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Meeting the Demand for Agricultural Educators

Strengthening Agriculture Through Agricultural Education

by Dr. Gaea Hock

As the U.S. population continues to be further and further removed from the farm, I am a firm believer we need more agricultural education at all levels. We need teachers in the school system who are knowledgeable and equipped to educate students from all backgrounds about the agriculture industry. We also need nonformal agricultural educators in communities across the nation to reach populations who are decision-makers, opinion leaders, and consumers.

Unfortunately, we are facing a massive teacher shortage across all disciplines, including agricultural education. This is not a new or novel problem, but one we are continually working to improve.

Each state is working to address the teacher shortage with innovative and unique approaches. In Kansas, we work on multiple levels to increase recruitment efforts, provide the best education possible in the post-secondary setting, support new teachers in their first several years in the classroom, and continue open communication with key stakeholders.

The teacher shortage is not one easily solved. We need to approach the challenge considering the many facets and factors impacting the current situation. Are we recruiting the right students into teacher education programs? Are we communicating clearly with administrators about the mentoring and support needs of their SBAE teachers? Are we working to educate community members, FFA Alumni and Supporters Chapter members, and school board members about

Leading future educators on agriculture content tours is one of my favorite activities. Learning about the research behind seed varieties was a focus of this particular tour sponsored by the Kansas Soybean Commission.

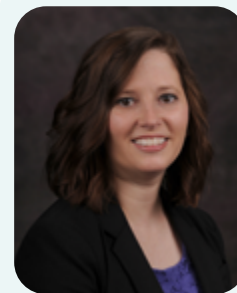
the many responsibilities an agriculture teacher must accomplish? Are we supporting alternative licensed/certified teachers in an effective manner? Are we encouraging teachers starting families to practice work-life harmony? Are we making the expectations of the job more complicated as we add more "opportunities"? How can we increase funding to support our many needs?

These are the many questions I ponder as we continually discuss the teacher shortage. I don't have the answers, although I wish I did.

It is important that we are all striving to do our part in strengthening agriculture by supporting the agricultural education profession. As you read the articles in this issue, I hope you acquire a few strategies to address the teacher shortage situation in your community, area, or state. We can



each work to improve the agricultural education profession and in turn strengthen the agriculture industry for years to come.



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Distribution

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Article Submission

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It Takes a Village to Raise an Ag Teacher

by Dr. Amy Smith

As a parent, I am keenly aware of the truth behind the proverb, “*It takes a village to raise a child.*” The proverb suggests that to provide for, influence, and aid in the upbringing of our children, an entire community is needed, in addition to parents or immediate family. I am personally so thankful for the village that is helping to raise my son.

In Minnesota, we have embraced that proverb – and modified it a bit – for application to school-based agricultural education (SBAE).

It takes a village to raise an Ag teacher. ~Minnesota Ag Ed Proverb

Indeed, it does. A high-quality, well-resourced SBAE teacher doesn’t develop overnight or exist within a vacuum. The best SBAE teachers have likely been impacted and shaped by countless individuals, experiences, and factors -- sometimes in obvious ways and other times, more subtly. But, the village needed today is different from the one that existed when I became a teacher in the early 2000s. The world at large, and the world of teaching SBAE, has changed. As such, our system of support must evolve, morph, and change too. So, what does this village need to know, do, address? What changes must we make?

Within the agricultural education profession, we recognize the tremendous need for more SBAE teachers, both now and into the foreseeable future. With states across the nation feeling the impacts of the teacher shortage in one way or another, issues related to SBAE teacher supply and demand, recruitment, and retention are on the minds of many. Some are struggling to fill available positions with fully licensed teachers

or license-eligible candidates, especially during a time of considerable programmatic growth. More and more school districts are recognizing what agricultural education coursework, FFA/leadership development, and SAE/work-based learning can provide for their students and are exploring program creation or expansion.

When I agreed to serve as the theme editor of this issue, I hoped that it would be published offering new and innovative solutions to these ongoing challenges. Certainly, the issue offers creative ideas, new resources, and information about state-specific best practices, which are helpful. But, if I’m honest, conversations I had with colleagues and prospective contributors led to more questions than answers in my mind. I thought this would be an appropriate place to capture and share some of those questions – to plant seeds for continued thoughts, conversations, and solution-seeking among the profession.

Some pressing questions:

1. How do we improve the narrative around teaching as a career choice and highlight the benefits and rewards of teaching school-based agricultural education?
2. Where are the boys? How do we get more young men to view school-based agricultural education as a desirable career choice?
3. How can we simultaneously leverage the breadth of the agricultural education major and the numerous careers a graduate can pursue while not discouraging teaching school-based agriculture?
4. What changes must be made as a profession to truly embody the values of

diversity, equity, inclusion, and belonging? How do we make this part of the fabric of who we are and what we do every day?

5. What efforts and resources are necessary to attract teachers from diverse backgrounds, ensuring that the SBAE teacher population mirrors the student populations of the school districts we serve?
6. How can we best support beginning teachers, regardless of their background, licensure status, or rationale for entering the classroom?
7. What must be done to recalibrate expectations of the profession to foster greater job satisfaction and career longevity? What changes might allow for individuals at all life stages, with varying personal and familial responsibilities, to remain in the profession?
8. What, if anything, could be done to encourage those who take a leave from SBAE to return?

I recognize that this list of questions identifies an immense amount of work to be done within agricultural education – and yet, it isn’t exhaustive by any means. At the same time, I don’t want to be discouraging or disheartening. A great deal of good work *IS* happening in agricultural education and *SHOULD* be celebrated. This issue highlights some of the good work, including state and national strategies for recruitment, teacher development, mentorship, and support – with representation from Illinois, Ohio, Oklahoma, Minnesota, and North Carolina. We need to pause and acknowledge the successes, then build upon them.

When I pause long enough to reflect, I see several things happening within our Minnesota village that should be celebrated. We have a deep bench of supporters and stakeholders on Team Ag Ed, and each plays an active role in the recruitment and retention of school based agricultural educators. Here are a few initiatives and efforts to note.

- **Heightened efforts to maximize interactions and touchpoints with prospective SBAE teachers.** Some of these initiatives are coordinated at the state level, including the Teach Ag Signing Day event at FFA State Convention and Teach Ag communication campaign through website, social media, and e-newsletters. Other strategies, such as the one-day Teach Ag Conference, are more collaborative efforts among the three in-state institutions offering teacher preparation (Southwest Minnesota State University, University of Minnesota-Crookston, and University of Minnesota – Twin Cities). Another example, specific to the UMN-TC campus, is the time and energy being invested into enhancing Invitational events for competing FFA members. Ideally, these efforts will allow more young people to “see themselves” in agricultural education and consider it their career.
- **Strategic initiatives to increase retention within the Ag Ed major.** A regional Future Agriscience Teacher (FAST) Symposium held annually during Ag Tech Conference, paid summer Ag Ed internship, facilitated by the Minnesota Agricultural Education Leadership Council (MAELC), and intentional campus-based community building are examples of efforts to retain students in the Ag Ed major. While teaching SBAE is not for everyone, such initiatives engage students with a network

of veteran SBAE teachers and allow them to experience the sense of belonging that often comes with active participation. Financial support for teacher candidates, made possible by the Minnesota FFA Foundation, scholarships, and specific loan forgiveness programs for SBAE teachers provide tangible resources to counter financial concerns and challenges that may cause a student to rethink their career choice.

- **Continued commitment to provide new and beginning teachers with support.** While the Minnesota Agriculture, Food, and Natural Resource (AFNR) Teacher Induction Program (TIP) has been in existence since 1999, programmatic changes have allowed us to better serve both traditionally and alternatively licensed individuals. Offering multiple in-person program kick-offs enables those hired early to begin the program over the summer, while a later kick-off accommodates late hires or those with time conflicts with the first session. Including the CASE AgX briefcase within programming provides new teachers with a ready-to-implement curricular resource and teaching strategies to apply in all courses. Ongoing legislative funding through MAELC supports the TIP program.
- **Intentional collaboration with other areas of career and technical education (CTE).** Recognizing the impact that teacher shortages across CTE were having on school-based agricultural education, Ag Ed leaders involved in Minnesota Association of Career and Technical Educators (MNACTE) created a statewide professional development program for new CTE teachers in partnership with the Minnesota Department of Education (MDE). The purpose of the Min-

nesota Career and Technical Educators Teacher Induction Program (CTE TIP) is to function as a professional learning community and support the development, efficacy, success, resilience, and retention of CTE teachers, with a particular focus on supporting those who have not completed a teacher licensure program.

Just as our Minnesota village is addressing recruitment and retention of SBAE teachers, this two-pronged approach is essential at all levels. To meet the demand for SBAE teachers, we must focus on both recruiting and retaining teachers equally. Merely recruiting more teachers won't suffice; we need to address the issues that lead to teacher attrition.

I firmly believe that agricultural education is ahead of the curve in terms of recruitment efforts, even though we still face a shortage. The agricultural education community must continue its effective practices while actively seeking, creating, and embracing new initiatives and opportunities. As we look to the future, let us remember that it indeed takes a village, not just to raise a child, but also to cultivate exceptional SBAE teachers and enrich the lives of students through agricultural education. Despite the hurdles, there is no greater village to be a part of, and together, we can ensure that SBAE remains vibrant and impactful for generations to come.



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Prioritizing Recruitment, Retention, and Recognition

by Ashley Rogers

The National Association of Agricultural Educators (NAAE) Recruitment, Retention, and Recognition efforts have been the foundation of the National Association of Agricultural Educators (NAAE) organization since the inception in 1948. In 2009, NAAE formalized the efforts by creating the NAAE National Teach Ag Campaign. #TeachAg, as it is often referred to, has grown over the last decade and the efforts of the campaign have become operationalized as part of the NAAE strategic goals and objectives. The NAAE National #TeachAg campaigns seeks to raise awareness of the need to recruit and retain highly qualified and

diverse agriculture teachers, encourage others to consider a career in teaching agriculture and celebrate the positive contributions agriculture teachers make in our schools and communities.

