in future contracts. We further discovered significant differences between agriculture teachers receiving the grant and those that do not, in their beliefs of adequate compensation for time conducting FFA and SAE responsibilities. Additionally, 80% of administrators stated that the grant is a major factor in recruiting and retaining agriculture teachers in their school districts. While findings were not generalizable beyond the population, there are implications for agricultural teacher preparation programming across America to address the lack of compensation outside of school hours if retention is to be improved.

Introduction

The American Association for Employment in Education (2021) has recently reported an overall shortage of teachers in the United States, with two-thirds of educational fields having “some level of shortage” and 17 of 64 fields experiencing “considerable shortage” (p. 4). The United States Department of Education (2023) revealed similar findings indicating teacher shortages in at least one content area in 47 states, four U.S. Territories, and the District of Columbia. Further, researchers have suggested it is becoming more difficult to recruit teachers in the profession. Irwin et al. (2023) found that schools were having more difficulty filling open positions than 10 years ago. This was during the same time period we witnessed a 28% decrease in the number of pre-service teachers completing traditional teacher preparation programs (Irwin et al., 2023). When school districts experience these teacher shortages, both students and schools can be negatively impacted.

A shortage of well-prepared and effective teachers has been shown to negatively affect overall student achievement, impact school climate, and financially burden school districts (Carver-Thomas & Darling-Hammond, 2017; Hoy & Sabo, 1998; Ronfeldt et al., 2012). In schools that experience teacher shortages, students are more likely to be lower performing and experience fewer positive outcomes (Fuller

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et al., 2018; Sutchter et al., 2016) due to the differences in teacher quality and effectiveness (Ronfeldt et al., 2013). School climate can also be negatively affected by teacher shortages, as it is a critical component of an effective school (Hoy & Sabo, 1998). High rates of teacher attrition can lead to a reduction in the effectiveness of the curriculum and hinder the forming of beneficial teacher relationships (Sorensen & Ladd, 2020). Organizational capacity can also suffer (Guin, 2004), as can staff cohesion in the school (Hanselman et al., 2016). Further, teacher attrition and the resulting vacancies can also be a burden on school districts, especially those with limited financial resources (Haynes, 2014). The cost to replace one teacher varies from school to school but is estimated to range from \$4,400 to \$20,000 (Barnes et al., 2007; Carroll, 2007; Carver-Thomas & Darling-Hammond, 2017; Haynes, 2014). Nationally, the annual total cost to replace teachers ranges between \$1 billion and \$2.2 billion (Haynes, 2014).

Examining reasons teachers leave the profession has been the focus of many studies in recent years. Nationally, 90% of job openings each year are due to teachers leaving the profession (Carver-Thomas & Darling-Hammond, 2017). The greatest turnover of teachers occurs during the first five years of teaching, where attrition ranges from 20% to 50% (Ingersoll & Smith, 2003; Ingersoll et al., 2018; Latham & Vogt, 2007). This high rate of turnover is compounded by the fact that approximately 25 to 50% of teacher preparation program completers do not go on to teach after they graduate (DeMonte, 2016). Researchers have indicated that practicing teachers choose to leave the profession for many reasons (Eck & Craig, 2019; Lawver et al., 2018; Solomonson et al., 2018; Sutchter et al., 2016). Some of the most common reasons cited are working conditions, stress and burnout, lack of administrative support, policy issues, testing and accountability, and financial compensation (Carver-Thomas & Darling-Hammond, 2017; Solomonson et al., 2018; Tippens, et al., 2013).

In a review of the literature involving teacher compensation, Allen (2005) reported that increased salary resulted in an increased retention of teachers, noting that the higher the starting teacher salary, the higher the likelihood of teacher retention. In a longitudinal comparison of teachers who started at \$40,000 or more a year versus those who started at less than \$40,000, Gray et al. (2015) noted that teacher retention rates of the greater than \$40,000 group were 10% higher after the first year and 9% higher after five years, compared to the less than \$40,000 group. Concerning all teachers, the average salary of full-time public school teachers in the United States was \$66,745, with an average starting salary of \$42,844 during the 2021-2022 school year (National Education Association, 2023). When compared to individuals with similar educations and experiences, teachers are paid 26.4% less on average (Allegretto, 2023). According to the National Association of Colleges and Employers, the average starting salary of 2022 college graduates was approximately \$60,028 (Gray, 2023), an even larger differential. Loeb & Beteille (2009) reported that individuals are more likely to enter education as a profession when the beginning salary is on par with other professions. Ingersoll and Smith (2003) found that almost 78% of teachers who left the profession did so because of salary, while other studies have linked low teacher salaries to the high teacher turnover rate (Garcia et al., 2009; Gray & Taie, 2015). Demonstrating the importance of compensation, Sutchter et al. (2016) explained that 68% of former teachers who considered returning to teaching indicated they might return if they received an increase in salary.

