

## Nebraska Department Of Education Mission

*To lead and support the preparation of all Nebraskans for learning, earning, and living.*



Nebraska Agricultural Education prepares students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber, and natural resources systems.

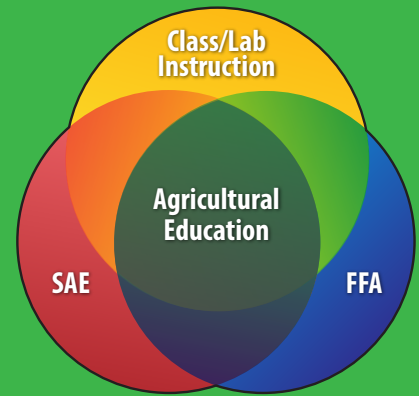
Knowing that the agricultural industry employs one of every three Nebraska residents, and that world population is forecasted to increase 9.7 billion people by 2050, students are motivated in this career field to make a difference in the world. Students are becoming equipped for this future demand through local classes/programs and during world-class district, state, and national educational experiences. The Agriculture, Food, and Natural Resources Career Field is comprised of seven Career Pathways (**see below**), all of which are essential to the economic development of Nebraska.

- Agricultural Power, Structure, and Technology
- Agribusiness
- Animal Science
- Diversified Agricultural Science
- Environmental and Natural Resources
- Food Products and Processing
- Plant Science

By serving students in 214 schools across Nebraska for the 2023-2024 school year, Agricultural Education provides these opportunities to over 15,000 young people each year.

# THREE COMPONENTS OF NEBRASKA

Today's Agricultural Education carries on the tradition of providing instruction through an integrated model of classroom and laboratory instruction, leadership development through FFA, and experiential work-based learning through a student's individualized Supervised Agricultural Experience (SAE) program.



## Classroom/Lab Instruction

A student's experience in agricultural education starts in the classroom with direct instruction from an Agricultural Education teacher. Students can expect classes to be based on career opportunities within Nebraska's leading industry. Often structured as hands-on courses, today's agricultural classes prepare students for both career and college opportunities. Teachers work hard to ensure their students benefit from experiences that happen at the intersection of academics and real life application.

Most schools with an agricultural education program provide hands-on experiences for their students with mechanics laboratories, greenhouses, aquaculture/aquaponics labs, land plots, and animal laboratories. Agricultural Education programs engage the community through field trips, guest speakers, and involvement with civic organizations.

Certified teachers with an endorsement in Agricultural Education engage their students in courses based on the identified career pathways within Agriculture, Food, and Natural Resources Career Cluster.

## Leadership Development (FFA)

Instruction in leadership has been a cornerstone of agricultural education for over 90 years. As mechanization of agricultural processes enabled other industries to be born, fewer Americans were involved with the production and processing of food. The Future Farmers of America organization was established in 1928 to provide a voice for those young people involved in production agriculture.

