

National Agricultural Education Supply & Demand Study



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

Contributions by: Ellen C. Thompson, National Teach Ag Campaign

2020 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 seventh year (2020) of data collection.

Need for the Project

A shortage of highly qualified school-based agricultural educators is not a new phenomenon in U.S. agricultural education (Smith, Foster, & Lawver, 2017). While demand for applied STEM education using food, fiber, and natural resources as a context in our school system is voracious, the challenges surrounding appropriate program funding, educator salary, licensure requirements and diverse representation in the teaching ranks persist. Systematically collaborating as stakeholders in the agricultural education to collect the best available data on the status of both the supply of qualified teachers in agricultural education and the demand for positions in US agricultural education program will allow for data-drive policy discussions.

Data Collection/Methods

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 non-respondent and alternate contacts in some cases. Both supply and demand instruments were distributed in September to elicit more accurate data regarding program completer employment.

Supply of Agriculture Teachers

A total of 89 teacher education programs provided supply data, resulting in an 83% response rate ($n=107$). Hawaii, Maine, Rhode Island, Vermont, and the Virgin Islands currently have no existing Agricultural Education teacher preparation programs. Of the 897 license-eligible program completers reported in 2020,

730 were undergraduate completers, 48 post-baccalaureate program completers, and 87 graduate program completers. An additional 32 individuals completed licensure only. Table 1 outlines the post-graduation employment plans of the 2020 license-eligible program completers as reported.

Table 1. Employment plans of license-eligible program completers ($n=897$)

Source	<i>f</i>	%
SBAE in-state	587	65.4
SBAE out-of-state	74	8.2
Graduate school	59	6.6
Teaching another subject	55	6.1
Agribusiness	42	4.7
Other	34	3.8
Unknown to teacher educator	22	2.4
Production agriculture	8	0.9
Extension	7	0.7
Unemployed	5	0.6
Military	4	0.4

*Note: Numbers as reported by state contacts.

Teacher educators indicated that of the license-eligible program completers, 673 (75%) were female and 224 (25%) were male. Nearly ninety percent of all license-eligible program completers were reported as White, Non-Hispanic, with 6.0% Hispanic/Latino, 0.4% African American, 1.2% American Indian/Alaskan, 0.8% Bi-racial/Multi-racial, 0.2% Asian, and 0.1% Native Hawaiian and Pacific Islander. Teacher educators reported Other or Unknown ethnicity for approximately 1.8% of license-eligible program completers.

Demand for Agriculture Teachers

A total of 47 states provided demand data, resulting in a 90% response rate ($N=52$). Arkansas, Louisiana, Puerto Rico, Vermont and West Virginia were unable to provide demand data.

As of September 15, 2020, state supervisors reported a total of 8,466 school-based agricultural education programs employing 13,253.5 teachers. Of the total number of teachers, 1476 (9.0%) 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	%
Newly licensed undergraduate (prepared in-state)	429	29.1
Licensed ag teacher (moved to new school)	309	20.9
Unknown	286	19.4
Alternative licensure route completer	199	13.5
Newly licensed undergraduate (prepared out-of-state)	80	5.4
Non-licensed individual	75	5.1
Newly licensed graduate (prepared in-state)	51	3.5
Other	31	2.1
Newly licensed graduate (prepared out-of-state)	16	1.0

Prior educational/employment experience was reported for non-licensed individuals hired to teach school-based agricultural education in 2020-2021. In total, 23 were graduates of an agriculture program, 23 were from other areas of education, 17 were from agribusiness, farming, or industry, 9 were other/unknown, 1 was a graduate outside of agriculture or education, and 1 was a retired educator.

Additional teachers were still needed to meet demand in school-based agricultural education; state supervisors reported 51 full time and 2 part-time vacancies as of September 15, 2020. Further, substantial growth and expansion in school-based agricultural education occurred in 2020-2021 with 242 new positions and 140 new programs added.

Despite program growth, 31 states reported a loss of programs or positions. A total of 77 positions were lost and 50 programs closed. Respondents reported a total of 673 school-based agricultural educators who taught in the 2019-2020 school year would not be returning to the classroom in 2020-2021. Table 3 identifies their reasons for leaving, if known.

Table 3. Reported reasons for leaving SBAE (n=673)

Source	f	%
Retirement	165	24.5
Unknown	116	17.2
Employed in business/industry	105	15.6
Employed in another educational content area (outside of Ag Ed)	57	8.5
Not offered a contract/terminated	45	6.7
Moved out of state (still teaching Ag)	37	5.5
Employed in school administration	33	4.9
Stay at home parent/caregiver	22	3.3
Employment in extension/non-formal education	22	3.3
Employed in production agriculture/farming	18	2.7
Employed in postsecondary education	15	2.2
Continuing education/grad school	8	1.2
Health	12	1.8
Ag Ed state staff	8	1.2
Other	6	0.9
Death	2	0.3
Employed in adult education/FBM	2	0.3

Future Plans

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 2026.

Recommended Citation

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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>

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