Clearly, teacher attrition is of national importance and school-based agricultural education (SBAE) has not been immune to this chronic problem. Smith et al. (2022) specified that there are 13,349 agriculture teachers in the United States across 8,367 programs in 2021. Of those, 12% ($n = 596$) were new hires. Even with these new agricultural teacher preparation program completers, there were still 84 positions unfilled at the beginning of the 2021-2022 school year (Smith et al., 2022). Similar to the field of education as a whole, literature in SBAE has identified salary as being a concern for teachers and a major reason for teacher attrition (Lemons et al., 2015; Solomonson et al., 2018; Tippens, et al., 2013). Prospective agriculture teachers listed salary as one of their top factors in deciding on a career (Igo & Perry, 2019; Loeb & Beteillie, 2009; Myers et al., 2004; Warnick et. al., 2010). Additionally, the field of SBAE is competing for college graduates being offered better-paying jobs in the agricultural industry (Foster et al., 2020).

To help combat the teacher shortage, states are using extended contracts as a tool to increase the recruitment and retention of agriculture teachers (Weakland & Curry, 2022). Bennet et al. (2002) reported that additional compensation, in the form of extended contracts, can be useful to increase teacher satisfaction, which has been shown to positively impact teacher retention. The Idaho Agricultural Teachers Association (2015) explained that extended contracts can ensure “the teacher can complete year-round teaching of students through supervised agriculture experience (SAE) projects and FFA activities, as well as program maintenance and professional development” (p. 1) and that the contracts “account for what you do outside of normal teacher duties” (p. 1). Scholars have provided evidence that extended contracts can have a positive impact on these extra duties, especially in the area of SAE. Dyer and Williams (1997) reported that when teachers were granted extended contracts, they were more involved in the planning and implementation of SAE. As the number of hours agriculture teachers spend supervising students outside of the normal school day is significant (Lemons et al., 2015), these extended contracts have been found to be essential. In previous studies, agriculture teachers have shared that they value extended contracts (Retallick, 2010; Tippens et al., 2013; Warnick et al., 2010) and that extended contracts can be a leading retention factor (Gross, 2019; Solomonson et al., 2021).

Several states, such as Kentucky, mandate that all agriculture teachers be provided with 12-month contracts (Kentucky Legislature, 2010). When polled about positive factors of salary and benefits, 75% of Kentucky teachers explicitly stated that the highest-rated benefit they receive is their 12-month extended contract (Gross, 2019). Other states, such as North Carolina, have similar mandates for their agriculture teachers (Weakland & Curry, 2022). Weakland and Curry (2022) indicated that while no nationally mandated extended contract exists, state-sponsored extended contract mandates or grants could be useful for retaining agriculture teachers.

To help alleviate the agriculture teacher shortage in Illinois, the Illinois State Board of Education formed a task force in 2015, which culminated in support for an extended contract grant program (Illinois Ag Ed Annual Report, 2017). Through legislative efforts, the teacher Three Circle Grant program was established in 2017 with the purpose of supporting agriculture teachers’ extended salaries beyond the required school day (Illinois Ag Ed Annual Report, 2017). Funded through yearly state appropriations, this matching grant provides compensation to agriculture teachers for 400 hours outside of contract time that is devoted to enhancing the Three Circle Model of Instruction, focusing on SAE, FFA, or curricular activities (Illinois Ag Ed Annual Report, 2017). Since its inception in 2017, the program has grown every year (Illinois Ag Ed Annual Report, 2017; Illinois Ag Ed Annual Report, 2018; Illinois Ag Ed Annual Report, 2019; Illinois Ag Ed Annual Report, 2020; Illinois Ag Ed Annual Report, 2021).

While the Three Circle Grant program in Illinois continues to see growth, there are still school districts and agriculture teachers who do not take advantage of the program. As agriculture teachers work well beyond the 40-hour work week (Murray et al., 2011; Hainline et al., 2015; Sorensen et al., 2016a), it is important that we understand the barriers to the implementation of an extended contract grant program to properly compensate these teachers for their time. As school administrators play an integral component in implementing extended contracts for agriculture teachers, it is also essential to determine their perceptions and attitudes toward this type of additional compensation (Flood, 2002). Currently, there is little research that has explored how compensation, specifically extended contracts and extended contract grants, has affected teacher retention and attrition in SBAE. Our study sought to fill this gap in the literature and investigate the perceptions and attitudes of agriculture teachers and school administrators regarding compensation and extended contracts.