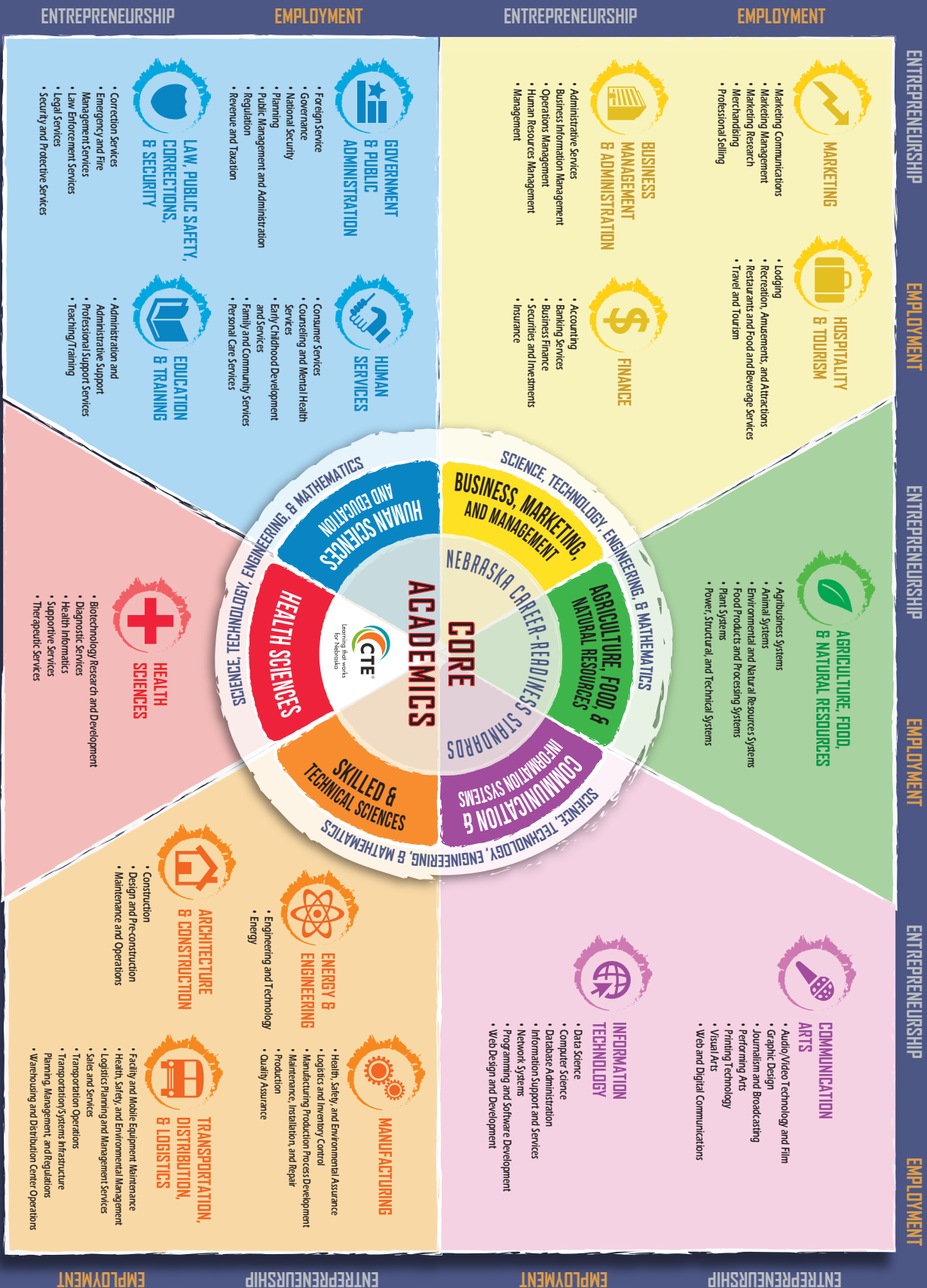
Today, the FFA has shed its acronym and is known as the National FFA Organization in response to the number of agricultural careers that are non-production in nature. FFA membership is at an all-time high with over 945,000 members nationally. Nebraska membership is over 11,500 and is the state's largest Career and Technical Student Organization.

## Experiential Learning (SAE)

True learning also occurs outside of the classroom. When students apply knowledge and develop skills, they transfer their learning into experiences that can lead to a successful career. A student's Supervised Agricultural Experience (SAE) is a formal way to gain that experience under supervision of their Agricultural Education instructor. SAE programs allow students to take knowledge gained in the classroom and apply it in a real-life setting.

Student SAEs can consist of Placement/Internship, Entrepreneurship/Ownership, Research (Experimental, Analytical, or Invention), School Based Enterprises, Service Learning, or be of an exploratory nature. Students document their experiences through an electronic portfolio known as the SAE Record Book. They track their personal goals, skills attained, and financial records for their business and personal lives. Teacher-led instruction in the classroom and during SAE visits empower students to make solid decisions that help them grow and prepare for future careers.

# NEBRASKA CAREER & TECHNICAL EDUCATION MODEL



# CAREER CLUSTER: AGRICULTURE, FOOD, AND NATURAL RESOURCES

This diverse Career Cluster prepares learners for careers in the planning, implementation, production, management, processing and/or marketing of agricultural commodities and services, including food, fiber, wood products, natural resources, horticulture, and other plant and animal products. It also includes related professional, technical, and educational services.

## PATHWAY DESCRIPTIONS

### **Agricultural Power, Structural, & Technical Systems**

Workers apply knowledge of engineering, hydraulics, pneumatics, electronics, power, structures, and controls to the field of agriculture. They develop conservation of soil and water to improve the processing of agricultural products.

