

# Agriculture in Minnesota's Classrooms

House Education Policy Committee  
February 22, 2021



## Sarah Kuschel

Regional Specialist  
Minnesota Agriculture in the  
Classroom (MAITC)

Early agriculture exploration



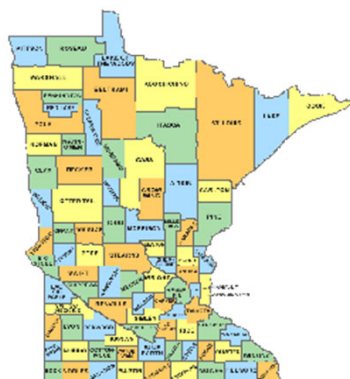
# Minnesota Agriculture in the Classroom

**VISION** Agriculture is valued by ALL.

- MISSION**
- Increase agricultural literacy through K-12 education.
  - An agriculturally literate person is defined as someone who understands and can communicate the source and value of agriculture as it affects our quality of life.
  - Agriculture in the Classroom (AIC) programs seek to improve student achievement by applying authentic, agricultural-based content as the context to teach core curriculum concepts in science, social studies, language arts and nutrition. By encouraging teacher to embed agriculture into their classroom, AIC cultivates an understanding and appreciation of the food and fiber system that we all rely on every day.



143,000 Students



## Teacher Remarks

"I love the overall idea of including agriculture in the classroom to a very urban, low-income population. I doubt any of my students have seen a bee box, baby pigs, large farm equipment, tree cutters, etc..."

-Middle school science teacher, St. Paul

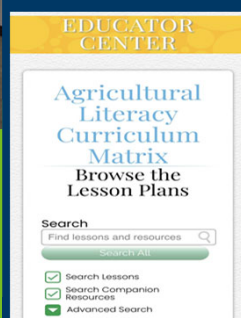
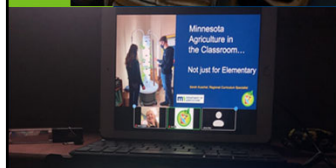
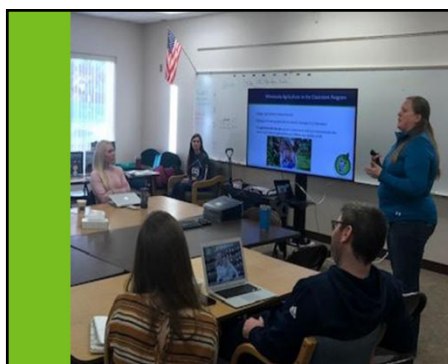
"It's been a LONG time since I have thoroughly enjoyed a class - especially online!" -2nd grade teacher, St. James

"You gave us a glimpse into the lives and occupations of so many people that we probably would have never met."

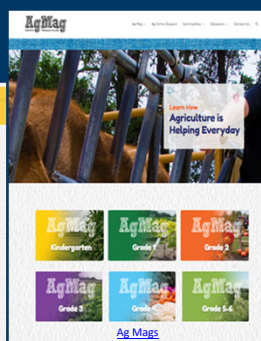
"What an entertaining, knowledgeable, heartwarming and caring group of people you all are! I live on a farm and raised five hard-working children here....you made me so proud of what agriculture really stands for.....thank you!"



## Resources



[MN Ag in the Classroom Website](#)



# Sarah Dornink

Executive Director  
Minnesota Agricultural  
Education Leadership Council  
(MAELC)

School-Based Agriculture, Food  
& Natural Resources (AFNR)  
Education



## One Minnesota & CTE

The Walz-Flanagan Administration founded a working group of the Minnesota Business Vitality Council for expanding Career & Technical Education (CTE) in High Schools.

### **One Minnesota Plan**

#### **Children and Families**

- *Every student receives a world-class education*
- *Every student attends a safe, nurturing school with caring, qualified teachers*

#### **Thriving Communities**

- *Everyone can obtain education and training for a career that earns a family-sustaining income*

[www.mn.gov/maelc](http://www.mn.gov/maelc)



## Agriculture, Food & Natural Resources Education Pathways

Learning by Doing - Minnesota students gain relevant industry skills and food and environmental literacy through classes and experiences related to:

Agribusiness  
Systems



Animal  
Systems



Biotechnology  
Systems



Environmental &  
Natural Resource  
Systems



Food Products &  
Processing Systems



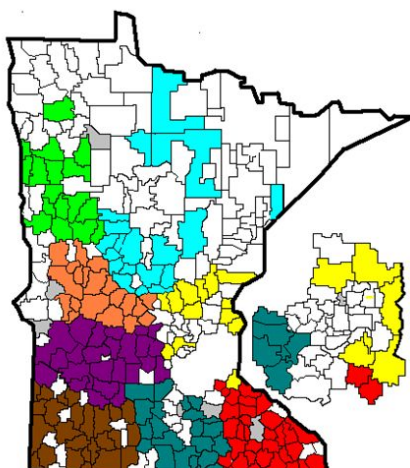
Plant  
Systems



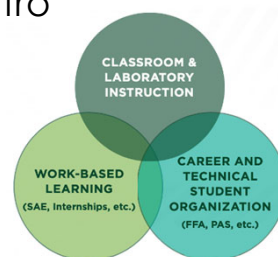
Power, Structural, &  
Technical Systems



## School-Based Agricultural Education



- Formal Classroom Setting
- Over 35,000 students grades 7-12 (mainly 9-12)
- 10,800 FFA members
- 202 programs in the state with 291 teachers
- 25 programs in the seven-county metro