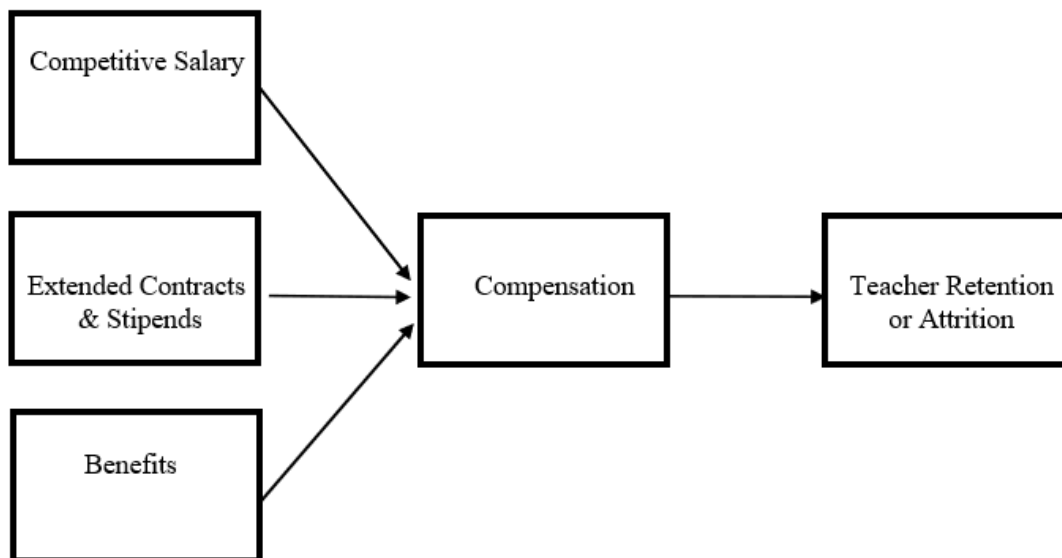
Conceptual Framework

We adapted the compensation construct of Solomonson et al.'s (2018) *Agriculture Teacher Retention or Attrition Model* as the conceptual framework for our study. Based on research from Grissmer and Kirby (1987) and Tippens et al. (2013), the *Agriculture Teacher Retention or Attrition Model* identified four major constructs of variables that influence an agriculture teacher's decision to leave or stay in the profession: (1) personal factors, (2) teacher development, (3) working conditions, and (4) compensation (Solomonson et al., 2018). As we were only investigating compensation and its variables, we adapted this singular component of the existing model to frame our investigation.

Solomonson et al.'s (2018) compensation construct illustrated that agriculture teacher compensation includes three factors: (1) a competitive salary, (2) adequate health benefits and retirement incentives, and (3) compensation for additional responsibilities outside of contract time in the form of extended contracts or stipends. Solomonson et al. (2018) posited that those three variables collectively encompass compensation which has the potential to impact agriculture teacher retention or attrition (see Figure 1).

Figure 1

Agriculture Teacher Compensation Model



Note. Adapted from the “Conceptual Model of Variables Influencing an Agriculture Teachers’ Decision to Leave the Profession” by J. Solomonson et al., 2018, *Journal of Agricultural Education*, 59(2), p. 323 (10.5032/jae.2018.02321). Copyright 2018 by the *Journal of Agricultural Education*.

Interestingly, Solomonson et al.'s (2018) research revealed that while important, compensation was the least influential of the four constructs under investigation. However, when evaluating specific variables, salary was identified as one of the leading individual factors impacting a former agriculture teacher's decision to leave the profession. The other compensation factors, such as the stipends, extended contracts, and benefits, were reported as having a lesser degree of influence. While these findings were contrary to other studies listing compensation as a leading variable for teacher attrition, the researchers did discover significant differences between novice and experienced agriculture teachers in how they valued overall compensation and the compensation they received for additional responsibilities outside of contract time. The study found that compensation influenced novice agriculture teachers (five or fewer years of experience) to a greater degree than their experienced colleagues. We used these findings and the compensation construct of their model as influences when designing the questions for our study.

Purpose and Objectives

The purpose of our study was to investigate the perceptions and attitudes of Illinois agriculture teachers and school administrators toward the teacher Three Circle Grant Program. The specific objectives of this study were to:

1. Describe how Illinois agriculture teachers are compensated for their time.
2. Determine Illinois agriculture teachers' perceptions of their compensation and if differences existed between those receiving the teacher Three Circle Grant and those not receiving it.
3. Examine Illinois agriculture teachers' attitudes toward the teacher Three Circle Grant Program.
4. Examine Illinois school administrators' attitudes toward the teacher Three Circle Grant Program.

Methods

Our research team used a census design to administer two different surveys to all current agriculture teachers and school administrators of agriculture teachers in Illinois. Participants and their contact information were identified by using the directory of all Illinois agriculture teachers and school administrators as provided on the Illinois SBAE website. The electronic instrument that we sent to the agriculture teachers consisted of three sections. The first section was composed of 10 questions related to their salary range, benefits received, forms of additional compensation, if they supplement their income with other employment, if they have moved jobs because of compensation, and if they felt fairly compensated for their teaching responsibilities and their FFA / SAE responsibilities. The second section consisted of nine to 11 Likert-type questions which examined participants' perceptions and attitudes towards the Three Circle Grant program. Nine questions were asked of teachers not currently receiving the grant, and 11 questions were asked of teachers currently receiving the grant. The third section included nine questions to collect participant personal and professional demographic data.

The electronic instrument that we sent to the school administrators was divided into two sections. The first contained four questions in which participants had to evaluate statements related to agriculture teacher recruitment and retention and the Three Circle Grant program. The second section included eight questions related to participant and school demographics. Both instruments were developed and administered using the online survey design platform SurveyMonkey. The instruments were reviewed for content and face validity by a panel of four SBAE experts prior to the survey being distributed. Two of the panel members were current agricultural teacher educators who each had over 30 years of SBAE experience, and the other two panel members were current employees working at the Illinois State Board of Education with 17 years of collective SBAE experience. We made no alterations to the instruments.

