National Agricultural Education Supply & Demand Study

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

Contributions by: Ellen C. Thompson & Ashley Rogers
National Association of Agricultural Educators

2022 Executive Summary

Since 1965, the National Agricultural Education Supply and Demand Study has been facilitated 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 ninth year (2022) of data collection by the present team.

Need for the Project

Within school-based agriculture, a shortage of highly qualified school-based agricultural educators is not a new phenomenon (Smith, Foster, & Lawver, 2017). Despite the voracious demand and ongoing program growth, persistent challenges exist in securing adequate funding for programs, addressing educator salary concerns, navigating licensure requirements, and promoting diverse representation in the teaching field. Collaborating systematically as stakeholders in agricultural education is essential to gather accurate and timely data on the supply of qualified teachers in agricultural education and the demand for school-based agricultural education positions throughout the United States. This approach will facilitate data-driven policy discussions.

Data Collection/Methods

Teacher educators at institutions with Agricultural Education teacher preparation programs were invited to provide supply data, while state supervisors/executive secretaries were invited to provide demand data. Both supply and demand instruments were developed in Qualtrics and distributed via email in October. Respondents were asked to provide data as of September 15, 2022. Multiple follow-up requests were made to each non-respondent and alternate contacts in some cases.

Supply of Agriculture Teachers

A total of 88 teacher education programs provided supply data, resulting in an 84% response rate (*N*=105). Alaska, Hawaii, Maine, Rhode Island, Vermont, and the Virgin Islands currently have no existing Agricultural Education teacher preparation programs. Of the 869 license-eligible program completers reported in 2022, 666 were undergraduate

completers, 69 post-baccalaureate program completers, and 91 graduate program completers. An additional 43 individuals completed licensure only. Table 1 outlines the post-graduation employment plans of the 2022 license-eligible program completers as reported.

Table 1. Employment plans of license-eligible program completers (n=869)

Source	*f*	%
SBAE in-state	601	69.2
SBAE out-of-state	83	9.6
Graduate school	38	4.4
Teaching another subject	34	3.9
Agribusiness	34	3.9
Other	31	3.6
Unknown to teacher educator	17	2.0
Extension	16	1.8
Unemployed	8	0.9
Production agriculture	6	0.7
Military	1	0.1

*Note: Numbers as reported by state contacts.

Teacher educators indicated that of the license-eligible program completers, 650 (75%) were female and 218 (25%) were male. Nearly 85% of all license-eligible program completers were reported as White, Non-Hispanic, with 4.5% Hispanic/Latino, 1.4% Bi-racial/Multi-racial, 2.5% African American, 1.4% American Indian/Alaskan, and 0.6% Asian. Teacher educators reported Other or Unknown ethnicity for approximately 4.8% of license-eligible program completers.

Demand for Agriculture Teachers

A total of 46 states provided demand data, resulting in a 88% response rate (*N*=52). Hawaii, Maine, Puerto Rico, Rhode Island, South Dakota, and Vermont were unable to provide demand data.

As of September 15, 2022, state supervisors reported a total of 8,987 school-based agricultural education programs employing 14,516 teachers (13,391 were full-time, 344 were part-time). Of the total number of teachers, 2023 (12.6%) were considered new hires in school-based agricultural education (SBAE). Table 2 identifies the source of new hires, as reported.

Table 2. Source of new hires in SBAE (n=2023)

Source	f	%
Licensed ag teacher (moved to new school)	613	30.3
Newly licensed undergraduate (prepared in-state)	436	21.6
Alternative licensure route completer	338	16.7
Non-licensed individual	210	10.4
Newly licensed graduate (prepared in-state)	139	6.9
Other	102	5.0
Unknown	83	4.1
Newly licensed undergraduate (prepared out-of-state)	83	4.1
Newly licensed graduate (prepared out-of-state)	19	0.9

Prior educational/employment experience was reported for non-licensed individuals hired to teach school-based agricultural education in 2022-2023. In total, 73 were from other areas of education, 68 were from agribusiness, farming, or industry, 40 were graduates of an agriculture program, 5 were graduates of an education program, 5 were retired educators, 3 were graduates outside of agriculture or education. The source of 16 non-licensed individuals was other/unknown.

Additional teachers were still needed to meet demand in school-based agricultural education; state supervisors reported 142 full time and 6 part-time vacancies as of September 15, 2022. Further, substantial growth and expansion in school-based agricultural education occurred in 2022-2023 with 335 new positions and 254 new programs added.

Despite program growth, 26 states reported a loss of programs or positions. A total of 86.5 positions were lost and 48 programs closed. Respondents reported that 839 school-based agricultural educators who taught in the 2021-2022 school year would not be returning to the classroom in 2022-2023. Table 3 identifies the reasons for leaving, if known. A total of 15 school-based agricultural educators moved to another state but continued teaching agriculture.

Table 3. Reported reasons for leaving SBAE (n=839)

Source	f	%
Retirement	179	21.3
Employed in business/industry	157	18.7
Employed in another educational content area (outside of Ag Ed)	129	15.4
Unknown	85	10.1
Stay at home parent/caregiver	62	7.4
Employed in school administration	41	4.9
Employed in production agriculture/farming	41	4.9
Not offered a contract/terminated	37	4.4
Employment in extension/non-formal education	28	3.3
Employed in postsecondary education	22	2.6
Ag Ed state staff	18	2.1
Continuing education/grad school	15	1.8
Health	10	1.2
Other	9	1.1
Death	5	0.6
Employed in adult education/FBM	1	0.1

Future Plans

Continued collaboration with the American Association for Agricultural Education, the National Association of Agricultural Educators, National Association of Supervisors of Agricultural Education, National FFA and Local Program Success Specialists will enable successful supply and demand data collection through 2026. The team has recently expanded to include Dr. Michael Speiss, Professor Emeritus Agricultural Education & Ag Engineering Technology, California State University – Chico, and is working toward providing more convenient access to longitudinal supply and demand data in the near future.

References

Smith, A. R., Lawver, R. G., & Foster, D. D. (2017). *National Agricultural Education Supply and Demand Study, 2016 Executive Summary.* Retrieved from:http://aaaeonline.org/Resources/Documents/NSD2016Summary.pdf

Recommended Citation

Smith, A. R., Foster, D. D., & Lawver, R. G. (2023). *National Agricultural Education Supply and Demand Study, 2022 Executive Summary.* Retrieved from:http://aaaeonline.org/Resources/Documents/NSD2022Summary.pdf