

THE AGRICULTURAL EDUCATION MISSION

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

Through agricultural education, students are provided opportunities for leadership development, personal growth and career success. Agricultural education instruction is delivered through three major components:

1. **Classroom/laboratory instruction** (contextual learning)
2. **Supervised agricultural experience programs** (work-based learning)
3. **Student leadership organizations** (National FFA Organization)

Students with an SAE learn by doing, developing an SAE project based on one or more SAE categories:

Entrepreneurship: Own and operate an agricultural business;

Placement: Get a job or internship on a farm or ranch, at an agriculture-based business, or in a school or factory laboratory;

Research and Experimentation: Plan and conduct a scientific experiment; or

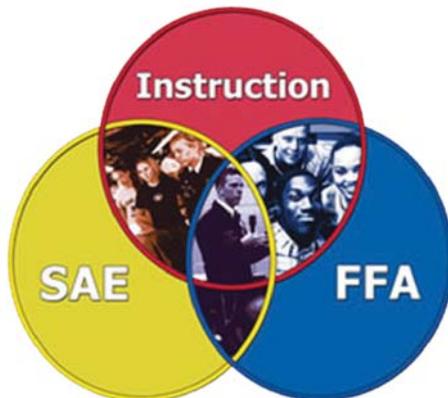
Exploratory: Explore careers in agriculture by attending an agriculture career fair, or creating a report or documentary on the work of a veterinarian.

Arkansas Department of Career Education

CAREER & TECHNICAL EDUCATION DIVISION



AGRICULTURAL SCIENCE AND TECHNOLOGY



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Preparing Tomorrow's Future Today



We offer programs of study in each of the following career pathways:

Plant Systems

People who work in the Plant Systems pathway study plants and their growth. This helps provide food, feed, and fiber crops to feed a growing population while conserving natural resources and maintaining the environment.

Specific Occupations: Plant Breeders and Geneticists, Soil and Water Specialists, Crop Farm Managers, Botanists, Tree Surgeons, Grain Operations Superintendents, Greenhouse Managers, Forest Geneticists

Animal Systems

People who work in the Animal Systems pathway work to develop better, more efficient ways of producing and processing meat, poultry, eggs, and dairy products. They study genetics, nutrition, reproduction, growth, and development of domesticated animals.

Specific Occupations: Livestock Producers, Animal Caretakers, Animal Health Products Distributors, Veterinarians, Livestock Geneticists, Embryo Transfer Technicians, USDA Inspectors, Pet Shop Operators

Power, Structural & Technical Systems

People who work in the Power, Structural, and Technical Systems pathway apply knowledge of engineering, hydraulics, pneumatics, electronics, power, structures, and controls to agriculture.

Specific Occupations: Machine Operators, Agricultural Engineers, Equipment/Parts Managers, Welders, Machinists, Agricultural Applications Software Developers/Programmers, GPS Specialists, Remote Sensing Specialists

Natural Resource Systems

People who work in the Natural Resources Pathway perform a variety of tasks from helping to develop, maintain, and manage the forest and natural environment to catching and trapping various types of marine life for human consumption, animal feed, bait, and other uses.

Specific Occupations: Wildlife Biologists, Ecologists, Park Managers, Fish and Game Operators, Geologists, Mining Engineers, Fisheries Technicians, Hydrologists, Pollution Prevention and Control Managers, Health and Safety Inspectors, Hazardous Materials Handlers, Water Quality Managers, Environmental Sampling and Analysis Scientists

Food Products and Processing Systems

People who work in the Food Products and Processing Systems pathway apply their knowledge to the study of product development, quality assurance, food safety, production sales and service, regulation and compliance, and food service within the food science industry.

Specific Occupations: Food Scientists, Toxicologists, Biochemists, Nutritionists, Dieticians, Food Inspectors, Meat Cutters, Microbiologists, Bacteriologists, Produce Buyers, Food and Drug Inspectors, Storage Supervisors, Quality Control Specialists

Agribusiness Systems

Agribusiness is the coordination of all activities that contribute to the production, processing, marketing, distribution, financing, and development of agricultural commodities and resources. This includes food, fiber, wood products, natural resources, horticulture, and other plant and animal products and services.

Specific Occupations: Bankers/Loan Officers, Field Representatives for Bank or Government Program, Agricultural Economists, Farmers, Ranchers, Feed and Supply Store Managers, Agricultural Communications Specialist, Agricultural Educators, Agricultural Journalists

