



National Agricultural Education Supply & Demand Study

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2016 Executive Summary

Since 1965, the National Agricultural Education Supply and Demand Study has been sanctioned and sponsored by the American Association for Agricultural Education (AAAE). In 2014, Drs. Daniel Foster (Pennsylvania State University), Rebecca G. Lawver (Utah State University), and Amy R. Smith (University of Minnesota) were selected to conduct the national agriculture teachers' supply and demand research. This document is a summary of findings from the third year (2016) of data collection.

Need for the Project

Numerous challenges facing school-based agricultural education include, but are not limited to, student enrollment, funding, and obtaining licensed teachers. Agriculture teacher preparation programs face related dilemmas such as shifting licensure requirements, challenging fiscal implications of pursuing a career in school-based agricultural education, and an absence of diverse teacher candidates.

While many stakeholders in agricultural education are aware of these challenges, additional research is needed to best determine a course of action. Current, accurate agriculture teacher supply and demand information will allow for meaningful, data-driven policy decisions at all levels.

Data Collection/Methods

Following the collection of 2015 supply and demand data, efforts were continued to refine the data collection process, incorporating operational definitions when needed and customizing validation settings to reduce mathematical errors in data entry. Teacher educators at institutions with Agricultural Education teacher preparation programs were contacted for supply data, while state supervisors/executive secretaries were contacted for demand data. In each case, an online instrument was distributed via email using Qualtrics. Multiple follow-up contacts were made to each respondent and/or alternate contacts in some cases. Both supply and demand instruments were distributed in September to accommodate teacher educators and elicit more accurate data regarding program completer employment.

Supply of Agriculture Teachers

A total of 101 teacher education programs provided supply data, resulting in a 100% response rate (N=101). Hawaii, Maine, Rhode Island, Vermont, and the Virgin Islands currently have no existing Agricultural Education teacher preparation programs.

Of the 772 license-eligible program completers reported in 2016, 596 were undergraduate completers, 60 post-baccalaureate program completers, and 58 graduate program completers. An additional 58 individuals completed licensure only. Table 1 outlines the post graduation employment plans of the 2016 license-eligible program completers as reported.

Table 1. Employment plans of license-eligible program completers (n=772)

Source	f	%
SBAE in-state	508	65.8
SBAE out-of-state	61	8.0
Graduate school	56	7.0
Agribusiness	47	6.0
Teaching another subject	29	3.7
Other	20	2.5
Unknown to teacher educator	16	2.0
Unemployed	11	1.4
Production agriculture	11	1.4
Extension	10	1.3
Military	3	0.3

*Note: Numbers as reported by state contacts.

Teacher educators indicated that of the license-eligible program completers, 516 (67%) were female and 256 (33%) were male. Nearly 89.5% of all license-eligible program completers were reported as White, Non Hispanic, with 5.0% Hispanic/Latino, 0.7% African American, 0.6% American Indian/Alaskan, 0.6% Bi-racial/Multi-racial, 0.5% Asian, and 0.1% Native Hawaiian/Other Pacific Islander. Teacher educators reported Other or Unknown ethnicity for approximately 2.5% of license-eligible program completers.

Demand for Agriculture Teachers

A total of 49 states and the Virgin Islands provided demand data, resulting in a 96% response rate (N=52). No data was available for Washington and Puerto Rico. Additionally, a number of states were unable to provide all data requested.

As of September 15, 2016, state supervisors reported a total of 7,775 school-based agricultural education programs employing 11,557.5 teachers. Of the total number of teachers, 1476 (13%) were considered new hires in school-based agricultural education (SBAE). Table 2 identifies the source of new hires, according to data reported.

Table 2. Source of new hires in SBAE (n=1476)

Source	f	%
Licensed ag teacher (moved to new school)	539	36.5
Newly licensed undergraduate (prepared in-state)	405	27.4
Alternative licensure route completer	245	16.6
Newly licensed graduate (prepared in-state)	86	5.8
Non-licensed individual	80	5.4
Newly licensed undergraduate (prepared out-of-state)	60	4.1
Other	43	2.9
Unknown	10	0.6
Newly licensed graduate (prepared out-of-state)	8	0.5

Prior educational/employment experience was reported for non-licensed individuals hired to teach school-based agricultural education in 2016-2017. In total, 20 were graduates of an agriculture program, 4 were graduates of an education program, 33 were from agribusiness, farming, or industry, 22 were from other areas of education, and 1 was a graduate outside of agriculture or education.

Additional teachers were still needed to meet demand in SBAE; state supervisors reported 66 full time vacancies as of September 15, 2016. Further, substantial growth and expansion in school-based agricultural education occurred in 2016-2017 with 175 new positions and 149 new programs reported.

Despite program growth, 27 states reported a loss of programs or positions. A total of 98.5 positions were lost and 73 programs closed. Respondents reported a total of 721 school-based agricultural educators who taught in the 2015-2016 school year would not be returning to the classroom in 2016-2017. Table 3 identifies their reasons for leaving, if known.

Table 3. Reported reasons for leaving SBAE (n=721)

Source	f	%
Retirement	201	28.0
Employed in business/industry	112	15.5
Not offered a contract/terminated	81	11.0
Employed in another educational content area (outside of Ag Ed)	53	7.3
Employed in production agriculture/farming	51	7.0
Employed in school administration	41	5.6
Stay at home parent/caregiver	31	4.2
Moved out of state (still teaching Ag)	28	3.8
Unknown	26	3.0
Employed in postsecondary education	20	2.7
Continuing education/grad school	18	2.4
Ag Ed state staff	17	2.3
Employment in extension/non-formal education	15	2.0
Health	10	1.3
Other	10	1.3
Death	5	0.6
Employed in adult education/FBM	2	0.2

Future Plans

In addition to this annual summary document, a more comprehensive report compiling 2014-2016 data will be produced and disseminated to the profession. Continued collaboration with the American Association for Agricultural Education, the National Association of Agricultural Educators, Teach Ag Campaign, National Association of Supervisors of Agricultural Education, National FFA and Local Program Success Specialists will enable successful supply and demand data collection through 2020.

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For questions or concerns regarding this study, please email nsd@aaaeonline.org.