

Representation Matters: The 1890 Land Grant Institutions Role in School-Based Agricultural
Education Supply and Demand

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Introduction

In the United States, classrooms are grappling with the challenge of providing quality education, particularly in school-based agricultural education (SBAE), where there's a documented shortage of teachers (National Center for Education Statistics, 2023). This challenge is more pressing as the data collected by the American Association of Agricultural Education (AAAE) National Supply and Demand (NSD) project documents an insufficient supply of program completers in agricultural education to meet demand for open positions in SBAE (Smith, et al, 2022). The disparity between student and teacher racial composition highlights the need for a more diverse teaching workforce to foster inclusive and effective educational systems. Research suggests that minority students perform better academically when taught by teachers of similar racial or ethnic backgrounds (Lindsay & Blom, 2017; Egalite & Kisida, 2018).

According to the most recent AAAE NSD report (2022), state staff reported that 90% of SBAE teachers in the US (N=13,270) identified as white with 1.5 % (N=268) of SBAE teachers identified as Black/African American. Related, of the 854 SBAE teacher education program completers (PCs) in 2022, 14% were reported as non-white with 2.5% reporting as Black/African American. Land-grant institutions (LGIs) established under the Morrill Act of 1890 could play a crucial role in addressing this issue, as they were historically established to educate Black scholars and produce qualified educators (USDA, 2023). Of the 19 1890 LGIs, the most recent study shows 8 have reported agricultural teacher education programs, positioning them uniquely to produce qualified SBAE teachers of color (Sullivan, et al., 2019). This research aims to examine the contribution of 1890 LGIs to the production of non-white SBAE teachers by analyzing agricultural teacher education program completers' data from the AAAE NSD project from 2014 to 2023.

Conceptual or Framework

As an extension of the current AAAE NSD project, the conceptual framework of the NSD study, as described in the 2014-2016 Status of the US Supply and Demand for Teachers of Agricultural Education report, (Lawver, et al. 2016; Lindsay, et al., 2009) was utilized.

Methods

For this poster, we analyzed secondary data collected by the AAAE NSD project and available in an online national dataset (Foster, et al., 2024). While AAAE NSD data has been collected since 1965, to increase data quality assurance, this study reviewed data collected from 2014 to present.

Results to Date

Figure 1 presents the program completer information for the six reporting 1890 LGIs reported in the 2014-2023 AAAE NSD data set collected by the current project team. The state reported data shows non-white program completers (NWPC) each year from the 2014-2023 reporting range starting with 88% in 2014, none in 2015, 12% in 2016, 43% in 2017, 8% in 2018 and 2019, 24% in 2020, 25% in 2021, 63% in 2022, and 17% in 2023. During the reporting range, the total number of program completers is 36, whereas the total NWPC is 117.

Figure 1

Reported Agricultural Teacher Education Program Completers from 1890 Land Grant Institutions, 2014 to present.

Year of Reporting	Number of Institutions Reporting	Total Program Completers	Non-White Program Completers (NWPC)	% of Total NWPC Completers that Year
2014	6	16	14	88%
2015	5	14	0	0%
2016	8	17	2	12%
2017	5	7	3	43%
2018	5	12	1	8%
2019	5	12	4	33%
2020	6	21	5	24%
2021	5	4	1	25%
2022	4	8	5	63%
2023	4	6	1	17%

Conclusions & Implications

This review of data collected from the AAAE NSD project generates more questions than answers. It presents an interesting discussion topic for our national meeting to address a pressing concern of preparing a teacher workforce prepared to advance an inclusive, equitable, accessible and effective educational system reflective of our multicultural society we live in to provide opportunity for all students to achieve appropriate learning outcomes (Lindsay & Blom, 2017; Egalite & Kisida, 2018). If students of color and other diverse backgrounds are to pursue a career in agriculture, especially agricultural education, positive interactions with agriculture teachers that represent them could increase their interest. Future research should be conducted to explore the challenges that the 1890 LGIs have in recruiting, retaining, and producing minority SBAE teachers. To address a limitation of this research of only having data reported for 6 of the 8 1890 LGIs with agricultural teacher education programs from 2014-2023, research methods that allow for a richer description of the phenomena with key informants from all 19 1890 LGIs are recommended. We recommend that further inquiry into which 1890 LGIs currently have agricultural teacher education programs available also be conducted. We acknowledge that the 1890 LGIs are only one of many potential avenues for pre-service agriculture teachers of color to go through. The rich history of the 1890s has of providing the Black community with teaching professionals that are representative of their communities is an opportunity for great influence today. Similar work should be done in describing programs and a resources comparison of the Primarily White Institutions (PWI), Hispanic Serving Institutions (HSI) and Tribal Colleges.

References

Egalite, A., & Kisida, B. (2018). The effects of teacher match on students’ academic perceptions and attitudes. *Educational Evaluation and Policy Analysis, 40*(1), 59–81. <https://doi.org/10.3102/0162373717714056>

- Foster, D. D., Smith, A. R., Lawver, R. G., & Spiess, M., (2024). *National Agricultural Education Supply and Demand Project [data set]*. American Association for Agricultural Education. Retrieved from: <http://aaae.agedweb.org/nsd>.
- Lawver, R. G., Foster, D. D., & Smith, A. R. (2018). *Status of the U. S. Supply and Demand for Teachers of Agricultural Education, 2014-2016*. <http://aaaeonline.org/Teacher-Supplyand-Demand>
- Lindsay, J. J., Wan, Y., & Gossin-Wilson, W. (2009). *Methodologies used by Midwest Region states for studying teacher supply and demand* (Issues & Answers Report, REL 2008–No. 080). 47 Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest. <http://www.eric.ed.gov/?id=ED506631>
- National Center for Education Statistics. (2023). *Characteristics of Traditional Public, Public Charter, and Private School Teachers*. U.S. Department of Education, Institute of Education Sciences. <https://nces.ed.gov/fastfacts/display.asp?id=28>
- Smith, A. R., Foster, D. D., & Lawver, R. G. (2023). *National Agricultural Education Supply and Demand Study, 2022 Executive Summary*. <http://aaaeonline.org/Resources/Documents/NSD2022Summary.pdf>
- Sullivan, M., Ricketts, J. C., Faulkner, P. E., & Hall, J. (2019). 1890 Land-grant institutions and school-based agricultural education preparation: Past, present, and future insights from institutional opinion leaders. *NACTA Journal*, 63(2), 258–265. <https://www.jstor.org/stable/26769647>
- United States Census Bureau. (2020). *United States quick facts: race and ethnicity*. U.S. Department of Commerce. <https://www.census.gov/quickfacts/fact/table/US/PST045222>
- United States Department of Agriculture: National Institute of Food and Agriculture. (2023). *1890 Land-grant institutions program*. <https://www.nifa.usda.gov/grants/about-programs/program-operational-areas/1890-land-grant-institutions-programs>