The NAAE National #TeachAg Campaign has launched a multitude of initiatives to recruit, retain, and recognize highly qualified and diverse teachers. These efforts have included the National FFA Convention & Expo #TeachAg recruitment booth, State Teach Ag Results (STAR) Program, National #TeachAg Day, #TeachAg Ambassadors, #TeachAg workshops, and the #TeachAg awareness campaign. In 2022, the #TeachAg recruitment and retention program-

ming directly impacted 50 states and Puerto Rico, and engaged 86,551 students, teachers, teacher educators, post-secondary students, and stakeholders.

Each carefully crafted grass-root effort has produced a notable impact within the profession and has brought awareness to agricultural education. A well-known initiative that unofficially launched the campaign was the #TeachAg recruitment booth at the National FFA Convention & Expo. For 14 years, the booth has provided interactive engagement and celebration for the profession of teaching agriculture. The booth began as a method to collect contact information of those who were interested in the

(LEFT) In 2022, the National #TeachAg Day celebration webcast was hosted at the CHS Headquarters in Inver Grove Heights, Minnesota. The CHS Foundation was recognized as a #TeachAg Champion. Riley Hintzsche (Illinois), Sabrina Davis (Georgia), and Jessica Fernandes (California) were the webcast hosts of the event.

(RIGHT) The State Teach Ag Results (STAR) program provides opportunities for states to recruit, recognize, and retain high quality and diverse agriculture teachers through different initiatives.



profession of teaching agriculture and provide contacts and updates with those individuals as they approach their career choices. The booth quickly grew into a distinctive space that is renowned for celebrating the career of teaching agriculture. Over the years, the booth has interacted with a multitude of agricultural education students, FFA members, agriculture teachers, advisors, pre-service teachers, and stakeholders. The National #TeachAg booth has transformed recruitment initiatives of the campaign and will continue to employ such strategies to fill the demand of agriculture teachers across the nation.

The NAAE National #TeachAg campaign has also spearheaded the monumental work of the State Teach Ag Results (STAR) program. This program is designed to assist states in creating sustainable and effective recruitment and retention plans. NAAE offers in-kind design and consul-

tation services, access to #TeachAg grant funding support, and priority preference for #TeachAg ambassador positions, promotion and assessment summaries, and access to planning materials specifically for recruitment and retention. This program is driven by the AAAE National Supply and Demand data, which allows states to analyze the areas in which they need to focus efforts pertaining to recruiting, retaining, and recognizing students, pre-service agriculture teachers, and agriculture teachers. In 2022, this program engaged over 75,893 individuals in the promotion of the profession of teaching

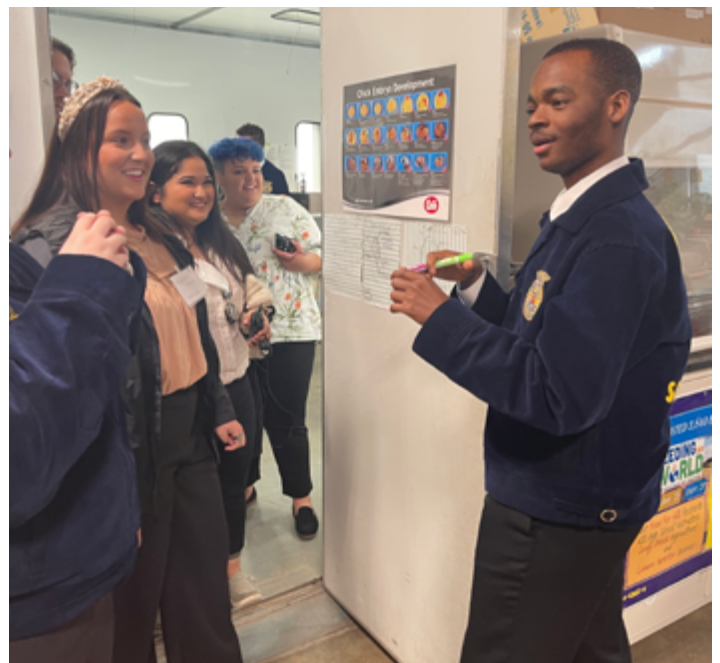
agriculture and recognizing pre-service and in-service agriculture teachers.

Another special project of the NAAE National #TeachAg Campaign is the celebration of teaching agriculture on National #TeachAg Day. This celebration was designed to focus on local programs and degree institutions through the delivery of materials and promotional items to celebrate the profession of teaching agriculture. Over 100 host kits and 50 mini host kits were provided to programs across the nation. The combined impact from the NAAE National #TeachAg host kits were able to

NAAE National #TeachAg Campaign has provided limitless learning to those who have a passion for agricultural education.

(LEFT) NAAE #TeachAg Ambassador, Morgan Jaterka, engages with FFA members upon their completion of the booth interactive activity.

(RIGHT) At the 2023 FAST IDEAP in Lexington, Kentucky. Participants had the opportunity to hear from guest speakers across the country about creating inclusive, diverse, equitable, and accessible programs. During the program, participants visited the Kentucky School for the Deaf to experience a program that emphasizes the importance of IDEAP in agricultural education programs.



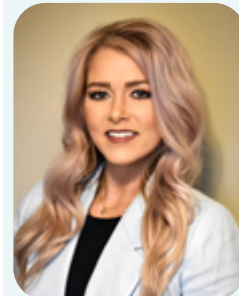
reach 58,516 students, pre-service educators, agriculture teachers, and stakeholders. The live webcast is also a unique feature of NAAE National #TeachAg Day. The webcast had over 26,605 viewers from 46 states. In 2023, NAAE launched new initiatives to highlight the profession of teaching agriculture. We will feature custom celebration kits for post-secondary institutions and state agricultural educator associations. A “Lesson Plan in a Box” for high school educators was provided to utilize on NAAE National #TeachAg Day to recruit students into the profession of teaching agriculture.

In addition to other grassroots initiatives, the NAAE #TeachAg campaign also offers Future Agriscience Teacher (FAST) Symposiums across the nation. Through the FAST programs, in 2022 NAAE was able to involve 214 preservice agricultural education majors and provide 72 hours of minds-on professional development training through four symposiums. FAST symposiums consist of Creating an Inclusive, Diverse, Equitable and Accessible Program (IDEAP), and programs at National FFA Convention, AFA Leaders Conference Ag-Ed track, and NAAE Convention. The NAAE National #TeachAg Campaign seeks to promote and support those who are eager to enter the profession.

“Attending the FAST IDEAP program was life-changing. I was able to step outside of my comfort zone and gain extensive knowledge on how to build a more inclusive, diverse, equitable, and accessible program. This program allowed me to hear from guest speakers, build long-lasting friendships, and be reminded of my why as a future educator. I loved being a part of the FAST program and highly recommend it to all pre-service agriculture educators.” - 2023 FAST IDEAP Participant.

NAAE National #TeachAg Campaign has provided limitless learning to those who have a passion for agricultural education. NAAE will continue to advocate and promote the profession of teaching agriculture while keeping the three core values of the organization at the forefront: advocacy for agricultural educators, advancement through professional development opportunities for agricultural educators, and recruitment and retention of agricultural educators within the profession. If you are interested in getting involved with NAAE and the National #TeachAg campaign, please visit <https://www.naae.org>

Thank you to the NAAE National #TeachAg Campaign partners, the CHS Foundation, Corteva Agriscience, Growth Energy and BASF, for continuing to support agricultural educators at every age and every stage of their careers.



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Growing Agricultural Science Teachers in Illinois

by Dr. Jay Solomonson, Andrew Klein, Dr. Lucas Maxwell, Dr. Amy Leman, Dr. Andrew Baker, & Dr. Steven Still

According to Fernandez et al. (2020), it is estimated that between 2020 and 2025 there will be 59,400 job openings annually for students pursuing careers in the agricultural industry. Currently, we do not have enough graduates within the pipeline to fill such positions in the United States. Similar shortages of school-based agricultural education teachers (SBAE) have been noted for decades with studies indicating the trend is likely to continue (Camp et al., 2002; Foster et al., 2020; Kantrovich, 2010). Following these national trends, a shortage of agricultural education graduates in Illinois, relative to annual openings has also been reported (Illinois Annual Ag Ed Report, 2019). While Illinois Agricultural Education stakeholders have established many initiatives to assist with this chronic supply and demand issue, one project has been instrumental in recruiting and

retaining SBAE teachers in the state- the Growing Agricultural Science Teachers grant program.

Growing Agricultural Science Teachers, or GAST, is a teacher recruitment and retention collaborative funded by Illinois state tax dollars and administered by the Illinois State Board of Education. The program provides grant funding to public universities and community colleges that offer an agriculture teacher education program of study. Funds are used differently by each grantee based on local needs. Activities range from professional development programs to recruitment events, retention incentives, and more. Funding varies based on an annual legislative appropriation, but in recent years has been \$40,000 for each university participant and \$20,000 for community college grantees.

GAST began with Illinois Public Act 95-153 (2008), when funds were given to public universities and community colleges to be used for four main purposes: teach-

er candidate recruitment and retention, having experienced teachers help with the coordination of student teachers, professional learning for educators within their first five years of teaching, and professional development for collegiate faculty and staff. In 2009, PA 96-404 changed certain aspects of the program allowing experienced teachers to be used for more than just student-teacher coordination and support. Further, funds for supporting early career teachers' professional development could be used for both hosting events and providing financial support (PA 96-404, 2009). Even with these changes, the four main pillars referenced above remain the primary objectives of the program today. This article will provide a glimpse of the various initiatives the participating public universities and community colleges have implemented to grow agricultural science teachers in the state of Illinois.

