

# 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

**Agribusiness Systems** workers use technology to coordinate all activities that contribute to production, processing, marketing, distribution, financing, and development of agricultural commodities.

**Animal Systems** 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 or marketing.

**Environmental Service Systems** workers are involved in pollution control, recycling, waste disposal, and public health. They conduct hazardous-waste management studies, analysis, and research environmental projects.

**Food Products and Processing Systems** 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.

**Natural Resources Systems** workers help to develop, maintain, and manage the forest and natural environment. Conservation scientists and foresters manage, develop, and help protect these natural resources.

**Plant Systems** workers develop ways to improve the nutritional value and aesthetic of 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.

**Power, Structural, and 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.

## Preparation for a Career in this Cluster Includes...

### Nebraska Career Education Coursework

Intro to Agriculture, Food, and Natural Resources  
 Agri-Business  
 Animal Science  
 Plant Science  
 Leadership and Human Relations  
 Veterinary Science  
 Biotechnology  
 Food Science  
 Natural Resources  
 Horticulture  
 Landscaping/Nursery/Turf Management  
 Agriculture Mechanics and Technology

### Extended Learning

FFA  
 SkillsUSA  
 DECA  
 Supervised Agricultural Experience  
 4-H  
 Start your own business

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Job shadow professionals  
 Participate in internships  
 Secure part-time employment  
 Volunteer in this career area



# Postsecondary Options: Agriculture, Food, and Natural Resources

Students preparing for a career in the Agriculture, Food, and Natural Resources Career Cluster 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
Agribusiness Systems	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 Agriculture Leadership Education Statistics
Animal Systems	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
Environmental Service Systems	Refuse and Recyclable Material Collection		Environmental Science Laboratory Science Technology	Aquatic Ecology Conservation Biology Environmental Soil Science Environmental Studies Habitat Management Insect Science	Entomology Natural Resource Sciences
Food Products & Processing Systems	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
Natural Resources Systems			Natural Resources Systems Soil and Water Conservation Wildlife Management	Environmental Soil Sciences Environmental Studies Fisheries and Wildlife Grassland Ecology/Management Natural Resources and Environmental Economics Water Science	Horticulture and Forestry Natural Resource Sciences
Plant Systems	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
Power, Structural & Technical Systems	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

For additional information on the Agriculture, Food, and Natural Resources Career Cluster please contact:

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