After we received Institutional Review Board (IRB) approval, the instruments were piloted with 40 Illinois agriculture teachers and 20 school administrators. Cronbach's alpha estimates of internal consistency were calculated for the reliability of the Likert-type questions evaluating the agriculture teachers' perceptions and attitude towards the Three Circle Grant Program and the Likert-type questions evaluating the school administrators' perceptions of agriculture teacher recruitment and retention and their attitude towards the Three Circle Grant program. Reliability estimates from the pilot test for the agriculture teacher instrument indicated a coefficient of .919, which is deemed "excellent" internal consistency, while the pilot test for the school administrators instrument resulted in a coefficient of .070, which is considered "acceptable" internal consistency (George & Mallery, 2003). The data collected in each pilot test was then merged with the overall data set.

After the pilot study was conducted, the electronic questionnaire was sent out to the remainder of the 432 full-time agriculture teachers and 333 school administrators in Illinois. Using recommendations from Dillman et al. (2014), we scheduled five points of contact to collect the remainder of our data. This

resulted in a 34.3% response rate from the agriculture teachers and a 25.8% response rate from the school administrators, respectively. The non-response error was calculated by comparing the mean scores of those individuals responding in the first week and the last week of our data collection for both surveys. No significant differences between groups ($p < .05$) were found. Comparing early and late respondents is an acceptable method of determining non-response error in agricultural education research, according to Lindner et al. (2001).

Data were analyzed using the Statistical Package for the Social Sciences (SPSS©) program version 26.0. We used descriptive statistics (i.e., frequencies and percentages) to analyze the demographic data. The demographic information of those participating in our study can be found below in Table 1 and in Table 2.

Table 1

Demographics of Participating Illinois Agriculture Teachers and Their Programs (n = 148)

Variable	f	%
Sex		
Male	54	36.5%
Female	88	59.5%
Age		
20-25	24	16.2%
26-35	54	36.5%
36-45	29	19.6%
46-55	28	18.9%
56+	7	4.7%
Ethnicity		
White, non-Hispanic	139	93.9%
Preferred to not disclose	9	6.1%
Size of Community in Which You Teach		
Rural (<10, 000 people)	115	77.7%
Suburban (10,000 to 50,000 people)	24	16.2%
Urban (50,000+ people)	3	2.0%
Type of Licensure		
Fully-state certified- Professional Educator License (PEL)	119	80.4%
Alternative-certified- Educator License with Stipulations (ELS)	23	15.5%
Highest Education Level		
Bachelor's Degree	76	51.4%
Advanced Degree	65	43.9%
Completed Number of Years Teaching		
1-3	39	26.4%
4-8	40	27.0%
9-15	22	14.9%
16-25	20	13.5%
26+	21	14.2%
Number of Agriculture Teachers in the Program		
Single-teacher program	83	56.1%
Multiple-teacher program	59	39.8%
Number of Unduplicated Students in the Program		
1-30	5	1.4%
31-50	24	16.2%

51-75	37	25.0%
76-100	24	16.2%
100+	51	34.5%

Note. Six individuals did not disclose demographic data.

Table 2

Demographics of Participating Illinois School Administrators with Agriculture Programs and Their Schools (n = 86)

Variable	f	%
Sex		
Male	64	75.3%
Female	21	24.7%
Age		
26-35	5	5.9%
36-45	30	35.3%
46-55	41	48.2%
56+	9	10.6%
Ethnicity		
White, non-Hispanic	85	100.0%
Size of Community		
Rural (<10, 000 people)	80	94.1%
Suburban (10,000 to 50,000 people)	4	4.7%
Urban (50,000+ people)	1	1.2%
Highest Education Level		
Master's degree	78	91.8%
Doctoral degree	7	8.2%
Years Serving as a School Administrator		
1-3	7	8.2%
4-8	28	32.9%
9-15	32	37.6%
16-25	17	20.0%
25+	1	1.2%
Number of Agriculture Teachers in Your District		
1	67	78.8%
2	14	16.5%
3	3	3.5%
4+	1	1.2%
Connection to agriculture*		
Previously employed as an agriculture teacher	3	3.5%
Grew up on a farm	26	30.2%
Previously worked in the agricultural industry	7	8.1%
Has an immediate family member working in the agricultural industry	35	40.7%
Agriculture is an active hobby on mine	11	12.8%
No background in agriculture	39	45.3%

Note. One individual did not disclose demographic data.

*Respondents may have selected more than one for this question.

To address our first research objective, we calculated descriptive statistics (i.e., frequencies and percentages) to determine how Illinois agriculture teachers are compensated for their time. To answer our

second research objective examining agriculture teacher perceptions of compensation, descriptive statistics were also calculated. Further, we conducted a Chi-square test to determine differences between those receiving the grant and those who did not. Research objective three analyzed the attitudes of agriculture teachers toward the Three Circle Grant program, and further descriptive statistics were calculated. For research objective four, additional descriptive statistics were calculated to determine school administrators' attitudes toward the Three Circle Grant program. Finally, we calculated a Pearson product-moment correlation coefficient (r) to determine the relationship between their personal background and whether their school district participated in the Three Circle Grant program.