Illinois State University (ISU)

In an effort to recruit and retain agricultural education students, GAST funds at Illinois State University have been allocated to several initiatives including student scholarships to offset costs associated with completing a degree in Agricultural Education and obtaining licensure (student teaching, summer experience coursework, state mandated assessments, etc.). Additionally, GAST funds have been used to support faculty and student travel to recruit at events such as the Illinois FFA State Convention, Illinois Association of Vocational Agriculture Teachers (IAVAT) Conference, ELITE Conference, and the Illinois Junior Minorities in Agriculture, Natural Resources, and Related

ISU used GAST funds to update their displays for recruitment events. Pictured above are two ISU students speaking with potential Ag Ed students at the state's ELITE conference.



Sciences (MANRRS) Conference. The grant also has supported four annual on campus professional development opportunities aimed at building student's self-efficacy in content and pedagogical practices to help retain them in agricultural education.

Recognizing the need for faculty to remain prepared to implement the most current research-based practices, these funds have also supported the professional growth and development of both teacher education faculty at Illinois State by partially supporting participation in the annual American Association for Agricultural Education (AAAE) and the National Association of Agricultural Educators (NAAE) Conferences. Finally, to support the development of preservice teachers, GAST funds have been allocated to several activities aimed at increasing student technical content knowledge. While not an all-inclusive list, the following highlight some of the activities that would otherwise be nearly impossible to provide without these funds.

- The maintenance and support of an Agricultural Education Resource Center (AERC) where countless resources are made available for students to utilize as they complete technical course work in agriculture, develop their pedagogical skills in Ag Ed and teaching and learning courses, and bring the aforementioned together in numerous laboratory and clinical experiences.
- Provide all student-teachers the opportunity to become certified in a Curriculum for Agriscience Education (CASE) course before their first teaching position with no cost to the student for certification, housing, meals, etc.
- Provide students additional, paid teaching experiences by serving as assistants in lower division agricultural education coursework.

- Provide instructional items to increase teacher self-efficacy and fluency in areas related to agricultural lab management and safety (lab coats, welding helmets, etc.)

Southern Illinois University (SIU)

The GAST grant is an important component of the agriculture education program at Southern Illinois University. SIU has traditionally allocated funds from the GAST grant to financially support clinical students and GAST interns and implement a summer agricultural education camp.

Funds from the GAST grant have been used to defray expenses incurred in student teaching and travel for both clinical students and student teachers in our Ag Ed licensure program. In addition, the GAST interns are compensated to coordinate and conduct FFA career development events on campus. SIU currently hosts about 20 FFA events, welcoming over 3,000 students to our campus annually.

In 2021, SIU began a summer agricultural education camp to help with recruitment of students into the agricultural education major. At the three-day camp, high school students are familiarized with aspects of what it means to be a SBAE teacher with the goal of contextualizing the experience in fellowship and outdoor pursuits

GAST funding has been used to fund summer Ag Ed camps in Illinois. Pictured above are students participating in the high ropes course at SIU's Ag Ed Camp.

that are unique to our region. Related to this, SIU is collecting longitudinal data on the camp to determine if there is an increased yield of SBAE teachers.

University of Illinois (U of I)

The University of Illinois at Urbana-Champaign utilizes GAST funds to recruit and retain agricultural education students at the college level and to retain early career teachers. Regarding recruitment, the university hosts a summer overnight camp for high school juniors and seniors who are interested in agricultural education as a career. During the four-day camp, students visit with and tour agriculture content areas and facilities to increase their knowledge from university experts. Next, students learn to write and develop interactive lesson plans, from objectives to assessments, based on the information and activities they learned from the U of I experts. On the last day of the camp students teach their lessons to each other and current local high school agriculture teachers. They then receive feedback. This camp immerses students in both the content and the process of agricultural education. It allows students to understand the skills and techniques necessary to become a SBAE teacher. In addition, the



GAST grant allows the university to fund current agricultural education students to assist in planning and implementing recruitment events targeting high school students on campus, including the agricultural education camp.

An essential part of recruitment and retention continues once students enroll in agricultural education degree programs. Teacher licensure pathways require added expenses for travel to observe existing teachers during early field experience and for student teaching or clinical experiences. Teachers in Illinois are also required to pass both content tests and the edTPA, which they also must pay to complete. The U of I provides additional funding to cover travel expenses and the cost of licensure exams to mitigate the added expenses of agricultural education teacher licensure above a typical college student.

The U of I also provides numerous professional development opportunities for preservice and novice teachers. In 2022, U of I joined ISU to offer a preservice teachers CASE certification before they begin full-time employment. Utilizing the CASE institute framework designed for preservice teachers, the students complete the CASE training for a discounted rate. To retain

early career teachers, the university has used GAST funding to support summer seminars for first and second-year teachers. These seminars are led by the Illinois agricultural education state staff. The seminars cover the essential information unique to Illinois agricultural education in addition to continual needs for new teachers, such as classroom management procedures or where to find curriculum resources. Participants can also sign up to receive master's level credit for this experience, funded through the grant.

Western Illinois University (WIU)

At Western Illinois University, a majority of the GAST funds are utilized to establish Agricultural Education internships at the high school, community college, and university levels. These internships are designed to give potential and existing students, who are interested or pursuing an Agricultural Education degree, the opportunity to get the real-life, hands-on experience of working with a practicing agricultural educator. They set-up labs, teach lessons, help facilitate CDE events, and work on SAE development. They work with their mentoring teacher to design their 80-hour program on what they are confident and comfortable

with. Students can complete multiple internships at different agriculture programs to diversify their experiences. These GAST internships are priceless for our students in their

GAST has been used to fund preservice teacher CASE institute training in Illinois.

development as beginning teachers and when it comes to their student teaching placement.

Other funds are utilized to support much needed Agricultural Education academic scholarships. It is often difficult for agricultural education majors to qualify for departmental scholarships that are more Ag Business or Ag Science focused. These curriculum scholarships are extremely valuable in providing the financial assistance that Ag Ed majors need to be retained. Other funds are utilized to support expenses with student teaching placements. Students need financial support during their student teaching semester for housing, travel, and other expenses. The student teaching semester truly puts students in a financial strain during this crucial period of their college experience, so the GAST funds do provide a sense of financial security for our students. Other programs funded through this grant support expenses for beginning teachers to attend and participate in their NAAE regional meeting. Professional development activities like attending a regional NAAE conference become critical in the retention of beginning teachers. All of these experiences assist in the development of a highly prepared pre-service teacher, their journey as a beginning, tenured teacher, and through their life-long career as an agricultural educator.

Community College Initiatives

As mentioned above, universities often use funds to support their preservice teachers through academic support, financial aid, and other initiatives. Community colleges, however, tend to focus all of their funding on recruitment efforts with area high schools. A popular use of funds is to facilitate junior internships for high school juniors and seniors exploring agricultural education as a career. The internship requirements such as hours, timeline, and allowable activities vary from college to col-



lege. Generally, GAST junior internships involve students supporting their local agricultural education teacher or teaching younger students (grade eight and below) about agricultural topics.

Students generally earn income through grant funding which serves as an incentive to participate. Previous winners of the Illinois FFA Proficiency Award in Agricultural Education generally have completed a GAST junior internship with one of the participating grantees.

Other than internships, funds have also been used for travel, stipends, or scholarships for agricultural education students to recruit at local career fairs, and state and national conventions. Some community college participants have also started to use GAST funds to cover expenses relating to CASE institutes for early career teachers.

Summary

The Growing Agricultural Science Teachers (GAST) grant has provided public teacher education institutions in the State of Illinois with a tremendous opportunity to recruit and retain students into the Agricultural Education profession. These funds have assisted in

not only stabilizing the supply of pre-service teachers but advancing the number of students to meet state demands. If you would like to learn more about the GAST program in Illinois, feel free to contact any of the contributing authors.

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Keeping Pre-Service Teachers Out of the Transfer Portal

by Dr. Robert Terry, Jr. & Nathan Smith

A little more than two years ago, college football changed forever. The transformation had nothing to do with rule changes on the field, innovative offensive schemes, or the latest, high-tech gear. Rather, the change was precipitated by the National Collegiate Athletic Association (NCAA) loosening its rules for student-athletes transferring from one school to another. Prior to this change, undergraduate Division 1 (D1) athletes were required to sit out of competition for a year after transferring from another D1 school (Dohrn & Lopez, 2022). As of April 2021, qualifying players were allowed to enter what's known as the *Transfer Portal*, and immediately suit up for a different school. Consequently, athletes could leave, without reason or repercussion, the program to which they were recruited, committed, provided scholarships, training, and other perks. The aftermath of this pol-

icy has been profound. Now, a team roster can be transformed in a matter of days. At the end of the 2022 season, Oklahoma State University (OSU) football fans were stunned to see 19 players, including the starting quarterback, transfer out (GoPokes247, 2023). On the other hand, Coach Deion Sanders used the Transfer Portal to change the fortunes of the football program at the University of Colorado in a positive way. After adding 68 new players during the off-season (Schrotenboer & Sergent, 2023), the Buffaloes went from a team that won one game in 2022, to being nationally ranked in 2023.

As if that change was not enough, in June of 2021, the U.S. Supreme Court ruled against the NCAA in the *NCAA v. Alston* case. Stated simply, this ruling allowed student-athletes to earn money from their name, image, and likeness (NIL). What followed was a series of endorsement deals for

athletes from corporations, such as Nissan and Nike, and from local businesses such as restaurants and auto dealerships (Moore, 2021). Next, came the creation of entities referred to as *collectives* designed to pool money from a variety of sources to facilitate student-athletes' opportunities to monetize their NIL (Taxpayer Advocate Service, 2023). Today, no longer is it enough for universities to offer full ride scholarships, fancy locker rooms, excellent medical staff, and five-star meal plans. Now, players can shop for the best deals in an environment where there are no salary caps and no contracts.