*Course offerings in Agricultural Power, Structural & Technical Systems: Welding, PST Fundamentals, Metals and Fabrication, Precision Agriculture, Advanced PST Systems, Agricultural Technology.*

### **Agribusiness**

Workers use technology to coordinate all activities that contribute to production, marketing, distribution, financing, and development of agricultural commodities.

*Course offerings in Agribusiness: Agricultural Business, Agricultural Sales, Agricultural Communications, Agricultural Economics, Agribusiness Entrepreneurship.*

### **Animal Science**

Workers study genetics, nutrition, reproduction, growth, and development of food and companion animals. They inspect and grade livestock food products, purchase livestock, or work in sales and marketing.

*Course offerings in Animal: Animal Science, Small Animal Management, Large Animal Management, Veterinary Science, Agriculture Biotechnology.*

### **Diversified Agriculture Science**

Workers utilize the interconnectivity of the agricultural systems, focusing on issues from a diverse standpoint. They manage diversified farms and ranches, work in agricultural sales, service, research, and extension.

*Course offerings in Diversified Agricultural Science: Diversified Agriculture, Integrated Agricultural Science.*

### **Environmental & Natural Resources Systems**

Workers are involved in pollution control, recycling, waste disposal, public health, natural resources, and wildlife management. They conduct hazardous-waste management studies, analysis, and research environmental projects. They help to develop, maintain, and manage natural resources such as forests and other natural environments.

*Course offerings in Environmental and Natural Resources: Environmental and Natural Resources, Wildlife Management, Environmental and Natural Resources Management.*

### **Food Products & Processing**

Workers discover new food sources, analyze and develop ways to process, preserve, package, or store food. They create new food products and inspect food processing to ensure sanitation, safety, quality, and waste management standards are met.

*Course offerings in Food Products and Processing: Food Science and Safety, Food Products and Technology.*

### **Plant Science**

Workers develop ways to improve the nutritional value and aesthetic to plants and quality of seeds. They use genetic engineering to develop pest and drought resistant plants helping producers while conserving natural resources and maintaining the environment.

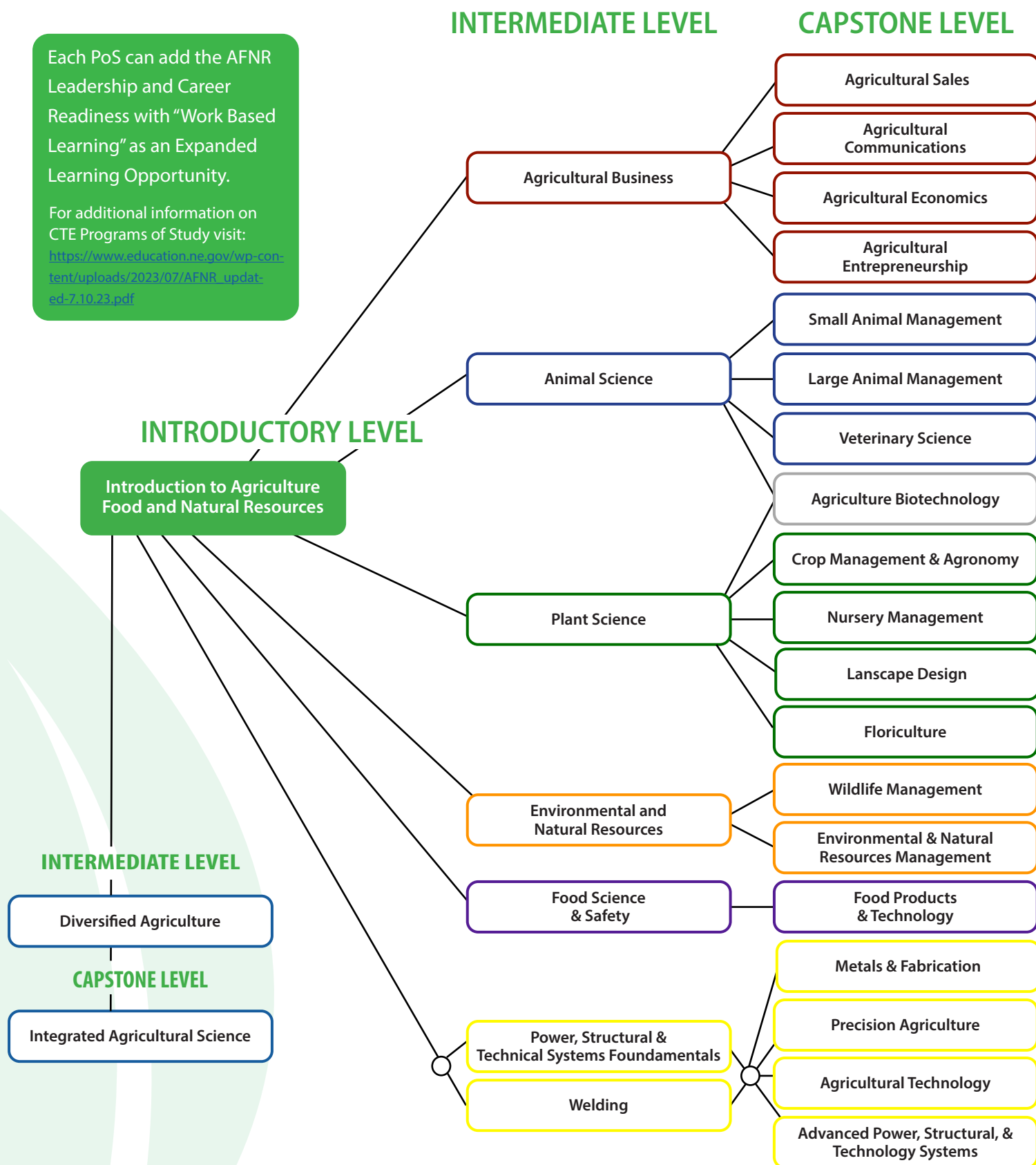
*Course offerings in Plant Science: Plant Science, Crop Management & Agronomy, Nursery Management, Landscape Design, Floriculture, Agriculture Biotechnology.*