Findings

Objective 1

Objective one was used to describe how Illinois agriculture teachers are compensated for their time. Using components outlined in the conceptual model, we asked agriculture teachers questions regarding their current salaries, benefits, and additional compensation through extended contracts and stipends. When examining the current base salary range of Illinois agriculture teachers, 29.3% ($f = 43$) self-reported earning less than \$40,000 annually, with 25.9% ($f = 38$) earning between \$40,000 and \$49,999, 21.1% ($f = 31$) between \$50,000 and \$59,999, 13.6% ($f = 20$) between \$60,000 and \$69,999, 6.1% ($f = 9$) between \$70,000 and \$79,999, 2.7% ($f = 4$) between \$80,000 and \$89,999, and 1.4% ($f = 2$) earning above \$90,000 annually.

We also inquired about the benefits Illinois agriculture teachers receive through their individual school district teaching contracts. Over seventy-five percent ($f = 111$; 75.5%) received both insurance and retirement benefits as a part of their compensation package, while 15.6% ($f = 23$) only received insurance and 5.4% ($f = 8$) only received retirement benefits. Five individuals (3.4%) reported receiving no benefits. When examining additional compensation for work completed outside of scheduled contract time, 83.8% ($f = 124$) indicated receiving either a stipend or extended contract, while 16.2% ($f = 24$) reported no additional compensation beyond their standard teaching hours. At the time data was collected, over 83% ($f = 123$; 83.1%) of the agriculture teachers were receiving the teacher Three Circle Grant. Even with additional compensation (i.e., extended contract or stipend), over 30% ($f = 47$; 31.8%) of respondents indicated they still supplement their income with a non-teaching job, and over 20% ($f = 16$; 21.6%) reported moving schools at some point in their career for a better teaching salary.

Objective 2

The intent of Objective two was to determine Illinois agriculture teachers' perceptions toward their compensation and if differences existed between those receiving the teacher Three Circle Grant and those not receiving it. Overall, 73.6% ($f = 109$) of our respondents indicated they felt they were fairly compensated for their teaching responsibilities during contract time, yet only 55.4% ($f = 82$) felt fairly compensated for their time with FFA and SAE responsibilities scheduled outside of their regular teaching contract.

Next, we examined responses between those agriculture teachers receiving the Three Circle Grant and those who did not. We found that 83.7% ($f = 103$) of agriculture teachers receiving the grant and 84.0% ($f = 21$) of teachers not receiving the grant felt they were fairly compensated for their teaching responsibilities during contract hours. We conducted a Chi-square test and found no significant difference between groups as they relate to their teaching compensation during contract hours, $X^2(1) = .042$, $p = .84$. However, when examining perceptions of fair compensation for FFA and SAE responsibilities outside of contract time, the Chi-square test revealed a significant difference as 91.9% ($f = 113$) of agriculture teachers receiving the grant and 72.0% ($f = 18$) of teachers not receiving the grant felt fairly compensated for their FFA and SAE responsibilities, $X^2(1) = 9.144$, $p = .00$.

Objective 3

Our third research objective was to examine Illinois agriculture teachers' attitudes toward the teacher Three Circle Grant Program. To determine the impact of the grant, as perceived by Illinois agriculture teachers, we asked 11 Likert-type questions to those receiving the grant and nine Likert-type questions to those not receiving the grant to determine the impact of the program.

Of those agriculture teachers receiving the grant ($n = 119$), 73.1% ($f = 87$) indicated that they *agree* or *strongly agree* that the Three Circle Grant is a major factor in their decision to stay in their current teaching position, and 49.6% ($f = 59$) revealed it was a major factor in their decision to teach in Illinois rather than in another state. Further, 57.2% ($f = 68$) and 56.3% ($f = 67$) of respondents reported that they *agree* or *strongly agree* that the grant has helped increase participation in FFA and SAE, respectively. Additionally, 80.7% ($f = 96$) *agree* or *strongly agree* that the Three Circle Grant allows them to devote more time to both FFA planning and curricular and professional development. High percentages of respondents also indicated that the additional salary through the grant has positively impacted their SBAE program in all areas of the three-circle model. To review all additional impact data and their frequencies and percentages, please see Table 3.

For those agriculture teachers not receiving the grant ($n = 25$), 76.0% ($f = 19$) indicated they *agree* or *strongly agree* that the Three Circle Grant is something that they want in their next teaching contract. A third of those teachers (33.3%; $f = 8$) *agree* or *strongly agree* that they would likely seek employment in another Illinois school district that offers the Three Circle Grant. High percentages of respondents reported that they feel that the extended contract hours through the grant would help increase participation in all areas of their agricultural education program. All additional specific descriptive data on agriculture teachers not receiving the grant can be found at the bottom of Table 3.

Objective 4

The goal of objective four was to examine school administrators' attitudes toward the teacher Three Circle Grant program. Overall, of the administrators at schools receiving the grant, 74.2% ($f = 46$) indicated that they *agree* or *strongly agree* that the Three Circle Grant is a major factor in recruiting agriculture teacher applicants, while 80.9% ($f = 51$) responded that it is also a major factor in retaining their current agriculture teacher. Additionally, over 80% ($f = 52$; 82.6%) of those same administrators feel that the grant program has helped to increase participation in their SBAE program. For school administrators in districts not participating in the Three Circle Grant program, over half ($f = 14$; 58.3%) believe that the grant would be a major factor in recruiting agriculture teacher applicants as well as helping increase participation in their SBAE programs. All descriptive data collected from the school administrators can be found in Table 4.