So, what does all of this have to do with pre-service agricultural education teachers? Although there were no policies restricting students from transferring from one major to another, there has always been competition to recruit and threats to retain students majoring in agricultural education (AGED). The need to attain and keep students in our school-based agricultural education (SBAE) teacher certification programs has never been greater. The teacher shortage is commonly regarded as the top challenge to sustaining high quality SBAE programs. Just like coaches of D1 sports teams must work to build and retain their roster, we must find ways to attract and retain students in our agricultural education academic programs. And just as athletic programs and their supporters are developing creative ways to incentivize athletes to stay on their team, we must come up with creative approaches to fill the pipeline with future SBAE teachers. Although we may not



have NIL collectives, there are innovative ideas to make our academic programs and a career in teaching more attractive. Described below are a few of the resources we have available to help keep pre-service teachers in our program at OSU. As a preface, we must point out each example described below is a result of innovative thinking, cooperative efforts, and ultimately, selfless generosity. Although these are specific to our program, we believe the concepts are transferable to similar programs. It is also important to note our university is fortunate to have an excellent team of development officers who work on our behalf from the OSU Foundation, Inc. The individuals who work most closely with our AGED program are former SBAE students who understand the importance of our program and the graduates we produce.

Agricultural Education Scholarship, Inc.

Dr. Jack Pritchard introduced our profession to Agricultural Education Scholarship, Inc. with an article that appeared in the January 1982 issue of the *Agricultural Education Magazine*. Established in 1977, this fund was created to “encourage top quality young people to enter the teaching profession (Pritchard, 1982, p. 21). From humble beginnings of providing \$300 scholarships to four agricultural education majors in the fall of 1978, the scholarship endowment has grown to more than \$1.2 million. Ag Ed Scholarship, Inc. is operated by a board of directors that is independent of the OSU AGED program. They set policies, raise funds, and select scholarship recipients. Currently, approximately 30 scholarships of \$1,500 are given each year.

Endowed Professorship

In 2008, the T. Boone Pickens Foundation provided \$100 million in matching funds to increase the number of endowed chairs



and professorships at OSU (OSU News and Media, 2019). Jack and Joyce Stuteville responded by giving a generous gift to establish an endowed professorship honoring Jack’s ag teacher. The Rodger Howell Memorial Professor of Agricultural Education professorship endowment now exceeds \$1 million. Since its establishment, funds from have been used for new and continuing student scholarships, graduate student assistantships, support for research associated with SBAE teacher education, as well as instructional equipment and supplies. Most recently, professorship funds were designated to provide OSU Ag Ed students support to participate in the National Association of Agricultural Educators (NAAE) convention.

Scholarships Honoring Agriculture Teachers

Several of our scholarship programs were established by former SBAE students who were positively impacted by their ag teacher. In a very tangible way, these scholarships extend the influence of the teachers for whom the scholarships are named. Some of the programs target students from specific communities or regions, while others are intended for students

who meet a specified level of academic performance. Some donors aim to support students who engage in community service or leadership roles and others focus on students with shortfalls to fund their education. One of our newest scholarship programs was established to support graduate students working toward teacher certification.

Making Things Better Scholarships

Congressman Wes Watkins served as Oklahoma FFA Association president in 1958-59 and then earned two degrees in agricultural education from OSU (Parrish, 2016). During his seven terms in the U.S. House of Representatives, he was recognized as a servant leader who focused great effort on helping people in rural and underdeveloped areas around the world. The Making Things Better program is designed to encourage and recognize students who put in action the sentiment of the Biblical verse Matthew 25:40 by serving individuals and/or their community. Although this program is not limited to AGED majors, it is administered through our department and pre-service teachers are commonly among those selected.



Blue & Gold Sausage Company Scholarships

What began as an idea to raise funds for a local FFA chapter turned into a company benefiting hundreds of agricultural education organizations and tens of thousands of young people. When Don Ramsey was teaching agriculture in Jones, Oklahoma, he began making breakfast sausage from pigs raised by his FFA members. Jones FFA members then sold the sausage to raise funds for chapter activities (Blue & Gold Sausage, Co., n.d.). Nearly 60 years later, Blue & Gold Sausage Company is one of the most generous supporters of the Oklahoma FFA Association and the OSU AGED program. Each year, more than 10 Ramsey Family/Blue & Gold Sausage Company scholarships are awarded to incoming and continuing AGED students.

Student Teacher Assistance Program

Mr. Ben Grant came to Oklahoma A&M College in the 1930s to study animal husbandry so he could return home and become a farmer in southwestern Oklahoma (B. Grant, personal conversation, September 2, 2011). While in college, duty called and he joined the Army Air Corps. Ben served

with distinction during World War II, completing 56 combat missions. After returning from the war, Ben and his wife, Alma, moved to the state of Washington where he became a successful farmer and custom harvester. As his harvesting business grew, he worked with farm equipment manufacturers to improve the quality and comfort of combines, which led to him holding 14 patents for his designs. For many years, the Grants were generous donors to the OSU Department of Animal Sciences and they endowed a scholarship for AGED students. However, Ben wanted to do more to recognize the influence his ag teacher, Mr. William E. Brown, who advised him to sell his farm and go to college. After discussing several ideas, Ben chose to establish the Student Teacher Scholarship Program. His gift of \$800,000 included \$200,000 of matching funds to encourage others to give to this program. The matching fund inspired 10 other donors who gave a total of more than \$200,000, bringing the endowment for this fund to more than \$1 million. This program provides each of our students at least \$1,500 to help with costs associated with their student teaching internship.

Inspired to Teach

The shortage of qualified teachers is an issue that crosses all grade levels and all academic areas. Last year, the state legislature and governor approved an innovative program designed to attract and retain students in accredited teacher certification programs (Oklahoma State Regents for Higher Education, n.d.). Benefits to qualifying students include \$1,000 in scholarships for up to three academic years and \$2,500 in scholarships for the final academic year. After graduating, participants can earn \$4,000 for each year they teach in an Oklahoma public school for up to five years.

Oklahoma Agricultural Education Teacher Association (OAETA) Scholarship

Perhaps no group better understands the need for well-prepared SBAE teachers than those currently serving in that role. OAETA partners with the Oklahoma FFA Alumni Association to raise funds to support children of agriculture teachers and other students who pursue a career in teaching. Recipients of these scholarships are selected by the OAETA executive committee.

Summary

In one way or another, the goal of each program described above is to build and keep a team of future SBAE teachers. Because these programs serve as vehicles for people to provide financial support to our students, they serve the same basic purpose of collectives. As is the case with collectives, however, these programs only function if people are committed enough to donate their hard-earned money. We are very fortunate to have many generous people who believe in what we do and are willing to invest in the future of our students. Last year, our department awarded almost \$160,000 to future SBAE teachers. This amount does not include many other programs available to our students from the university, our college, and entities external to the university. How effective have we been? For the last ten years we have enjoyed a steady increase in the number of AGED majors. This fall semester, we have more juniors than any of our faculty can remember. This spring, we anticipate one of our largest classes of student teachers in recent memory. This encouraging trend is a result of effective recruiting of freshmen and transfer students, as well as fewer students choosing to enter the transfer portal to change majors. Now, we just hope our Cowboy and Cowgirl athletic programs will enjoy similar success in the age of the transfer portal and NIL.

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An Alternative Certification Primer

by Dr. Kellie Claflin

When I decided to become an agriculture teacher, I only knew of one way to do it. Go to a four-year university with an agricultural education program. There was no other way, right? So that's what I did. I went to the University of Wisconsin-River Falls, took classes, student taught, graduated with a degree and a teaching license, and got hired without thinking about any other possible option.

Fast forward a few years into my ag teaching career. I was sitting in an ag teacher's meeting in Wisconsin and state leaders started to talk about "alternative certification," teachers hired without going through a teacher preparation program at a university with agricultural education. A couple of alternative certification programs in the state were mentioned, and a few teachers had been hired by schools who were going this route. There were a lot of unknowns for those of us who had been traditionally certified. Around the same time, the Wisconsin legislature passed a bill to allow folks with industry experience in trades and agriculture to enter the classroom with an experienced-based license. How would these teachers learn about agricultural education, FFA, SAE, the whole alphabet soup of acronyms, and the cornerstones of what made our programs unique?

When I knew I wanted to transition to higher education, I felt guilty because I wasn't sure if my position would be filled. When it came time to fill the vacancy, the teacher who was hired was well deserving of the position. They had a background in animal science, tons of ag experience, a background in pedagogy and working in schools, and were alternatively certified to teach agriculture.

Alternative certification...generally, is a term that describes anything other than traditional teacher preparation through a university...Alternate routes are paths to teaching that mirror traditional teacher preparation programs.

Due to these experiences and conversations, when I went to Oregon State for graduate school, the ideas and questions surrounding alternatively certified ag teachers were still turning over in my head. Since then my research has focused on uncovering the nuances of alternatively certified agriculture teachers and identifying best practices to support this group of educators. So, what is alternative certification? How does it play into meeting the demand for agricultural educators?

What is alternative certification?