## Challenges & Opportunities

- Increasing access to programming and FFA membership
- Matching industry needs and having accurate employment data
- Ensuring flexibility in curriculum to fulfill credits and provide students' choice in their schedules
- Increasing opportunities for concurrent enrollment, work-based learning, and summer programming
- Maintaining equipment to be industry aligned and up-to-date
- Ensuring we meet the demand for quality agriculture teachers in the classroom





## AFNR Teacher Preparation

- Current agriculture teacher licensure programs:



- Southwest Minnesota State University- Marshall
- University of Minnesota-Crookston
- University of Minnesota-Twin Cities
- Minnesota State Colleges & Universities (2+2)

Approximately 80 students enrolled in teacher preparation programs statewide



## Keith Olander

Executive Director  
AgCentric

Minnesota State Agricultural  
Centers of Excellence  
Post-Secondary Agriculture,  
Food & Natural Resources  
(AFNR) Education



## AFNR

- ..... Agriculture, Food and Natural Resources (AFNR) is like this box of cereal, people often don't understand the process behind the product



- Think about this box of cereal. Think about the careers related to this box.

### The Box

- Development of the box cardboard – lumber
- Precision manufacturing/robotics
- Graphic Design
- Marketing
- Food Science – in the

### Bag –

- made from recycled plastic – sustainability

### Contents –

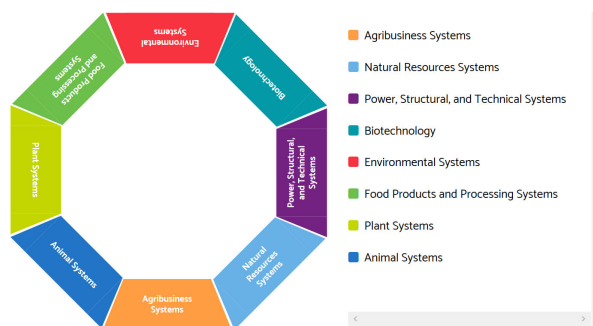
- Precision agriculture
- Efficiency through technology
- Healthy/dietary science
- Agronomy
- Transportation – moving the product
- Water Conservation
- Fluid Power – hydraulics
- Diesel Technology
- Soil Health





# Agriculture, Food & Natural Resources (AFNR)

## Agricultural Career Pathways



DOWNLOAD BROCHURE

## National AFNR Job Demand

- A recent report by USDA's National Institute of Food and Agriculture (NIFA) and Purdue University shows **strong job demand for new college graduates with degrees in agricultural programs**. Also, college graduates can expect approximately **59,400 job opportunities annually between 2020 and 2025**. This reflects a **2.6% growth from the previous five years**. Employer **demand will exceed the supply** of available graduates. (<https://nifa.usda.gov/press-release/employment-outlook-promising-new-college-graduates-agriculture>)

## Minnesota AFNR Demand

- **MN Agriculture and Forestry** and related industries showed that these industries contribute \$37.1B in total value added, **388,134 jobs**, \$105.6B in output (sales) and \$21.4B in household income.

(<https://www.agrigrowth.org/news/new-economic-contribution-study-of-agriculture-shows-industry-adds-more-than-37b-to-minnesota-economy>)



## Minnesota AFNR Demand

- In January 2021, The Center for Rural Policy and Development released a report on the employment picture in rural MN, influenced by the pandemic. Data shows that in most regions within MN, **there are workforce shortages in AFNR careers.**

(<https://www.ruralmn.org/pandemic-paints-a-different-employment-picture-in-rural-minnesota/>)



## Workforce Development Scholarships

**\$2,500 SCHOLARSHIPS**  
Available to those Pursuing AGRICULTURE DEGREES

The Minnesota Legislature passed a Workforce Development initiative, as part of this initiative, \$2,500 scholarships are being awarded to students across the state pursuing in demand career areas.

**Start your career in agriculture by attending one of Minnesota State Colleges and Universities.**

Students pursuing degrees in advanced manufacturing, agriculture, health care, information technology, early childhood education and transportation qualify for scholarships.

- Scholarships are available to students pursuing a 1 year or 2 year associate degree, diploma, or certificate program.
- A pilot program was launched in 2017 with scholarships being awarded for fall 2018.
- Nearly 400 Workforce Development Scholarships were awarded last year of \$2,500 each.
- The number of scholarships is expected to increase from 400 in FY 19 to 668 for FY 20.
- Many industry leaders are stepping forward and making contributions to add incentive for students to attend college and enter these in demand career fields.

Scholarships are now available! Go to <http://minnstate.edu/stories/wds>



- In 2019, 24 AFNR students received scholarships.
- In 2020, 82 scholarships were awarded in Agriculture.

- Where are the AFNR career pathways offered?



## Solving the problem.....

We want to serve as **catalyst to serve Minnesota's AFNR talent needs**, especially thinking long term needs

- Career Fairs/literacy – serve as point of entry/engagement
- Virtual Career Tours
- Connecting to colleges/high schools
- Scholarships
- **Connecting with Career Influencers**
- **Foster data collection practices demonstrating talent demand and competitive compensation**
- Web:
  - AgCentric.org
  - Centerofag.org



## Programmatic changes to meet workforce challenges:

- Adding a Poultry Program – industry engaged solution.
- Meat cutting/butchery – exploration stages with industry partners.
- Developing programs in technical applications – digital sensing system repair and maintenance – with NSF support – responding to industry requests



## Centers of Agricultural Excellence



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## Thank you!

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Minnesota Agriculture in the Classroom



MAELC  
Minnesota Agricultural Education  
Leadership Council



AgCentric  
CONNECTING  
EDUCATION & AGRICULTURE