When collecting demographic data, we also asked the school administrators about their connection to agriculture to determine if a relationship existed between their previous agricultural experiences and if they participated in the grant program. Of the respondents, 47 administrators selected at least one variable connecting them to the agricultural industry (e.g., grew up on a farm, worked in the agricultural industry, were themselves former agriculture teachers, etc.), while 45.3% ($f = 39$) indicated they had no background in the agricultural industry. We calculated a Pearson product-moment correlation coefficient (r) to determine the relationship between their background and whether their school district participated in the Three Circle Grant program. A small, negative relationship (Cohen, 1988) was discovered between our two variables ($r = -.18$; $p = .09$), revealing that if an Illinois school administrator had no agricultural background, they were less likely to participate in the Three Circle Grant program but not at the significant $p < .05$ level.

Table 3

The Impact of the Three Circle Grant As Perceived by Illinois Agriculture Teachers

Items	Frequency (%)				
	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
Agriculture teachers receiving the grant (n = 119)					
The extended contract I receive from the grant is a major factor in my decision to stay in my current position	6 (5%)	7 (5.9%)	19 (16.0%)	40 (33.6%)	47 (39.5%)
The extended contract I receive from the grant is a major factor in my decision to teach in Illinois rather than in other states	6 (5%)	12(10.1%)	42 (35.3%)	28 (23.5%)	31 (26.1%)
The extended contract hours from the grant have helped increase participation in the FFA chapter	2 (1.7%)	11 (9.2%)	38 31.9(%)	34 (28.6%)	34 (28.6%)
The extended contract hours provided by the grant has helped increase participation in SAE programs	4 (3.4%)	8 (6.7%)	40 (33.6%)	40 (33.6%)	27 (22.7%)
The extended contract hours from the grant allows me to devote more time to FFA planning and activities	2 (1.7%)	5 (4.2%)	16 (13.4%)	51 (42.9%)	45 (37.8%)
The extended contract hours from the grant allows me to devote more time to curricular and professional development	2 (1.7%)	6 (5.0%)	15 (12.6%)	51 (42.9%)	45 (37.8%)
Additional salary through the grant has impacted my aged program positively by meeting the required extra hours for SAE	3 (2.5%)	2 (1.7%)	20 (16.9%)	49 (41.5%)	44 (37.3%)

Items	Frequency (%)				
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>No opinion</i>	<i>Agree</i>	<i>Strongly agree</i>
Additional salary through the grant has impacted my program positively by meeting the required extra hours of FFA CDEs for student development	3 (2.5%)	2 (1.7%)	16 (13.6%)	51 (43.2%)	46 (39.0%)
Additional salary through the grant has impacted my program positively by meeting professional development requirements	3 (2.5%)	6 (5.0%)	21 (17.6%)	45 (37.8%)	44 (37.0%)
Additional salary through the grant has impacted my program positively by providing needed hours of curriculum planning	3 (2.5%)	3 (2.5%)	17 (14.3%)	54 (45.4%)	42 (35.3%)
Additional salary through the grant has impacted my program positively by increased enrollment in my classes	3 (2.5%)	7 (5.9%)	48 (40.3%)	33 (27.7%)	28 (23.5%)
Agriculture teachers not receiving the grant (n = 25)					
Without the extended contract through grant, I will likely seek employment in another Illinois district that offers the grant	1 (4.2%)	5 (20.8%)	10 (41.7%)	3 (12.5%)	5 (20.8%)
Without the extended contract through the grant, I will likely seek employment in a school district outside of Illinois in another state	6 (25.0%)	4 (16.7%)	10 (41.7%)	0 (0%)	4 (16.7%)
Without the extended contract through the grant I will likely leave the teaching profession	5 (20.8%)	5 (20.8%)	10 (41.7%)	3 (12.5%)	1 (4.2%)
The extended contract hours from the grant would help increase participation in my FFA chapter	1 (4.2%)	2 (8.3%)	4 (16.7%)	5 (20.8%)	12 (50.0%)

Items	Frequency (%)				
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>No opinion</i>	<i>Agree</i>	<i>Strongly agree</i>
The extended contract hours from the grant would help increase participation in my SAE programs	0 (0%)	3 (12.0%)	1 (4.0%)	9 (36.0%)	12 (48.0%)
The extended contract hours from the grant would allow me to devote more time to FFA planning and activities.	0 (0%)	3 (12.0%)	2 (8.0%)	8 (32.0%)	12 (48.0%)
The extended contract hours from the grant would allow me to devote more time to professional learning and curriculum development	0 (0%)	3 (12.0%)	1 (4.0%)	12 (48.0%)	9 (36.0%)
I worry that I would not meet the extra hours for FFA and SAE as outlined by the grant terms	6 (24.0%)	10 (40.0%)	3 (12.0%)	5 (20.0%)	1 (4.0%)
The grant is something I want in my contract	1 (4.0%)	3 (12.0%)	2 (8.0%)	4 (16.0%)	15 (60.0%)