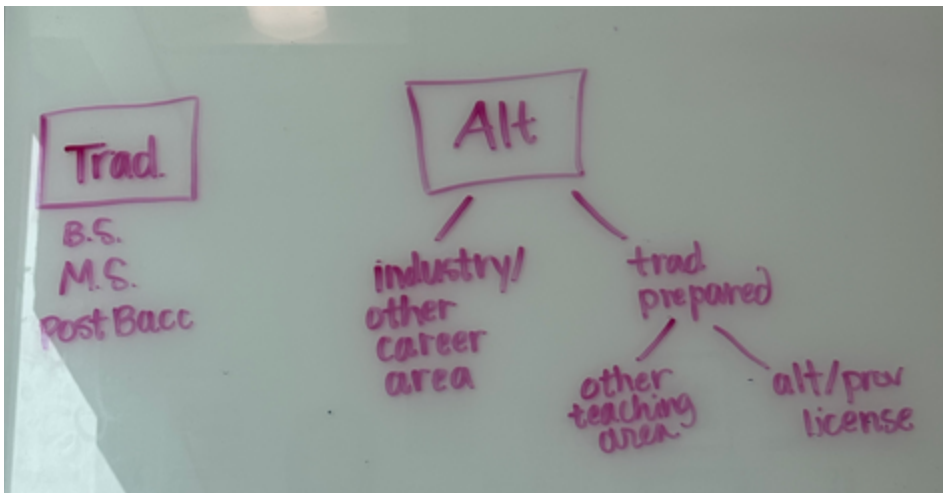
Policymakers and school districts use alternative certification to combat the nationwide teacher shortage (Ingersoll, 2003). All states offer some form of alternative certification to more easily get folks without current teaching degrees into the classroom, but those processes are inconsistent (Redding & Smith, 2016). Education has not wholly embraced alternative certification (Walsh & Jacobs, 2007). And that is for good reason, as we want to ensure quality educators are in classrooms teaching our children, and the process of alternative certification is often murky.

Alternative certification is not new to agricultural education or career and technical education (CTE). Traditional teacher prepara-

tion programs are still the predominant way to be prepared and certified to teach agriculture, but starting in the 1960s, alternative certification programs began to certify agriculture teachers (Bowling & Ball, 2018). In the past two decades, several states have seen an influx of alternatively certified agriculture teachers and it continues to dominate the national conversation in supporting new agriculture teachers. In 2021, 18.3% of new hires in school-based agricultural education were alternatively certified (Smith et al., 2022).

What does alternative certification look like for other CTE areas?

A little history lesson – at the onset of federal funding for vocational education with the Smith-Hughes Act in 1917, funding was set aside for teacher training. However, Charles Prosser, who wrote the Smith-Hughes Act and was the director of the Federal Board for Vocational Education, believed that vocational teachers needed practical work experience in industry and that this funding shouldn't necessarily be used for universities (Lynch, 1996). However, Prosser felt differently about agriculture and home economics as long as those individuals had grown up practicing their vocation and had taken coursework at the high school level. The



dichotomy of a few of CTE areas being traditionally certified (i.e., agricultural education, family and consumer education, business education) and the others alternatively certified based on industry experience (i.e., trade and industrial education, health occupations) continues today (Gray & Walter, 2001). Alternative certification is very common for many other CTE areas.

How do we define alternative certification?

Alternative certification is a messy label with a range of terms and definitions. Generally, it is a term that describes anything other than traditional teacher preparation through a university. Some definitions lump alternative and emergency certification into one group (National Research Council, 2010), while others identify the difference between alternate routes and alternative certification. Alternate routes are paths to teaching that mirror traditional teacher preparation programs, while alternative certification references policies that lower requirements to enter the classroom (Darling-Hammond et al., 1999).

The separation between routes and certification provides an essential delineation between preparation and certification, as they are not synonymous. There are programs offered by universities, educational service agencies,

and other educational entities that offer alternative teacher preparation. These programs offer various pedagogical training and experiences similar to traditional teacher preparation programs both before and while new teachers enter the classroom. There are also types of certification and licensure labeled “alternative” or “provisional” that are separate from the preparation programs.

Alternate Routes

There are two main groups of alternatively certified agriculture teachers that were present in my research – second-career teachers and traditionally prepared teachers with an alternative license.

- Secondary-career teachers come from industry or another career area and decide to enter the classroom. This career change can be facilitated for numerous reasons, from deciding that they want to teach to being recommended for a local teaching opening. They may enroll in a teacher preparation program before entering the classroom or concurrently with their first year as a teacher. For many, alternative certification is the most convenient way to become an ag teacher, especially if it is a second career (Claflin et al., 2020).
- There is also a group of traditionally prepared teachers (i.e., attended a teacher

Are alternative certified teachers a solution to the teacher shortage?

preparation program at a university that included student teaching) who end up with an alternative or provisional license. This could be for several reasons. One example is a teacher who was traditionally prepared to teach another subject area but added an agriculture license. Another example is someone who went through a traditional teacher preparation program but, for some reason, did not become licensed at that point. Hence, they ended up entering with a provisional license. They received pedagogical training in both cases, but the license is not “traditional.”

What do we need to keep in mind?

As we continue to see the number of alternatively certified agriculture teachers increase and identify how to ensure that we have enough agriculture teachers to fill the need, we need to broaden our mindset.

- Alternatively certified agriculture teachers want to do a good job and be in the classroom. They often jump through several hoops to prepare and persevere as they encounter challenges (Claflin et al., 2020; Claflin et al., 2023).
- Alternative certification is not a homogenous term. Do not lump all teachers together. Honor the individual experiences they bring to the profession.
- We cannot assume alternatively certified agriculture teachers have had no preparation to teach. We need to meet them where they are through mentoring and support.
- An untapped resource in recruiting agriculture teachers is potential second-career teachers who are looking for

a change. How can we better reach and prepare those folks to teach?

Are there challenges? Absolutely. Constantly changing state policies and the lack of consistency among preparation and certification nationwide is a huge issue. The majority of alternative certification programs are not made to support agricultural education specifically. However, we cannot continue to have a deficit mindset. Unfortunately, due to many factors, alternative certification is a choice that state legislatures have put in place as a result of the teacher shortage. School districts are going to continue to utilize alternative certification as an option. The teachers becoming alternatively certified to teach agriculture are doing so because they have a passion for agriculture and the future of the students in their communities. Let's remember that.

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Welcoming the Next Generation of Ag Teachers

by Dr. Travis Park, Dr. Misty Lambert, Dr. Joy Morgan, Dr. Wendy Warner, Mary Kate Morgan, Josh Bledsoe, Dr. Stephen Edwards

Some speak of agricultural education as a “family.” Family might be a strong term for what we are. Without a doubt, agricultural education is certainly a *community* of professional educators who value youth and agriculture. Recruiting and retaining agriculture teachers into our community is a full-time, constant search for prospects who will become excellent agriculture teachers, colleagues, and friends...and maybe even family.

Part of a person’s decision to teach agriculture, and continue teaching, may be influenced by the community of agricultural educators across various districts, states, and even the nation. Our state Teach Ag Task Force is focused on building community among agriculture teachers.

Signing Ceremony – The Welcome

At the state FFA convention in June, we recognize high school graduates who are matriculating into one of our teacher preparation institutions. We invite the student, their parents, and their agriculture teachers for a signing ceremony as a main stage pre-session event. Students receive gifts from their institution and a Teach Ag t-shirt. They sign a “commitment” to teach document and receive a similar certificate in a frame. The certificate includes the Ag Teacher’s Creed and a commitment to teach agriculture.

Family Trees – The Legacy

Every two to three years, we update our Agriculture Teacher Family Trees. The family trees

are a 11- by 17-inch card-stock poster inscribed with a line from the Ag Teacher’s Creed and part of the FFA advisor’s opening ceremonies. Each family tree is customized with the agriculture teacher’s name on the trunk of the tree. Their own high school agriculture teachers (lettered in green) and their cooperating teachers during student teaching (lettered in red) are highlighted in the roots, the foundation of their career in agricultural education. Each of their own students who became teachers and each of their student teachers are found in the branches of the tree, along with the school where they teach. Teachers hang their family tree proudly in their classrooms and even add post-it notes with names of prospective teachers out of their own classrooms to the branches. We provide a tree to each new teacher as a challenge to develop their own branches of agricultural education through prospecting a new teacher from their own classroom and/or through mentoring a student teacher.

Fill the Bucket – The House-Warming

We provide a 5-gallon bucket of beginning teacher materials to all beginning teachers, regardless of licensure pathway, attending the annual teacher’s conference. Buckets are filled by experienced agriculture teachers for the beginning teachers. Buckets could be filled with markers, post-it notes, books, coffee gift cards. They could include materials the giving teacher either found super-helpful in teaching or things that were valuable, but for some reason, were no longer being used in their program. Experienced teachers were encouraged to add cards and notes of encouragement to the beginning teacher.

For a few years, during the pandemic, we opted to fill Amazon gift lists of similar materials for new teachers. What we found was a breakdown of community with the gift lists. Beginning teachers really appreciated receiving a bucket of materials, even if some of the materials were “hand-me-downs.” The thrill of the unknown was appreciated.

COMMITMENT TO TEACH AG

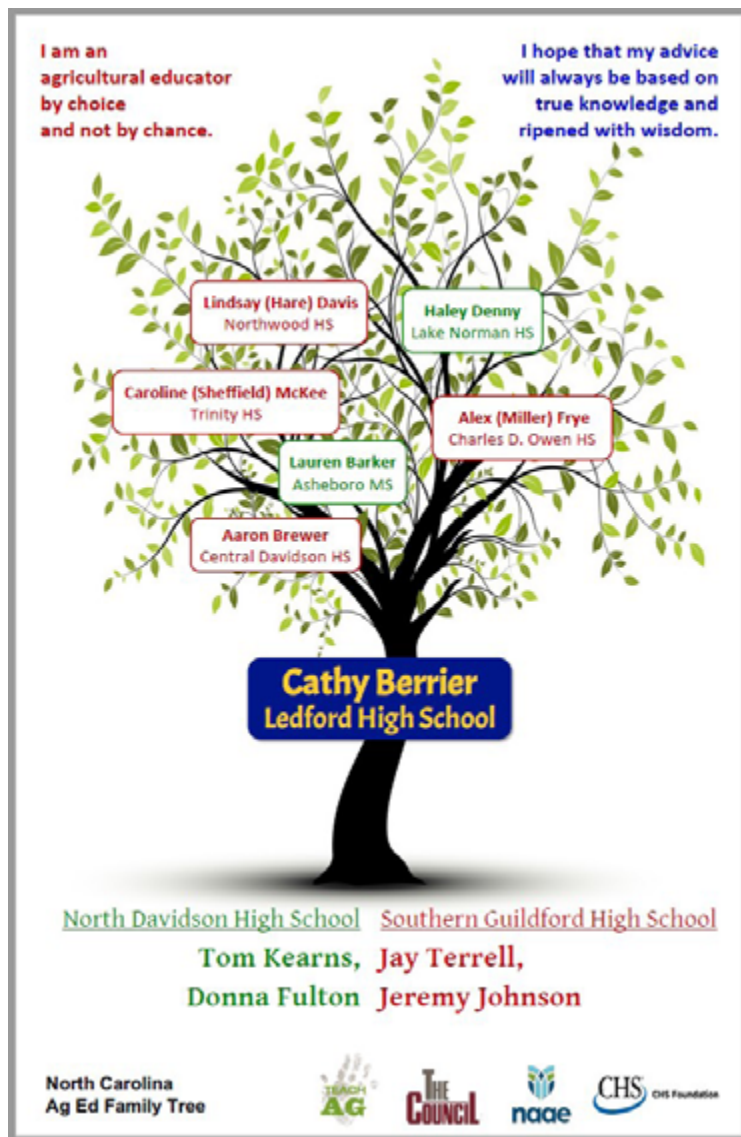
I understand agricultural education is a community of professionals engaged in the noble calling of developing future leaders, scientists, and workforce in agriculture, food, and natural resources.

