



Animal Health Programs for 4-H Youth

Christopher Anderson
4-H Youth Development Specialist, Animal Sciences
University of Maryland Extension
Maryland 4-H Center

Cooperative Extension System

- Nationally, Extension and 4-H is administered by the National Institute of Food and Agriculture (NIFA) of the United States Department of Agriculture (USDA).
- Within each state, Extension and 4-H is coordinated by Land-grant Universities and delivered locally at the county and parish levels.



4-H Youth Development

- 4-H programs target youth audiences between the ages of 5 to 18 years.
- 4-H programs are grounded in research-based, youth development frameworks and best practices.
- 4-H programs are delivered in the classroom, during out-of-school times as part of after-school programs, and through community-based 4-H clubs.
- Volunteers are recruited and trained to extend the outreach of the 4-H program; they serve in various roles including club leaders, project leaders, workshop instructors, and more.

University of Maryland Extension 4-H

Maryland 4-H is the youth development program of University of Maryland Extension

- College of Agriculture and Natural Resources at University of Maryland, College Park
- School of Agricultural and Natural Sciences at University of Maryland Eastern Shore



Maryland 4-H Animal Science Programs

- Approximately 5,500 youth from 23 counties and Baltimore City are enrolled in nearly 7,000 animal science projects each year.
- Youth participate in these animal science projects:
 - Beef Cattle
 - Camelids
 - Dairy cattle
 - Goats
 - Horses/ponies
 - Poultry
 - Sheep
 - Small pets
 - Swine
 - Rabbits
 - Veterinary Science

WHAT We Teach in 4-H Animal Sciences

- Best Animal Husbandry Management Practices
- Roles of Youth Animal Owners
- Keeping Animals, Products, and Handlers Safe
 - Purpose of Quality Assurance Programs
 - Animal Behavior, Housing, and Handling
 - The Importance of Animal Identification
- Animal Health
 - Importance of a Valid Veterinary – Client – Patient Relationship
 - Animal Nutrition
 - Disease Identification
 - General Guidelines and Regulations for Animal Health Products: Labels, Use, Veterinary Feed Directive, and Record Keeping
 - Zoonoses Awareness
 - Biosecurity Planning
 - Animal Well-Being
- Ethics in Animal Projects and Fair Requirements

HOW We Teach in 4-H Animal Sciences

Animal Husbandry and Quality Assurance Training

Animal Husbandry and Quality Assurance programs emphasize the need for youth livestock producers and exhibitors to provide a wholesome, quality livestock product for the consumer. Additionally, programs emphasize that owners, caretakers, and handlers raise, care for, and handle livestock, companion, and performance animals using responsible practices that assure animal well-being.

Training programs help youth:

- understand best management practices for the responsible production of livestock,
- understand their responsibilities to provide a safe, wholesome food product to consumers,
- understand how to follow labels carefully for feed additives, medicines, or products used in their livestock production systems,
- learn the importance of practicing honest, ethical behavior in the production of livestock and care of livestock, companion, and performance animals.

HOW We Teach in 4-H Animal Sciences

Animal Science Educational Meetings and Workshops

- Youth and volunteers learn about important Animal Science topics at demonstrations, field days, meetings, and workshops held at the club, county, and state levels.

Animal Project Care/Ownership

- Youth learn through hands-on, engagement in livestock animal breeding and growing projects.
- Youth learn through performance and companion animal care and handling projects.

Animal Fairs and Exhibitions

- Youth learn through the opportunity to showcase their project work and receive recognition for their accomplishments.

HOW We Teach in 4-H Animal Sciences

Animal Science Knowledge and Skills Events

Preparation for and participation in a wide variety of 4-H Animal Science knowledge and skills competitions help youth learn important subject matter and develop and practice life skills with an emphasis on decision making, acquiring knowledge, and taking personal responsibility.

Strategies include:

- Judging Contests: Dairy, Horses, Livestock, Poultry, Rabbits
- Quiz Bowl Contests: Avian, Dairy, Dog, Horse
- Skillathon/Hippology Contests: Dairy, Dogs, Horses, Livestock
- Art and Communications Contests
- Animal Science Camps and Jamborees

WHERE We Teach Youth about Anti-Microbial Resistance in 4-H Animal Sciences

Animal Husbandry and Quality Assurance

Rationale Behind and Compliance with the Veterinary Feed Directive

Adult Animal Quality Assurance Programs

Best Management practices for various species, especially for Beef, Dairy, and Swine.

Meetings and Workshops

Management practices to slow the development of resistant worms, especially with small ruminants and horses.

Printed and Web-based Publications

Fact sheets and Content-focused website pages are effective in providing research-based information for producers.

Animal Science Knowledge and Skills Competitions

Resistance-related questions and stations at Quiz Bowl Contests and Skillathon / Hippology Contests.

INCREASING Efforts to Teach Youth about Anti-Microbial Resistance in 4-H Animal Sciences

Education about New Research Findings and Improved Best Practices

Example: Slowing dewormer resistance: Dewormer resistance is inevitable, but the rate at which it develops is not. [Web Resource: www.sheepandgoat.com]

Education about Regulatory Adjustments

Example: Rationale Behind and Compliance with the Veterinary Feed Directive

Example: Animal Identification Guidelines

Grant Funding Priorities – Emerging Issues

Example: Animal Husbandry and Quality Assurance Programs

Example: Zoonoses Education Programs for Youth in Agriculture



WHY We Teach Youth about Important Topics and Issues in 4-H Animal Sciences

- We must help youth members of 4-H, and similar programs, who are engaged in animal projects understand the visible and important roles they have as representatives of animal agriculture.
- We must help youth members of 4-H, and similar programs, preserve the public's trust in agriculture, and related industries and youth organizations.
- We must ensure wholesome products for consumers
- We must partner and engage in collaborative efforts to effectively achieve optimal health for people, animals, and the environment.
- We must prepare tomorrow's leaders of animal agriculture TODAY.