# 2023–2024 NEBRASKA AGRICULTURE, FOOD, AND NATURAL RESOURCES

## Program of Study & Course Standards Outline

Each PoS can add the AFNR Leadership and Career Readiness with “Work Based Learning” as an Expanded Learning Opportunity.

For additional information on CTE Programs of Study visit:  
[https://www.education.ne.gov/wp-content/uploads/2023/07/AFNR\\_update-7.10.23.pdf](https://www.education.ne.gov/wp-content/uploads/2023/07/AFNR_update-7.10.23.pdf)



# NEBRASKA AGRICULTURE, FOOD, AND NATURAL RESOURCES

## Additional Program Of Study Information

### CASE

#### *Curriculum for Agricultural Science Education*

CASE is a national curriculum that is STEM-based with an emphasis on laboratory and hands-on experiences for students. Teachers are certified by attending a CASE Institute and completing 80 hours of intense training for each course. Nebraska has hosted CASE trainings, but agricultural educators can attend a CASE Institute anywhere in the United States to become certified. CASE courses count towards Nebraska's Program of Study.

Learn more at: <https://www.case4learning.org>

#### **Teachers can become certified in the following CASE areas:**

- Introduction to Agriculture, Food and Natural Resources (AFNR) • Principles of Agricultural Science – Animal (ASA) • Principles of Agricultural Science – Plant (ASP) • Agricultural Power and Technology (APT)
- Natural Resources and Ecology (NRE) • Animal and Plant Biotechnology (APB) • Food Science and Safety (FSS)
- Mechanical Systems in Agriculture (MSA) • Environmental Science Issues (ESI) • Agricultural Research and Development (ARD) • Agricultural Business Foundations (ABF) • Technical Applications in Agriculture (TAA)
- AgXPlore Middle School (AgX)

## AGRICULTURE, FOOD, AND NATURAL RESOURCES MIDDLE SCHOOL COURSES

Many agricultural education programs offer classes to middle school students.

#### **The following are AFNR Middle School Courses:**

- Middle School Intro to Agriculture Food and Natural Resources
  - Careers and Literacy of Agriculture
  - CASE AgXPlore Middle School

*For more information, contact Nebraska State Agricultural Education Staff.*



# POSTSECONDARY OPTIONS: AGRICULTURE, FOOD, AND NATURAL RESOURCES

Students preparing for a career in the Agriculture, Food, and Natural Resources career field have a variety of postsecondary options. Education and training can be obtained through on-the-job training, technical colleges, two-year community colleges, four-year colleges/universities, and apprenticeship programs. They can enter programs leading to a certificate or a degree at the associate, baccalaureate, or advanced degree level. The table below shows examples of postsecondary Agriculture, Food, and Natural Resources programs of study organized by pathway.