*I hereby commit, to **North Carolina State University**, the North Carolina FFA Association, and the North Carolina Agriculture Teachers Association, to prepare myself diligently with a comprehensive degree in agricultural education.*

I intend to educate my students and my community about agriculture in all of its forms.

I will uphold the highest standards of academic and personal conduct in working with agriculture’s most valuable resource—our youth.

Committed at the North Carolina State FFA Convention, Raleigh, NC, June 27, 2023



I am an agricultural educator by choice and not by chance.

I hope that my advice will always be based on true knowledge and ripened with wisdom.

Lindsay (Hare) Davis
Northwood HS

Haley Denny
Lake Norman HS

Caroline (Sheffield) McKee
Trinity HS

Alex (Miller) Frye
Charles D. Owen HS

Lauren Barker
Asheboro MS

Aaron Brewer
Central Davidson HS

Cathy Berrier
Ledford High School

North Davidson High School Southern Guildford High School

Tom Kearns, Jay Terrell,
Donna Fulton Jeremy Johnson

North Carolina
Ag Ed Family Tree



And, in the act of giving a bucket from an experienced teacher to a beginning teacher, we observed community being developed. The human connection and the act of kindness instilled a connection across agriculture programs. Experienced teachers even commented about how they enjoyed finding and filling a bucket with materials for the beginning teacher.

Messaging – Our Culture

When I meet a prospective agricultural education student, there are several messages I try to communicate. I start with why I love serving as a teacher educator in agriculture: I really enjoy connecting with students, seeing them transition into professionals, and knowing that

we will be interacting with one another throughout the next 20 or so years of our professional lives. I enjoy seeing weddings, births of children, and teacher accomplishments, both in and of themselves and through the accomplishments of their students. I enjoy hearing a new student enthusiastically share the impact of their own agriculture teacher.

I communicate that student teaching and even a few years of teaching agriculture will only accelerate a person's career. I really want our students to student teach, especially those who are on the fence about teaching. Our cooperating teachers are wonderful mentors and champions for the profession. If a student goes into the classroom, prepares well,

and connects with their students, then I think we have a good likelihood of them teaching for at least a few years.

From my experience, student teaching develops valuable skills, knowledge, and competencies, even student teachers with jobs waiting outside of the classroom. Every employer in agriculture wants a new hire who has initiative, can organize themselves and their ideas, knows something about agriculture, and has developed solid communication and interpersonal skills. To be successful as a student teacher, a person has to get themselves up, prepared, and organized to deliver at least six hours of constructive, meaningful instruction every day. Student teachers learn a lot about agriculture in developing and delivering their lessons. If a student teacher can successfully engage a classroom of teenagers, prepare a CDE team or a LDE individual, and communicate with parents, school administration, and community stakeholders, then they certainly have a good command of communication and interpersonal skills and knowledge.

Teach Ag Retreat – Our Gathering

For the past two years, we have invited all agricultural education students across our four teacher preparation institutions to our FFA Center at White Lake for a Teach Ag Retreat. In total about 100 preservice teachers have attended a retreat. During the retreat we plant the seeds of collaboration among agriculture teachers. We engage teachers in collegial skill, knowledge, and athletic competitions. We conduct team-building challenges. We share philosophies focused on the “why” of teaching. Preservice teachers leave the weekend with new friends and colleagues, connections across institutions and with state staff, and an eager anticipation for the next professional development opportunity.

Including Lateral Entry Teachers – Immigration

In my observations of teachers through various professional development, multiple state conferences, and national events, I wonder if we are welcoming enough of our teaching colleagues who matriculate to the agriculture classroom from industry or who were not enrolled themselves in school-based agricultural education or FFA. When preservice teachers progress through their undergraduate studies, they develop community and bonds of friendship. They have shared memories, common experiences, and similar acquaintances and friends. For teachers who were engaged with agricultural education and FFA as youth, they likely attended camps, conferences, and conventions with peers who likewise became teachers.

For our agriculture teachers who matriculate to teaching from industry or non-traditional licensure pathways, many do not have this built-in community. They may find difficulty connecting with our “agricultural education family.” As someone who has worked in the agricultural education community across multiple states, I can attest to the difficulty of connecting with a community with a long history of friendships and common experiences.

How can we continue to invite all of our teachers to *belong* to our agricultural education community? Should we welcome lateral entry teachers to the profession with a signing ceremony? How do we reach out and embrace these beginning teachers with rich agricultural industry experience? Do our awards and

recognition programs equitably address all teachers regardless of licensure pathway?

Conclusion

As our agricultural education community grows both in quantity and diversity of teachers, we must continue to find ways of encouraging, welcoming, and fostering new teachers through all pathways. Communities find strength in developing human capital. Our teachers, state leaders, teacher educators, and national staff are the strength, consistency, and foundation of agricultural education. As we prepare the youth who will engage with and solve the challenges facing our global food system, please welcome all prospective teachers to our profession with open arms, hearts, and minds.



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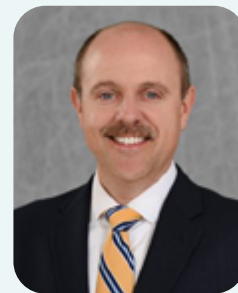
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National Ag Ed Supply & Demand: Expanding Access to Data for Increased Collaborative Action

by Dr. Daniel Foster, Dr. Amy Smith & Dr. Michael Spiess

It is widely known that there are not enough school-based agricultural educators in the U.S. to meet current demand. In fact, at present, school-based agricultural education is not alone in this shortage of educators. Shortages in multiple areas of education at varying levels are occurring for reasons ranging from a decrease in teachers entering the profession, an increase in student enrollment, teacher attrition, and restored, or new, positions and courses to better prepare students for life beyond graduation (Berry & Shields, 2017). These shortages are exacerbated further by factors including public perception of the profession influenced by federal and state legislation, the teacher evaluation process (Goldhaber, 2015), increased workload, paperwork, and the amount of classroom time lost to standardized testing (Thibodeaux, Labat, Lee, & Labat, 2015).

Since the early 1900s, there have been concerns about the professional capacity to prepare an adequate supply of school-based agricultural educators. According to Kruse (1915), *"This sudden and rapid growth and the resulting demand for teachers has created a serious, if not the most serious problem in the training of teachers... Nobody knew what should be taught in secondary agriculture, much less what qualifications the agricultural teacher should have, and least of all, how to train them"* (p. 2). Swanson (1942) continued, *"The initiation of vocational agriculture under the vocational education acts creat-*

ed a problem of teacher supply" (p. 526). True (1929) acknowledged fluctuating demand was difficult for any state to estimate. He continued, *"The ideal would be to have production well in advance of the probable annual need, perhaps 10 to 20 percent. This would provide for emergency years and in average years allow for culling"* (True, 1929, p. 8).

How can we take meaningful steps to help address this ongoing issue? A first step in working toward adequate supply of school-based agricultural educators would be valid and reliable data to describe the current status of school-based agricultural education. Since 1965, the National Supply and Demand for Agricultural Education project has been supported by the American Association for Agricultural Education (AAAE) and utilized by its members. The study has historically provided valuable information to those engaged in the agricultural education profession. Particularly, determining and describing who is teaching school-based agricultural education and whether or not there is an appropriate supply to meet demand is important to agriculture teacher educators, school-based agriculture students, parents, school administrators, policy makers and other stakeholders in agricultural education. Kantrovich (2010) stated, *"Leaders of the profession need current, accurate estimates of the numbers of and demand for teachers of Agricultural Education to provide for meaningful policy decisions at all*

levels. Teacher organizations and teacher educators need current, accurate supply and demand information to use in recruitment activities and in counseling potential teachers of Agricultural Education. Yet, detailed data of that nature, specific to Agricultural Education, are not available outside this study" (p. 8).

For quite some time, conversations have occurred regarding the supply of agricultural educators at regional and national AAAE meetings, and school-based agricultural education stakeholder organization meetings. The profession challenged individuals and organizations to tackle recruitment and retention issues head on within their respective states as this pressing issue to the profession continued to grow. In 2010, stakeholders of school-based agricultural edu-

Scan the QR Code
to access the new
National Supply and
Demand platform.



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National Agricultural Education Supply and Demand Project

Home Charts Data Maps Query Data Resources

Since 1965, the National Agricultural Education Supply and Demand Project has been facilitated by the American Association for Agricultural Education (AAAE). In 2014, Drs. Daniel Foster (The 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. In 2022, Michael Spless (California State University, Chico) joined the team to assist with accessibility of the data. The data on this site was compiled by this team.