Table 4

The Impact of the Three Circle Grant As Perceived by Illinois School Administrators with Agricultural Programs

Items	Frequency (%)				
	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
Administrators at schools receiving the grant (n = 62)					
The grant is a major factor in recruiting agriculture teacher applicants	1 (1.6%)	0 (0.0%)	15 (24.2%)	29 (46.8%)	17 (27.4%)
The grant is a major factor in retaining our current agriculture teacher	2(3.2%)	3 (4.8%)	7 (11.1%)	31 (49.2%)	20 (31.7%)
The extended contract hours from the grant have increased participation in the agriculture program	2 (3.2%)	1 (1.6%)	8 (12.7%)	35 (55.6%)	17 (27.0%)
Administrators at schools not receiving the grant (n = 24)					
The grant would be a major factor in recruiting agriculture teacher applicants	1 (4.2%)	0 (0.0%)	9 (37.5%)	12 (50.0%)	2(8.3%)
The grant would be a major factor in retaining a current agriculture teacher	1 (4.3%)	4 (17.4%)	8 (34.8%)	8 (34.8%)	2 (8.7%)
The grant would help increase participation in the agriculture program	0 (0.0%)	0 (0.0%)	10 (43.5%)	12 (52.2%)	1 (4.3%)

Conclusions, Implications, and Recommendations

The purpose of our study was to investigate the perceptions and attitudes of Illinois agriculture teachers and school administrators toward the teacher Three Circle Grant program. This census study analyzed responses from 148 Illinois agriculture teachers and 86 school administrators. While these findings are important to the SBAE stakeholders in Illinois and have the potential to provide valuable insights on extended contract grants nationwide, the results of this study should not be generalized beyond the respondents, as these data are unique to our state and the teacher Three Circle Grant program. We acknowledge this as a limitation of our study.

Objective one described how Illinois agriculture teachers are compensated for their time. According to national-level data collected from Iowa State University (2023), the average starting salary in 2022-2023 for agricultural education teachers was \$46,906, while the average starting salary for college graduates in an agriculturally related field was \$52,914. Data from the 2023 *Illinois Agricultural Education Annual Report* reported that the average salary of beginning agriculture teachers in Illinois was \$49,068 (Illinois Ag Ed Annual Report, 2023), higher than the national average. Our findings revealed that 83.8% of agriculture teachers were receiving some type of stipend or extended contract, and 83% were receiving the teacher Three Circle Grant to supplement their salaries. This suggests additional compensation, through stipends and/or extended contracts, could be useful to close the gap between an agriculture teacher's salary and the salaries of those working in an agriculturally related field. This would support the findings of Weakland and Curry (2022). Interestingly, even with additional compensation (i.e., extended contract or stipend), we discovered that 31.8% of respondents still supplement their income with a non-teaching job. Other studies have reported similar findings, indicating that teachers in specific states work additional jobs during the summer or school year to earn extra income to supplement their income (Henderson & Henderson, 2000; Scarbrough et al., 2001). As these factors can vary from state to state, it is recommended to conduct a national investigation of how agriculture teachers are compensated for their time and determine how the components of Solomonson et al's (2018) compensation model impact agriculture teacher recruitment and retention nationwide.

Objective two was used to describe Illinois agriculture teachers' perceptions of their compensation and if differences existed between those receiving the Three Circle Grant and those not receiving it. Of all respondents, 73.6% felt fairly compensated for their time teaching during contract hours. However, only 55.4% felt fairly compensated for their time with FFA and SAE responsibilities scheduled outside of regular contract times. This has exposed several issues as the state of Illinois mandates a comprehensive SBAE program using the Three-Circle Model of Instruction. The Illinois Public Statute (Illinois General Assembly, n.d.) has stated:

The General Assembly hereby declares that it is in the best interests of the people of the State of Illinois that a comprehensive education program in agriculture be created and maintained by the State's public school system in order to ensure an adequate supply of trained and skilled individuals and to ensure appropriate representation of racial and ethnic groups in all phases of the industry.

The Illinois State Board of Education, the entity responsible for administering the mandate, has further indicated that:

A school district that offers a secondary agricultural education program that is eligible for State and federal funding must ensure that, at a minimum, the following are available to its secondary agricultural education students: (1) an instructional sequence of courses approved by the Illinois State Board of Education; (2) a State and nationally affiliated FFA chapter that is integral to instruction and is not treated as an extracurricular activity; and (3) a mechanism for ensuring the involvement of all secondary agricultural education

students in formal, supervised, agricultural-experience activities and programs (Illinois State Board of Education, 2016).

As these components of the three-circle model are required for Illinois agricultural education programs to be considered an approved program and secure funding, it is imperative that agriculture teachers are fairly compensated to carry out these responsibilities, particularly with FFA and SAE activities outside of school hours. The use of the Three Circle Grant seems to support this idea. When comparing agriculture teachers receiving the grant and those not, we found that 91.9% of those receiving the grant now felt fairly compensated for their time with FFA and SAE activities compared to 72% of those not receiving the grant. This difference proved to be significant at $p = .00$. With this, we can infer that the Three Circle Grant appears to increase the salary satisfaction of Illinois agriculture teachers. With the evident satisfaction of teachers receiving the grant, why are all school districts in Illinois not offering the grant? We propose an investigation into specific barriers to Illinois school districts applying for the Three Circle Grant program.