	High School Diploma On-the-Job Training	Certificate/License	Associate's Degree	Bachelor's Degree	Master's/Doctoral Professional Degree
Agricultural Power, Structural & Technical	Electrician Apprenticeship Plumbing Apprenticeship Welding Apprenticeship	Parts Distribution and Management Parts/Sales and Management	Agri-Technology Farm Mechanics Irrigation Technology John Deere Ag Technician Mechanized Agriculture	Agricultural Operations Mechanized Marketing Mechanized Science Mechanized Systems Management Processing Operations	Agricultural and Biological Systems Engineering Mechanized Systems Management
Agribusiness	Farm and Ranch Workers	Agriculture Contact Provider	Agribusiness Management Agribusiness Operations Technology Agriculture Agri-Communications Farm and Ranch Business Management	Agricultural Economics Agribusiness Agricultural Education Agricultural Journalism Hospitality Restaurant and Tourism Management Professional Golf Management	Agricultural Economics Leadership Education Statistics
Animal Science	Animal Caretakers Feed Sales	Ag Dairy Technician Beef Quality Assurance Program Livestock Production Pork Quality Assurance Program	Animal Science Equine Industry Management Livestock Industry Management Swine Management Veterinary Technology	Animal Science Biochemistry Grazing Livestock Systems Veterinary Science Veterinary Technologist	Animal Science (Nutrition, Genetics, or Physiology Focus) Biochemistry Integrative Biomedical Sciences Veterinary Medicine
Diversified Agricultural Science	Farm and Ranch Workers	Agriculture Contact Provider Farm, Ranch, and Horticulture Technician Diversified Production Operations Agricultural Sales	Agribusiness Management Agribusiness Operation Farm, Ranch and Horticulture Operations and Technical Assistant Operations Management	Agribusiness Agricultural Communications Operations Management Farm, Ranch and Horticulture Production Sales and Marketing	Agricultural Communications Leadership Education Agribusiness Management
Environmental and Natural Resources	Refuse and Recyclable Material Collection		Environmental Science Laboratory Science Technology Natural Resources Systems Soil and Water Conservation Wildlife Management	Aquatic Ecology Conservation Biology Environmental Soil Sciences Environmental Studies Fisheries and Wildlife Grassland Ecology/Management Habitat Management Insect Science Natural Resources and Environmental Economics Water Science	Entomology Horticulture and Forestry Natural Resource Sciences
Food Products & Processing	Butchers and Meat Cutters Meat Processing Slaughter and Meat Packer	Agriculture Dairy Technician Commercial Plant Production Food Handlers Permit Quality Control	Agronomy Diversified Agriculture Dietary Management Food Science and Technology Quality Control	Agronomy Animal Science Food Science and Technology Hospitality, Restaurant and Tourism Management Mechanized Systems Management	Agronomy Animal Science (Meat Science Focus) Food Science and Technology Nutrition
Plant Science	Nursery and Greenhouse Workers Seed Sales Tree Trimmers and Pruners	Commercial Horticulture	Agronomy Commercial Horticulture Crop Production Forestry Landscape/Nursery Sport Turf Technology	Agronomy Biochemistry Diversified Agriculture Studies Grazing Livestock Systems Horticulture Insect Science Plant Protection Sciences	Agriculture Agronomy Biochemistry Entomology Horticulture Horticulture and Forestry