Published Reports

Recommended citation for use of this data:

Foster, D. D., Smith, A. R., Lawver, R. G., & Spless, M. (2023). National Agricultural Education Supply and Demand Project [data set]. American Association for Agricultural Education. Retrieved from: <http://aaae.agedweb.org/nsd>. (Click on text to copy to clipboard)

Data last updated: 4/20/2023 8:14:29 PM
 Demand Reports: 555
 Supply Reports: 1091

Questions about the site can be addressed to [Michael Spless](mailto:michael.spless@csuchico.edu)

cation worked with the National Association of Agricultural Educators (NAAE) to develop the National Teach Ag Campaign. As NAAE leaders embraced the need for data to drive policy and decision making, they began collaborating with AAAE on the National Supply & Demand Project in 2014. However, since then, the concern has persisted - **are we doing enough to make information related to the availability of the agriculture teachers available and accessible for the decision making processes impacting policy and practice?**

As the current facilitators of the National Supply and Demand (NSD) project, we are excited to take a bold step forward to help improve accessibility to state, regional, and national supply and demand data. The creation of a new platform enables the supply and demand data set to be quickly and easily available to the entire profession.

While the NSD team has utilized Qualtrics, a web-based application to gather supply and demand data from 2014 to the present, until recently, the data was not immediately accessible to members of the profession. The profession as a whole received an annual summary document from the data collected, as well as a

(ABOVE) The new platform will allow users to access the data in a variety of ways, including visual charts and maps.

more comprehensive 3-year summary report. However, beginning in 2023, supply and demand data that has been checked for quality from 2011 to present is available to all. The site, located at <http://aaae.agedweb.org/nsd/>, provides access to the data as visual charts (graphs) and maps, as well as tabular data (Excel). A large number of reports may be generated, simply by selecting a state and year.

The online dataset provides individuals and organizations more timely access to supply and demand data and enables them to pull customized reports, creating charts, maps, and queries specific to their state and or region. Data can also be viewed by regions as defined by AAAE, NAAE, and the National FFA.

The National Supply and Demand project team anticipates these heightened service efforts will help colleagues across the nation access data to advance the common good of school-based agricultural education. With an audacious goal of ensuring that every community, school, and student has the opportunity to have a highly-qualified school-based agricultural educator, we hope

that this platform provides those in professional leadership capacities access to the good data necessary to drive good decisions in a more timely and impactful way.

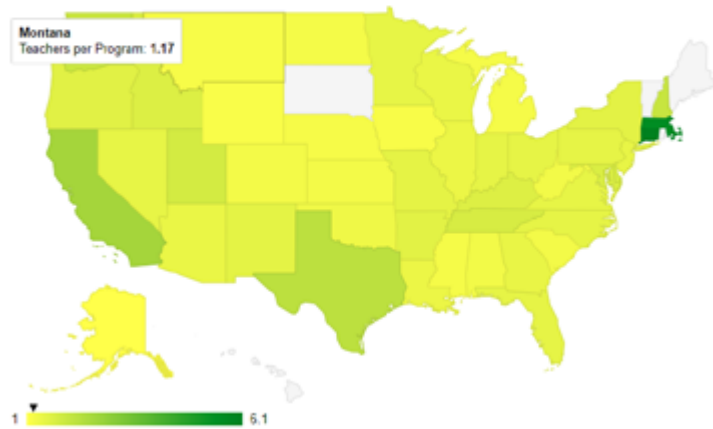
The project team recognized that more focused study and efforts are needed to be able to truly explain and address the issue of school-based agricultural education supply and demand. Our team invites you to reach out with great ideas and/or a willingness to collaborate on advancing the profession in this way. Just email foster@psu.edu to open that conversation!

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Teachers per Program

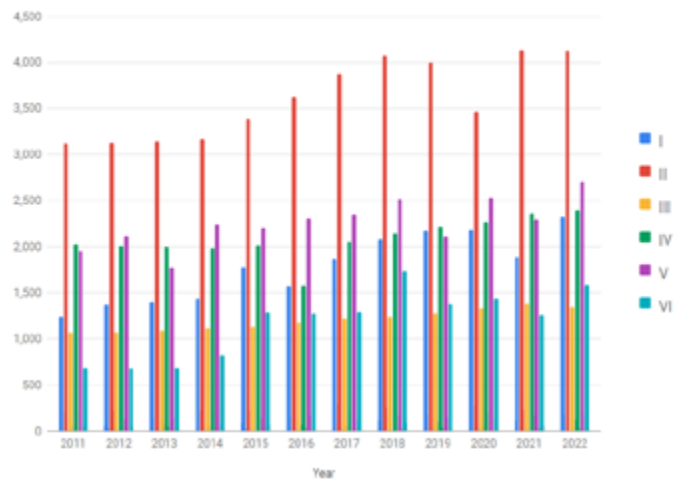
Teachers program ratio, (demand)-2022



Hover over the state to view value. States not shaded reported no data.

NAAE Region Teachers

Teachers by NAAE region.



Hover over bars for details.

(LEFT) A map with a visual representation of the data is one of the many ways data can now be displayed in the NSD Platform.

(RIGHT) Charts are also available to compare data across a wide variety of years, regions, and descriptors.

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Expanding Our Circle of Support

by Lavyne Rada

Nearly every meeting or conference I attend about education has one theme that consistently is brought up - the shortage of teachers. While this is not a new problem, especially in AFNR education, it is an expanding problem impacting more and more teaching disciplines each year. AFNR education recognized this trend years ago and has strong programs that are often used as models, such as state teacher induction programs, the national Teach Ag campaign's recruitment program, the State Teach Ag Results (STAR) program, and numerous retention programs offered at state and national levels for AFNR teachers.

Mentorship for All

In June 2023, the Association of Career and Technical Education brought together professionals who work in Career and Technical Education (CTE) to explore the issues of teacher recruitment and retention for a Teach CTE Summit. AFNR education was well represented throughout the event and often used as a model in conversations about campaigns and programs with proven success.

Throughout the Teach CTE Summit, the power of mentorship was a consistent theme. Mentors are teachers, counselors, guides, coaches, advisors, and nurturers. Mentorship programming has been a key component of my work for more than a decade, but the value of mentoring relationships for all teachers, regardless of years of experience, is often noted but also overlooked as a key component of what keeps us in the profession. When asking an early-career teacher about how mentorship kept them in the teaching profession, they re-

“Mentors are teachers, counselors, guides, coaches, advisors, and nurturers.”

sponded, *“I am a strong believer that it may take a village to raise a child, but it takes a community to raise an ag teacher. A community that fosters growth and a supportive environment for an ag teacher builds resilience and confidence, therefore increasing the likelihood of staying in the profession. My mentors, both formal and informal, have instilled a lifelong learning mentality as well as the importance of grit in an ever-changing career. Without these crucial influences, I would not find myself pursuing a Master’s, pushing for success, or continuing my career with a sense of adventure and excitement for what’s to come.”*

Another shared, *“I think the biggest challenge to young teachers is feeling isolated and alone in the things happening in our schools and classrooms. Having mentors is essential to helping me feel confident in teaching. When at regional competitions, other teachers will ask how things are going in the classroom and offer feedback and ideas for classroom activities. When talking about behaviors we see in the classroom, they let me know that it is not just happening to me. Or help by offering modifications to students who need it, mentor teachers offer many insights into what they do in the classroom. Having these conversations makes me feel not so alone. We need to continue to build a community around teachers.”*

Not only does mentorship help teachers feel part of something bigger, but it also helps strengthen the work they are doing. One teacher shared, *“I am a teacher who is greatly helped by actively brainstorming with others and hearing what others have had success with in their classrooms. Getting the opportunity to discuss those things with a mentor and peers has really provided my students with better learning opportunities and hands-on activities in class.”* Another shared, *“It was really nice to have support and ideas from people who have had similar experiences as me. It was also a positive to have people in my corner and helping me meet others in Ag Ed as well!”*

However, the piece we often overlook is that mentorship does not only help early-career teachers, but the network in AFNR education supports teachers at all experience levels. A mid-career teacher shared, *“Mentorship has been a huge reason why I am still in this profession. Not only have mentors helped me with resources for the classroom, but they have also acted as a sounding board for ideas, classroom management solutions, and just day-to-day frustrations. I wouldn’t be the teacher I am today without their help and advice.”* Another shared, *“Building a network of mentors has not only helped me professionally as an educator, but it has led to a support system of colleagues, friends, and sup-*

porters who have impacted my teaching and life. The support that mentorship programs provide is long-lasting and does not simply stop at the conclusion of the (mentorship) program.”

AFNR education has systems of support in the early years, but support is needed throughout our careers. Another teacher shared, *“In any and every way I’ve needed help, my mentors have stepped in to encourage, instruct, assist, and motivate me. They’ve provided instructional and program resources, helped me learn how to advocate for myself, and reassured me when things didn’t go the way I wanted. Most importantly, they have reminded me at every step of the way that I am not in this alone. Ag Ed can be lonely, and I am still teaching because so many others took the time to help me make sure that I was ready for another day.”*

Many AFNR teachers are single-person programs who hopefully have a network of support from others in AFNR, but sometimes we can also look in our own communities or even in our own hallways to find others who have similar experiences but may also have similar feelings of feeling isolated.

Expanding the Model

Teacher induction programming for early-career AFNR teachers has been a foundational part of many states for decades; however, statewide models like those found in AFNR education are limited in other content areas. A panel from Minnesota shared at the Teach CTE Summit about how the model for the AFNR Teacher Induction Program (TIP) through the University of Minnesota was used to design a statewide CTE model for all early-career CTE teachers in Minnesota but also specifically targeted supporting teachers who were coming into teaching positions from careers in industry. As a leader in both the AFNR and CTE programs in

Minnesota, I’ve seen the impact of expanding what we’ve learned in AFNR to support others in CTE and in other disciplines that are often single-person programs.

