INTRODUCTION
Recent studies have highlighted a growing concern for public education regarding the shortage of qualified teachers (Garcia & Weiss, Sutcher, 2019; Darling-Hammond & Carver-Thomas, 2016). One study estimates the overall shortage to be 112,000 qualified teachers annually, and this number could grow if steps are not taken to increase the supply of teachers (Sutcher et al). With regard to career and technical educators, two-thirds of the states reported shortages of teachers in at least one specialty (Quinton, 2017). In order to fill the demand, school systems often take such steps as hiring teachers with credentials in another subject area (e.g. hiring an English teacher to teach math), increasing class sizes, or hiring individuals who do not have a teaching credential, all of which may impact the quality of instruction students receive.

One organization that has mounted a years-long successful campaign to encourage students to enter the field of teaching is the National Teach Ag Campaign. Teach Ag, a program of the National Association of Agricultural Educators (NAAE), seeks to increase the recruitment and retention of agricultural educators and promote a diverse teaching force. The campaign provides a national infrastructure for teachers and other stakeholders to promote agricultural education as a career, and is the brainchild of Ellen Thompson, who in 2008, as a classroom agricultural teacher, came up with the idea of a day every year where ag teachers across the nation would talk to their students about why they love agricultural education. “We talk about lots of other careers in our classrooms, but we seldom talk about the one that’s standing in front of the students,” said Ms. Thompson, who has directed Teach Ag since its inception. A National Teach Ag day has been held annually since 2010, but the campaign has grown to include other components, including the State Teach Ag Results program.

NATIONAL TEACH AG DAY
The National Teach Ag Day is an annual event held in the fall, usually on the third Thursday in September. The fall timeframe was selected because that is when high school students are thinking about what they want to do after high school. A different location is selected each year as the host site for a live webcast, which is joined by watch parties held in high school ag classrooms and ag educator postsecondary education programs. In 2018, the webcast had over 10,000 viewers from 49 states (NAAE, 2018).

During the live webcast, current agricultural teachers tell their stories about why they became teachers and how agricultural education changes lives. Students enrolled in teacher preparation programs also share their stories. The National Teach Ag campaign provides lesson plans and online games for teachers to use with students in coordination with the event. Also, ag education majors can submit promotional videos about their college, and the video with the most views wins a trophy. “It’s really ... a celebration of teaching and a day for people to talk about why they want to teach ag, but ultimately the goal is for someone to say to someone else, ‘I think you should teach ag. You would be a great ag teacher,’” said Ms. Thompson.

Beginning in 2020, local sites will be encouraged to sign up online for the webcast, and those that do will receive a kit that includes items such as a Teach Ag Day door skin, buttons, promotional flyers and posters. The local sites that sign-up will be recognized during the webcast.
STATE TEACH AG RESULTS (STAR) PROGRAM

Building on the success of the National Teach Ag Day, the Campaign launched the STAR program in 2014 to help states by gathering crucial supply and demand data related to agricultural educators. States participating in STAR also receive guidance and assistance on developing a strategic plan to increase the recruitment and retention of ag educators. Moving to state-specific work was a natural evolution of Teach Ag after the national efforts were well-established. “We knew the next step was working directly with states to create their state level plans,” said Ms. Thompson. “Once we got our feet under us and ... people were understanding and aware of the need to recruit and retain ... we decided it was time to really go and do where the most good could be done, which is directly at the state level,” she added. The STAR program has grown from 11 states in 2014 to 41 in 2020, and no state has left the program.

Source for image: https://www.naae.org/teachag/starstates.cfm

Teach Ag, working with the University of Minnesota, Penn State University, and Utah State University, conducts surveys in all 50 states to gather ag teacher supply and demand data. Supply-side information is collected from postsecondary institutions on the number of students enrolled in ag education programs as well as number of graduates from these programs, and this data is broken out by demographic groups. The survey also asks about the post-college employment plans of the graduates. The demand-side data collected from states includes the number of ag ed teachers; the number of post-secondary ag teacher preparation programs; the number of ag teachers who left the profession that year, why they left the profession, and what they did after they left; the number of ag teacher retirements; the number of new ag teachers hired, including demographic data on the new hires, the type of certification they received, and whether they are an in-state or out-of-state hire; the annual average starting salary in the state; and the number of ag teacher positions that went unfulfilled. Teach Ag uses the supply and demand data to create profiles for all 50 states and for six geographic regions.
While the data collection and profiles are done for all states, states can receive extra assistance by applying to Teach Ag to become a STAR state. STAR states receive guidance and support from Teach Ag to analyze the supply and demand data in their state profile and to develop and implement a strategic plan based on that data. The activities of STAR states are guided by a team of ag education stakeholders, including representatives from state government, postsecondary institutions, ag teachers, and the state FFA Foundation. As discussed in more detail below, funding for the initiative comes from the FFA Foundation, and small grants ($5,000 to $8,000) are given to STAR states to help with the costs of implementation. In order to help aspiring teachers, all STAR states will have to illustrate their pathway to becoming an ag teacher. These pathways include traditional routes, such as postsecondary teacher education programs, and often include alternative routes, such as programs for career-changers.