# CAREER BASED AWARDS AND RECOGNITION OPPORTUNITIES AVAILABLE TO FFA MEMBERS

Leadership Development Events (LDEs)	Career Development Events (CDEs)	Supervised Agricultural Experience (SAE) and Application-Based Events
<p><b>High School Events</b></p> <ul style="list-style-type: none"> <li>• Agricultural Demonstration</li> <li>• Cooperative Speaking</li> <li>• Creed Speaking</li> <li>• Extemporaneous Speaking</li> <li>• Employment Skills</li> <li>• Conduct of Chapter Meetings</li> <li>• Parliamentary Procedure</li> <li>• Natural Resources Speaking</li> <li>• Jr. Public Speaking</li> <li>• Sr. Public Speaking</li> </ul> <p><b>Middle School Events</b></p> <ul style="list-style-type: none"> <li>• Ag Literacy Speaking</li> <li>• Creed Speaking</li> <li>• Conduct of Chapter Meetings</li> <li>• Discovery Speaking</li> <li>• People in Ag Poster Event</li> <li>• Quiz Bowl</li> </ul>	<ul style="list-style-type: none"> <li>• Agriculture Biotechnology</li> <li>• Agricultural Communications</li> <li>• Agricultural Issues Forum</li> <li>• Agricultural Sales</li> <li>• Agricultural Technology &amp; Mechanics</li> <li>• Agriscience</li> <li>• Agronomy</li> <li>• Dairy Cattle Evaluation &amp; Management</li> <li>• Dairy Cattle Handlers Activity</li> <li>• Environmental &amp; Natural Resources</li> <li>• Farm and Agribusiness Management</li> <li>• Floriculture</li> <li>• Food Science and Technology</li> <li>• Horse Evaluation</li> <li>• Livestock Management</li> <li>• Livestock Selection</li> <li>• Marketing Plan</li> <li>• Meat Evaluation and Technology</li> <li>• Milk Quality &amp; Products</li> <li>• Nursery/Landscape</li> <li>• Poultry Evaluation</li> <li>• Range Evaluation</li> <li>• Veterinary Science</li> <li>• Welding</li> </ul>	<ul style="list-style-type: none"> <li>• Agriscience Fair</li> <li>• American FFA Degree</li> <li>• Chapter FFA Degree</li> <li>• Discovery FFA Degree</li> <li>• Greenhand FFA Degree</li> <li>• Proficiency Award Competition (based on your SAE Program)</li> <li>• Star Award Competition (based on your SAE Program)</li> <li>• State FFA Degree</li> </ul> <p><b>Other Opportunities</b></p> <ul style="list-style-type: none"> <li>• Edge Leadership Conference</li> <li>• Land Evaluation</li> <li>• Local Chapter Grant</li> <li>• National Band, Chorus, and Talent</li> <li>• National Chapter Award Program</li> <li>• National Convention</li> <li>• Nebraska FFA Foundation Jacket Scholarship</li> <li>• Nebraska FFA Launch! Program (School Based Enterprise)</li> <li>• Over \$2.3 Million in National Scholarships</li> <li>• Pathway to Careers Conference</li> <li>• Spring Leadership Conference</li> <li>• State Chorus and Talent</li> <li>• State Convention</li> <li>• Washington Leadership Conference</li> </ul>
<p>For more information visit the following websites:</p> <p><a href="http://www.neaged.org">www.neaged.org</a></p> <p><a href="https://alec.unl.edu/agedcde">https://alec.unl.edu/agedcde</a></p> <p><a href="http://www.ffa.org">www.ffa.org</a></p>		

Numerous chapter-level award areas and individual non-FFA opportunities exist. Visit [www.neaged.org](http://www.neaged.org) for additional opportunities and to learn more!



# NEBRASKA AGRICULTURAL EDUCATION & FFA CALENDAR

## Approximate Planning Dates

### AUGUST

- Beginning of school year; start to the Agricultural Education & FFA calendar year
- FFA State Fair Weekend, Grand Island

### SEPTEMBER

- "Chapters in Good Standing" items due, including FFA membership
- Potential EDGE Leadership Conferences (location varies)
- Potential Land Evaluation Events and Range Evaluation Events

### OCTOBER

- National FFA Convention
- Potential District Livestock Evaluation Events

### DECEMBER/JANUARY/FEBRUARY

- Potential Leadership Development Events
- Potential State Degree Evaluation
- Potential Proficiency Award Evaluation
- Potential Chapter Visit by a State FFA Officer

### FEBRUARY

- Spring Leadership Conferences
- Potential Career Development Events
- Potential Chapter Visit by a State FFA Officer

### MARCH

- Numerous State Convention Deadlines including registration
- Potential Career Development Events
- Potential Chapter Visit by a State FFA Officer

### APRIL

- State FFA Convention
- Potential Chapter Banquet

### MAY

- Chapter Officer Leadership Training (COLT) Conference, Aurora

### JUNE

- Nebraska Career Education (NCE) Conference, Kearney
- Professional Development opportunities for teachers

### JULY

- Professional Development opportunities for teachers
- NDE CTE Beginning Teacher Institute and Jump Start Conference

# NEBRASKA FFA CHAPTERS BY DISTRICT

Nebraska Agricultural Education Programs and FFA Chapters are organized into 12 districts. The schools in these districts work together to provide competitions and leadership experiences for their students.