We used research objective three to gauge Illinois agriculture teachers' attitudes toward the Three Circle Grant program. In our study, 80.7% of respondents receiving the grant indicated that they *agreed* or *strongly agreed* that it gives them more time to devote to curriculum and professional development and for planning FFA activities. Eighty-four percent of the agriculture teachers not receiving the Three Circle Grant *agreed* or *strongly agreed* that it would provide them with more time for professional learning and curriculum development. Eighty percent *agreed* or *strongly agreed* that it would allow them more time to plan for FFA activities. Agriculture teachers who have left the profession have said that the time demands of their positions are so great that to be good at the job, one must work extra hours beyond the normal school day (Lemons et al., 2015). These findings are important as time commitment is a common attrition factor for agriculture teachers (Crutchfield et al., 2013; McKibben et al., 2022; Solomonson & Retallick, 2018; Sorensen et al., 2016b), and planning for effective instruction has been identified as a characteristic of effective agriculture teachers (Roberts & Dyer, 2004). Since its inception, the Three Circle Grant has provided paid compensated time to complete these essential tasks of an agricultural education program.

Of those teachers receiving the Three Circle Grant, 73.1% *agreed* or *strongly agreed* that the grant is a major factor in their decision to stay in their current teaching positions, and 49.6% *agreed* or *strongly agreed* that it is a major factor in their decision to teach in Illinois rather than in other states. We can imply that the Three Circle Grant can be effective at retaining current agriculture teachers in the profession and keeping agriculture teachers in Illinois. These findings are notable when comparing teachers not receiving the grant. Of those teachers, 33.3% *agreed* or *strongly agreed* they would likely seek employment in another Illinois school district that offers the grant. This is congruent with the findings of Tye and O'Brien (2002), who suggested that teachers move for compensation. Further, for those not receiving the grant, there is a clear demand for the opportunity, with 76% affirming that they want it in their next contract. Based on this statistic, perhaps the time has come for the state of Illinois to fully fund the program instead of requiring school districts to provide matching funds. This would eliminate any potential inequities among school districts that have restrictive budgets and do not have access to adequate funding through their tax base. To eliminate this discrimination, a match calculation could be developed. For example, this might take the form of a sliding scale that could be correlated to the percentage of students participating in free and reduced school lunch programs. It is recommended that Illinois agricultural education stakeholders investigate possible alternatives to the current funding model to ensure equitable access to the grant program for all possible applicants.

Research objective four examined Illinois school administrators' attitudes toward the Three Circle Grant program. Over seventy percent (74.2%) of administrators in schools offering the Three Circle Grant indicated they *agreed* or *strongly agreed* that the grant is a major factor in recruiting agriculture teacher applicants to their programs, and 80.9% *agreed* or *strongly agreed* with the statement that the grant is a major factor in retaining their current agriculture teachers. Further, 82.6% of school administrators feel that

participation in the Three Circle Grant program has increased participation in their SBAE programs. Flood (2022) found similar findings in her study of school administrators and their attitudes toward extended contracts. These findings are important as our data shows that 20% of agriculture teachers have moved schools at some point for a better salary. With the ongoing teacher shortage (Smith et al., 2022), most school administrators are well aware of the difficulty in recruiting and retaining a qualified agriculture teacher. Interestingly, though, of the school administrators not offering the grant, only 58.3% agreed or strongly agreed that the grant would be a major factor in recruiting agriculture teachers, and only 43.5% *agreed* or *strongly agreed* that the grant would be a major factor in retaining their current agriculture teacher. These findings strongly contrast the attitudes of school administrators currently offering the grant program. It is not clear why these school administrators believe that offering an additional three months of salary would not be a major factor in recruiting or retaining an agriculture teacher. It is possible that these administrators have yet to hire a new agriculture teacher since the grant program's inception in 2017. It is recommended to follow up with these school administrators over time to determine their attitudes and perceptions of the Three Circle Grant changes over time.

Based on these findings, we recommend Illinois state officials and state-level agricultural education staff continue to promote and increase funding for the Three Circle Grant, increase the number of agriculture teachers in the grant program, and encourage administrators to take advantage of this opportunity for their agriculture teachers. Additional educational programming and information should be developed and made available to potential agriculture teachers, current agriculture teachers, pre-service agriculture teachers, school administrators, advisory and support groups, and other agricultural education stakeholders to promote the effectiveness of the grant program. Further, it is recommended that Illinois agricultural teacher educators, state-level staff, and other SBAE stakeholders work together to investigate how these findings could be used to assist in developing the state agriculture teacher recruitment and retention plan. This study should also be replicated in Illinois over time to monitor agriculture teachers' and school administrators' perceptions and attitudes toward the grant program. Finally, due to the positive outcomes of the Three Circle Grant program in Illinois, it is suggested that other states might do well to investigate the implementation of a similar extended contract grant program or designate state funds for salary enhancement for the purpose of recruitment and retention of agriculture teachers.

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