When the STAR program began, Ms. Thompson thought there would be significant differences among the states regarding the needs to be addressed by the strategic plans, but as the program progressed, she found that states were more similar than different. Therefore, strategies are developed around three pillars: recruitment, retention of both preservice and current teachers, and teacher recognition. BOX A highlights some of the strategies being employed by states around these pillars.

BOX A. STAR State Activities

**Recruitment**
States are employing a variety of strategies to encourage high school students to pursue a career in agricultural education. Some states hold a “signing day” where high school students who are headed to college sign letters of intent to study agricultural education, similar to athletes playing a collegiate sport. In Kansas, students who are interested in becoming teachers spend a day shadowing different ag teachers, not just their favorite ag teacher. The idea is that the students see a variety of teachers and get different perspectives on what it is like to be an agricultural educator. Some states also have college scholarships for ag education students, but many of these are targeted on students during their senior year of college, which is when students are close to finishing their degree and are engaged in a student teaching assignment. Reserving the scholarships for the senior year means that the funds are supporting students who are likely to become teachers and also are helping students in a year that can be financially taxing because, in addition to the regular college expenses, students may have additional costs due to their student teaching assignments.

**Programs for Students Enrolled in Teacher Preparation**
Programs for students studying to become ag teachers often have multiple goals, including enhancing students’ learning, providing real world teaching experience, and promoting collegiality. Teach Ag has encouraged states to hold these activities in different parts of the state so that students are exposed to other locations and may therefore be more open to taking a job outside of the area where they grew up. Ohio State and Purdue University (Indiana) have taken this idea across state lines by having agricultural education majors spend a weekend at each school. During these swaps, students participate in state-led professional development.

**Teacher Retention**
Teacher retention activities take many forms and are largely focused on the early years of teaching since 44% of new teachers leave the profession within the first five years of teaching, according to the Consortium for Policy Research in Education (Ingersoll, Merrill, Stuckey, & Collins, 2018). An overarching strategy employed by Teach Ag to keep current teachers in the profession is a focus on making sure that all ag teachers feel like they belong. “We’re also working always on developing inclusion strategy so that all teachers feel welcomed in the profession, anywhere from how they engage with that first day of their summer ag teacher’s conference to providing resources and materials so that they really feel like they’re part of the profession and making sure that we have accessible events, making sure that our curriculum is updated, so that it reflects the needs of all demographic areas within agriculture,” noted Thompson.

Some specific retention strategies employed by states include mentorship programs for ag teachers during their first few years of teaching, and early career academies that focus on issues such as work-life balance. A few states partner with private industry for student loan forgiveness programs for ag teachers. North Carolina has a novel approach to helping new teachers set up their classroom: at the summer ag teachers conference, attendees participate in a “fill the bucket” activity. Every new ag teacher at the meeting gets a bucket, and current teachers are asked to bring something to put in the bucket that will help new teachers get their classroom started. One teacher could bring a red pen, while another brings hand sanitizer or note cards. The state also provides some supplies for the bucket. Also, in North Carolina, some ag teachers display in their classrooms a “family tree” of mentors so that their current students can see the mentorship that takes place for ag educators. The family tree also gives the teacher an opportunity to discuss ag education as a career.

**Teacher Recognition**
States employ a variety of approaches to recognizing current ag teachers. Most STAR states participate in their state level agriculture teacher award programs, and teachers are also recognized for their efforts at informal events, such as featuring educators at the state FFA convention as speakers and honorees. In addition, NAAE sponsors a variety of teacher recognition programs, including awards for teachers early in their careers, outstanding teacher awards at the secondary and postsecondary levels, recognition of mentors, and lifetime achievement awards. Individuals apply for consideration and are selected by NAAE.
OTHER TEACH AG INITIATIVES

Teach Ag Ambassadors. Annually, 12 to 14 pre-service teachers are selected as Teach Ag Ambassadors. These individuals are provided with professional development and are also given the opportunity to share their passion for ag education with others. For example, the Ambassadors staff the Teach Ag booth at the FFA national meeting where they engage with young people who are interested in becoming agricultural educators. These interactions have inspired high school students to pursue a career in ag education.

Future Agriscience Teacher Symposia (FAST). Teach Ag hosts a series of symposia for pre-service teachers during national agricultural education-related meetings, such as the Minorities and Agricultural and Natural Resources-related Science conference, the Cultivating Change Summit, the National Teach Ag Day, and the NAAE convention. Students receive training on an inclusive classroom, inquiry-based instruction, networking, classroom management, job interview skills, and building a collegial network. Students majoring in agricultural education can apply for scholarships to attend these symposia.