## District 1

Auburn  
Beatrice  
Conestoga  
Falls City  
Freeman  
HTRS (Humboldt)  
Johnson-Brock  
Johnson County Central  
Lewiston Consolidated  
Nebraska City  
Norris  
Palmyra  
Pawnee City  
Plattsmouth  
Southern (Wymore)  
Sterling  
Syracuse-Dunbar-Avoca  
The Career Academy  
Weeping Water

## District 7

Aurora  
Boone Central  
Central City  
Doniphan-Trumbull  
Fullerton  
Giltner  
Hampton  
Heartland  
High Plains  
Northwest  
Palmer  
Riverside  
Spalding Academy  
St. Edward  
St. Paul  
Twin River

## District 2

Ashland-Greenwood  
Bishop Neumann  
Central  
Clarkson  
Cross County  
David City  
East Butler  
Howells-Dodge Cons.  
Humphrey  
Lakeview  
Leigh  
Newmn Grove  
Osceola  
Schuyler Central  
Shelby-Rising City  
Waverly

## District 8

Amherst  
Anselmo-Merna  
Ansley  
Arcadia  
Broken Bow  
Callaway  
Central Valley  
Centura  
Elba  
Gibbon  
Litchfield  
Loup City  
Overton  
Pleasanton  
Ravenna  
Shelton  
Sumner-Eddyville-Miller  
Wood River

## District 3

Arlington  
Bancroft-Rosalie  
Blair  
Logan View  
Lyons-Decatur N.E.  
Mead  
North Bend  
Oakland-Craig  
Omaha Bryan  
Pender  
Ralston  
Scribner-Snyder  
Tekamah-Herman  
Wayne  
West Point  
Winside  
Wisner-Pilger

## District 9

Arthur County  
Cody-Kilgore  
Gothenburg  
Hershey  
Hyannis  
Maxwell  
McPherson County  
Mullen  
North Platte  
Ogallala  
Paxton  
Perkins County  
Sandhills  
South Platte  
Stapleton  
Sutherland  
Thedford  
Valentine  
Wallace

## District 4

Allen  
Battle Creek  
Bloomfield  
Creighton  
Crofton  
Emerson-Hubbard  
Hartington Newcastle  
Laurel-Concord-Coleridge  
Lutheran High Northeast  
Madison  
Norfolk  
Osmond  
Pierce  
Plainview  
Randolph  
Stanton  
Summerland  
Verdigre  
Wynot

## District 10

Ainsworth  
Boyd County  
Burwell  
Chambers  
Elgin  
Elkhorn Valley  
Keya Paha  
Loup County  
Nebraska Ag Academy  
Neligh-Oakdale  
O'Neill  
Ord  
Rock County  
Sargent  
Stuart  
West Holt  
Wheeler Central

## District 5

Bruning-Davenport  
Centennial  
Crete  
Deshler  
Diller-Odell  
EMF  
Fairbury  
Fillmore Central  
McCool Junction  
Meridian  
Milford  
Seward  
Thayer Central  
Tri County  
Wilber-Clatonia  
York

## District 11

Arapahoe/Holbrook  
Bertrand-Loomis (BerMis)  
Cambridge  
Cozad  
Dundy County-Stratton  
Elwood  
Eustis-Farnam  
Hayes Center  
Hitchcock County  
Imperial  
Lexington  
Maywood  
McCook  
Medicine Valley  
Southern Valley  
Southwest  
Wauneta-Palisade

## District 6

Adams Central  
Alma  
Axtell  
Blue Hill  
Elm Creek  
Franklin  
Hastings St.Cecilia  
Holdrege  
Kearney  
Kenesaw  
Lawrence-Nelson  
Minden  
Red Cloud  
Sandy Creek  
Shickley  
Silver Lake  
Superior  
Sutton  
Wilcox-Hildreth

## District 12

Alliance  
Banner County  
Bayard  
Bridgeport  
Chadron  
Crawford  
Creek Valley  
Garden County  
Gering  
Gordon-Rushville  
Hay Springs  
Hemingford  
Kimball  
Leyton  
Minatare  
Mitchell  
Morrill  
Potter-Dix  
Scottsbluff  
Sidney  
Sioux County



[Non-Discrimination and Guidance Statements.](#)

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