



National Agricultural Education Supply & Demand Study

Daniel D. Foster, Rebecca G. Lawver, Amy R. Smith

2015 Executive Summary

Since 1965, the National Agricultural Education Supply and Demand Study has been sanctioned and sponsored by the American Association for Agricultural Education (formerly the American Association for Teacher Educators in Agriculture). In 2014, Drs. Daniel Foster (Pennsylvania State University), Rebecca G. Lawver (Utah State University), and Amy R. Smith (University of Minnesota) were awarded a contract to coordinate and conduct the national agriculture teachers' supply and demand research. Under their leadership, data will be collected on an annual basis (2014-2020). This document is a summary of findings from the second year (2015) of data collection.

Need for the Project

At present, more than 30 states are experiencing a shortage of agriculture teachers (NAAE, 2015). In 2014-2015 alone, a deficit of more than 400 agriculture teachers was reported by state supervisors responding to the National Agricultural Education Supply and Demand Study (Foster, Lawver, & Smith, 2015).

To appropriately respond to such concerns, agricultural education stakeholders need current, accurate estimates of agriculture teacher supply and demand to provide for meaningful policy decisions at all levels (Kantrovich, 2010). Teacher educators, agricultural education organizations, and state agricultural education staff need such data as well, for use in recruitment efforts of potential agriculture teachers.

Data Collection/Methods

Following the collection of 2014 supply and demand data, efforts were made to clarify or operationalize terminology used, further refine the data collection process, thus reducing burden to respondents. 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. The data collection timeline was adjusted in 2015, with instruments distributed in September rather than May, to better accommodate teacher educators and elicit more accurate data regarding program completer employment plans.

Supply of Agriculture Teachers

A total of 96 teacher education programs provided supply data, resulting in a 97% response rate (N=99). Six states (Hawaii, Maine, Nevada, New Hampshire, Rhode Island, and Vermont) and the Virgin Islands currently have no existing Agricultural Education teacher preparation programs. Data was not available from three institutions: Delaware State University, University of Arkansas – Pine Bluff, and University of Georgia – Tifton.

Of the 742 license-eligible program completers reported in 2015, 599 were undergraduate completers, 52 post-baccalaureate program completers, and 59 graduate program completers. Table 1 outlines the post graduation employment plans of the 2015 license-eligible program completers as reported.

Table 1. Employment plans of license-eligible program completers (n=742)

Source	f	%
SBAE in-state	446	60.1
SBAE out-of-state	66.5	9.0
Graduate school	65	8.8
Agribusiness	64	8.6
Teaching another subject	31.5	4.2
Extension	13	1.8
Unemployed	12	1.6
Unknown to teacher educator	12	1.6
Production agriculture	9	1.2
Military	1	0.1

*Note: Numbers as reported by state contacts.

Teacher educators indicated that of the license-eligible program completers, 498 (67%) were female and 244 (33%) were male. Nearly 92% of all license-eligible program completers were reported as White, Non Hispanic, with 5% Hispanic/Latino, 2% American Indian/Alaskan, and less than 1% African American.

Demand for Agriculture Teachers

A total of 49 states and the Virgin Islands provided demand data, resulting in a 96% response rate (N=52). Demand data was not available for Puerto Rico or Massachusetts.

As of September 15, 2015, state supervisors reported a total of 8,167 school based agricultural education programs, with 11,834 teachers. Of the total number of teachers, 1462 (12%) 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=1462)

Source	f	%
Licensed ag teacher (moved to new school)	555	38.0
Newly licensed undergraduate (prepared in-state)	448	30.6
Non-licensed individual	207	14.2
Newly licensed graduate (prepared in-state)	96	6.6
Newly licensed undergraduate (prepared out-of-state)	79	5.4
Other	64	4.4
Unknown	8	0.5
Newly licensed graduate (prepared out-of-state)	5	0.3

Prior educational/employment experience was reported for 203 of the 207 non-licensed individuals hired to teach school based agricultural education in 2015-2016. In total, 104 were graduates of an agriculture program, 34 were graduates of an education program, 24 were from other areas of education, 21 were from agribusiness, farming, or industry, 14 were from other areas of education, 9 were graduates outside of agriculture or education, 6 were unknown, 2 retired educators, and 3 reported “other”.

Nonetheless, additional teachers were still needed to meet demand in SBAE; state supervisors reported 72 full time and 8 part time vacancies as of September 15, 2015. Further, substantial growth and expansion in school based agricultural education occurred in 2015-2016, with 201.5 new positions and 145.5 new programs reported.

Despite program growth, 27 states reported a loss of programs or positions. A total of 75.4 positions and 42 programs were lost. Respondents reported a total of 901 school based agricultural educators who taught in the 2014-2015 school year would not be returning to the classroom in 2015-2016. Table 2 identifies their reasons for leaving, if known.

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

Note: Any data collected after the release of this executive summary will be included in the 2014-2016 three-year report.

Table 3. Reported reasons for leaving SBAE (n=901)

Source	f	%
Retirement	248	27.5
Unknown	115	12.8
Employed in business/industry	96	10.7
Not offered a contract/terminated	89	9.9
Employed in school administration	65	7.2
Employed in production agriculture/farming	54	6.0
Stay at home parent/caregiver	42	4.7
Employed in another educational content area (outside of Ag Ed)	40	4.4
Moved out of state (still teaching Ag)	34	3.8
Employment in extension/non-formal education	31	3.4
Continuing education/grad school	23	2.6
Health	12	1.3
Employed in postsecondary education	12	1.3
Ag Ed state staff	11	1.2
Other	11	1.2
Employed in adult education/FBM	10	1.1
Death	8	0.9

Future Plans

Prior to data collection in 2016, additional measures will be taken to further refine the instrument, inserting definitions to help clarify terminology used (ex. license-eligible program completer, non-licensed). Additionally, Qualtrics functions will be enabled to immediately send respondents a summary of data submitted to facilitate checks for accuracy in a timely manner.

An annual supply and demand summary will be generated for 2016, in addition to a more comprehensive report compiling 2014-2016 data. 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 be critical and assist researchers in identifying and accessing the best source of data from each institution and/or state.

References

Foster, D. D., Lawver, R. G., & Smith, A. R. (2015). *National Agricultural Education Supply and Demand Study, 2014 Executive Summary*. Retrieved from The American Association for Agricultural Education Website: http://aaaeonline.org/Resources/Documents/NSD_Summary_1_22_2015_Final.pdf

Kantrovich, A. J. (2010). *The 36th volume of a national study of the supply and demand for teachers of agricultural education 2006-2009*. West Olive, MI: Michigan State University. American Association for Agricultural Education.