Tag to Teach. One recruitment strategy promoted by Teach Ag is for teachers to nominate students who they believe would be great ag teachers. These students are “tagged to teach” and are honored at an event, such as a luncheon. Teach Ag's research shows that the number one reason someone becomes an ag teacher is because someone told them they should do so. Teach Ag offers at cost “Tag to Teach Ag” kits that include t-shirts and other giveaways, and states have also developed their own kits.

FOCUS ON DIVERSITY

A feature of all Teach Ag’s initiatives is to promote a diverse agricultural education teaching force. “We really try to make sure that we are showcasing ... a diverse array of teachers, and that can mean anything from race, gender, ethnicity, location in the United States, and type of program,” said Ms. Thompson. The goal is for all to feel welcome and Teach Ag works to ensure that events are accessible and inclusive and meet the needs of all who are or would like to be agricultural teachers. This is still a work in progress: In 2018, among graduates of agricultural education programs who were license-eligible, 71% were female, and 90% were white, non-Hispanic. (Smith, Lawver, & Foster, 2019).

In addition to the campaign's larger efforts to promote inclusivity, diversity, access and equity, Teach Ag has focused on small things as well. For example, Teach Ag ensures that the t-shirts and giveaways are gender-neutral.

FUNDING AND OTHER SUPPORT

Teach Ag’s current annual budget of approximately $1 million is entirely supported by outside sponsors, such as the CHS Foundation, Corteva Agriscience, Growth Energy, and BASF. However, Teach Ag/NAAE do not raise the funds directly, but work with the National FFA Foundation. Teach Ag and FFA have a symbiotic relationship because, in order to be a member of FFA, students need to be enrolled in an agricultural class in school, so without ag teachers, there are no ag students. Ms. Thompson explained: “An FFA member is an agricultural education student, first and foremost, and they have an ag teacher, so National FFA does the student leadership development side of things and NAAE does the teacher programming side of things. One needs the other.” In addition, both NAAE and FFA provide in-kind support for the Teach Ag initiatives, including administrative assistance from NAAE and booth space at each associations’ meetings.

IMPACT

While a direct line cannot be drawn to the Teach Ag initiative, over the last several years, there has been an increase in the number of ag education majors even as other content areas are seeing a decrease in teacher candidates, and an increase in the total number of ag ed degrees granted. Also, among those graduating with an agricultural education degree, 75% are going into teaching
(Smith et al., 2019), which is an increase from the 59% who pursued teacher careers in 2001 (Camp et al., 2002). The annual retention rate of ag teachers is 96% (Smith et al., 2019), which is higher than the estimated average teacher retention rate of first year teachers of 91% (Ingersoll et al., 2018). Further, as of September 2018, state supervisors reported 61 full time and 10 part time vacancies (Smith et al., 2019).

Agricultural education is growing: In the 2017-18 school year, 247 new positions and 140 new programs were added in schools across the nation (Smith et al., 2019). And this expansion is not just in rural areas: Ms. Thompson explained that there has been a significant increase in ag education in urban areas, such as in New York, Philadelphia, and Minneapolis. She attributes this growth to “people having a strong interest in food, fiber, and resources.” Ms. Thompson added that students can complete some of their science requirements through ag education “in a way that makes sense to a lot of kids.”

**REPLICATION**

Ms. Thompson acknowledged that the marketing campaign undertaken by Teach Ag could be applied to any teaching content area. To follow the playbook of Teach Ag, all it takes is one individual to advocate for such a campaign. Start working with your state association to designate a day where teachers talk with their students about why they became teachers and why they love teaching. Ask your state association to gather data from the institutions that prepare teachers in your subject area, and work with researchers to analyze the data. Use the data to not only highlight the need to recruit more individuals into your content area, but also to develop a strategic plan in concert with state and local stakeholders. Reach out to businesses that employ the students you are preparing to see if they will provide financial support for your efforts. Finally, stay the course. Make sure the “Teach Health Science” or “Teach Business” day is an annual event, and that data is gathered and shared annually.

**CONCLUSION**

For over 10 years, Teach Ag has run a successful campaign to encourage a diverse array of individuals to become agricultural educators and have also helped states and school systems retain those individuals once they are teachers. Data has been a cornerstone of all Teach Ag’s efforts, guiding decisions at both the national and state level. Teach Ag is a model that other education content areas could replicate to grow and retain their numbers. Of their decade-long effort, Ms. Thomson said, “Honestly, our prescription could be for anybody who is trying to recruit into anything. We’re just a marketing campaign, but somehow, we figured out.”

For more information on the Teach Ag campaign, visit https://www.naae.org/teachag/index.cfm, or contact Ellen Thompson at ethompson.naae@uky.edu.

**References**