Early-career CTE TIP participants were also asked about the most useful aspect of their induction program. Connection with others and mentorship was consistently noted as the most valuable aspect, as they shared, *“The most useful aspect of CTE TIP is the interaction and collaboration with other CTE teachers and mentors.”* Many also noted, *“Knowing I wasn’t alone”* was key to them making it through their first year teaching. Furthermore, they shared, *“Knowing that others do care about your success.”* As we met this fall at a CTE TIP seminar, teachers were divided into breakouts based on similar laboratory spaces. As AFNR teachers, we often balance welding facilities, kitchens, greenhouses, and so many other types of spaces, but when offered time to collaborate and talk about safety and laboratory space management, cross-disciplinary conversations helped everyone leave with ideas on how to better use their spaces. This is just one example of how we can expand our circle of influence to have meaningful and supportive conversations while building a bigger community.

As we enter the months that are typically the toughest for teachers, how can we expand our circle of support? Is there a new AFNR teacher down the road we can check on? Is there a new CTE teacher across the hall that we could get to know better to see how your programs can collaborate and support each other? Have you checked on your mentors to see what support they need (strong teachers need to be checked on, too)? We do amazing things every day in AFNR education and have a unique system of support that many others don’t fully understand the strength of, but what if we shared a little

of that magic by spreading that support and experience just a little bit further to help support all educators? As James Keller once said, *“A candle loses nothing of its light by lighting another candle.”*



Lavyne Rada is the Minnesota FFA Association Executive Director, the Co-director of the state’s AFNR Teacher Induction Program, and Director of the CTE Teacher Induction Program.

Always Enthusiastic, A Memorable Example...Dr. Howard Deems

by Don Henning

He was a teacher of future teachers. It was a responsibility he seemed to bring to the classroom every day. He was always prepared, always had an agenda and was genuinely enthusiastic about his subject matter. He was the most memorable professor in my college experience at the University of Nebraska. He was Dr. Howard Deems, Chairman of the Department of Vocational Education from 1951 to 1965.

I first met Dr. Deems when I was a second semester sophomore in the College of Agriculture. I had started my college experience knowing wanted a degree in agriculture but nothing more specific than that. After a four-year hitch in the Air Force my freshman year was dedicated to tending to unfinished business some of which should have been taken care of in high school and then learning how to “hit the books” again.

As a second semester sophomore in the Spring of 1959 it was time to get more specific in my graduation goals. I interviewed most of the department heads on campus to get input on specific opportunities their specialty might offer. It was a good learning experience.

My interview with Dr. Deems went very well. He cited numerous examples of graduates who became successful vocational agriculture teachers and excelled in the classroom. Then he referenced others who went on to satisfying careers in business and still others who returned to the farm and were leaders in their communities. I liked what I heard; it was a match.

Dr. Deems became my advisor. I remember his first class as being a special experience. He used anecdotes and real-life experiences that piqued my interest. But it was his enthusiasm, his genuine enthusiasm for his subject, that really impressed me. I looked forward to his classes.

It was a class in the Spring of 1960 that had the most lasting impact on my life. I believe it was Voc Ed-107 and involved a combination of classroom preparation and practical teaching in a nearby high school.

The first class of that semester Dr. Deems started by spelling out his expectations for us. At the top of that list was that each of us was going to have to make a contribution to agriculture in order to get a grade. I remember thinking at the time, “Oh really”? He then proceeded to outline what he meant, and the routes open to us.

The top target and the best grade would go to the individual or individuals who got an article accepted for publication in the National Journal for Vocational Agriculture Teachers (i.e. The Agricultural Education Magazine). The second level would be to get published in the state vocational education publication. The third level was to prepare a detailed lesson plan that would be distributed to every vocational agriculture classroom in the state.

I decided to go for the top grade. The short version of this story is that my article was accepted, I received the grade, and the article was published in the September issue, 1960, of the Agricultural Education Magazine. This publication then became a noteworthy resume enhancer for me.

As circumstances developed in the Spring of 1961, there were very few openings for vocational agriculture teachers, so I began interviewing. There was a schedule of companies coming to campus that included Ralston Purina, Four by Four Feeds, Tekseed Hybrids, and DeKalb. I had my best interview with De Kalb and received a job offer to start as a seed production trainee in their Redwood Falls, Minnesota facility. While still in the negotiating process a position opened up in the advertising/communications department in De Kalb, Illinois. The published article became the principle factor resulting in another interview and ultimately getting that job.

I went from copy writer and internal publications editor to public relations manager, wheat advertising manager, advertising account executive and finally to a position as Executive Vice President at business-to-business publisher, Johnson Hill Press in Fort Atkinson, Wisconsin.

At Johnson Hill Press we developed a fairly unique business model providing custom Publishing services to a significant agricultural client base. This included the Farm Credit System, Purina Mills, DeLaval, Jamesway Division of Butler Manufacturing, Farm Tire Division of Goodyear, Ag Chem Division of Conagra and Massey Ferguson. The company also owned Farm Equipment, a magazine for farm equipment dealers, and Feed and Grain Times, a magazine focused on the feed and grain storage and services business. Later, the company broadened the client base include organizations like Piper Aircraft, Peterbilt, Great Dane, the

Expanding Vocational Agriculture Through Television

DONLEY HENNING, Vocational Education Student,
Nebraska College of Agriculture

Are agriculture educators using the best possible method to inform and educate young and adult farmers?

Evidence indicates we are not. True, the programs presently operating are exceedingly successful. But the prob-

lem we are failing to solve is getting more people into these programs.

One of the most effective means of stimulating mass interest is through television. Today there are television sets in most farm homes and through TV, agriculture educators could expand young and adult farmer programs beyond all expectations. Admittedly, the commercial TV stations have farm directors and offer weather, markets, and some farm information on public service programs. However, in most cases this coverage is not adequate.

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THE AGRICULTURE EDUCATION MAGAZINE, September, 1960

National Educational Television (NET) is a network dedicated to education and information. In this network there are presently 45 TV stations. These are located in areas of high population concentrations, but in looking at their growth during the past five years and future plans for the 1960's I feel that NET will expand tremendously and thus include large rural areas within its broadcasting range. So, by using NET facilities it may be possible in the immediate future to enter many farm homes with educational agriculture programs.

The question arises, "Just how popular is educational TV?" A survey was conducted in Allegheny County, Pennsylvania. The population of this area is about 1.6 million residents of which 73% watch WQED, the local educational station, at least once a week. This indicates NET can successfully compete with commercial stations.

At the present time plans are being made by the Midwest Council on Air-

borne Television Instruction to conduct an experiment using two DC-7 aircraft as flying TV stations. These aircraft will be equipped with TV transmitters and fly at an altitude of about 20,000 feet. They will alternate in broadcasting educational programs to high schools in that area. The estimated coverage from the "flying TV station" will be a circle 300-400 miles in diameter. This area includes parts of Illinois, Indiana, Kentucky, Michigan, Ohio, and Wisconsin. The programs will be telecast from ground based facilities at Purdue University in Lafayette, Indiana, to the circling four-engine aircraft.

This experiment, which may stimulate similar projects in other regions, is an attempt to cope with the increasing education problems developing in our nation's expanding school system. But this idea of flying TV stations also has another aspect in that a large rural population will be included in the broadcast area and agri-

cultural education programs may be quite feasible.

Thus, through the medium of TV, farmers may attend classes in their own homes. With the cooperation of departments of vocational agriculture, colleges of agriculture, local farm organizations and other agriculture leaders an educational system of monumental size could be inaugurated. Real farm problems could be discussed and demonstrated by men who are acknowledged leaders in their fields. Unanswered questions could be phoned or sent to the local vo-ag teacher or direct to the person presenting the material.

The growth of the TV industry and NET in particular should be watched with a speculative eye, and we as educators in agriculture must be ready for the challenge when technology and knowledge make NET available for our use in educating the rural population. □

truck tire division of Goodyear and others.

It was a rewarding and enjoyable career that started with a challenge extended by Dr. Deems in 1960. He deserves to be recognized for his dedication to agriculture, to teaching and especially for his classroom enthusiasm.

The article that started this journey? I was able to call on my experience with the Armed Services Radio and Television Network in Dhahran, Saudi Arabia and also as a part-time student engineer at KUON-TV to lay out a sce-

nario for expanding the reach of educational television. Changing technologies were opening new avenues to reach more remote areas that were being underserved.

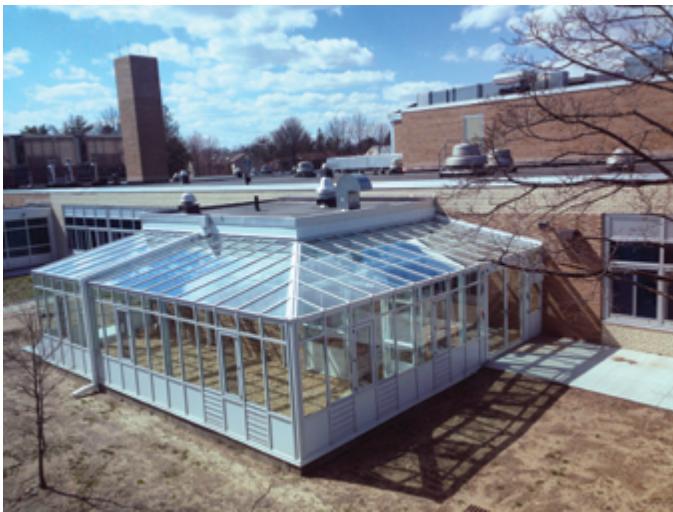
Included in those alternatives was the utilization of a flying TV transmitter. At that time an organization called the Midwest Council on Airborne Television Instruction was conducting experiments using two DC-7 aircrafts as transmitter platforms. My article expanded on that concept along with other technologies and how they could be utilized to expand the reach of educational television.



Don Henning is a 1961 graduate of the University of Nebraska. He had a successful career in agriculture with a large credit given to the impact of his college professor, Dr. Deems. He now resides in Fort Atkinson, WI with his wife Judy.



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