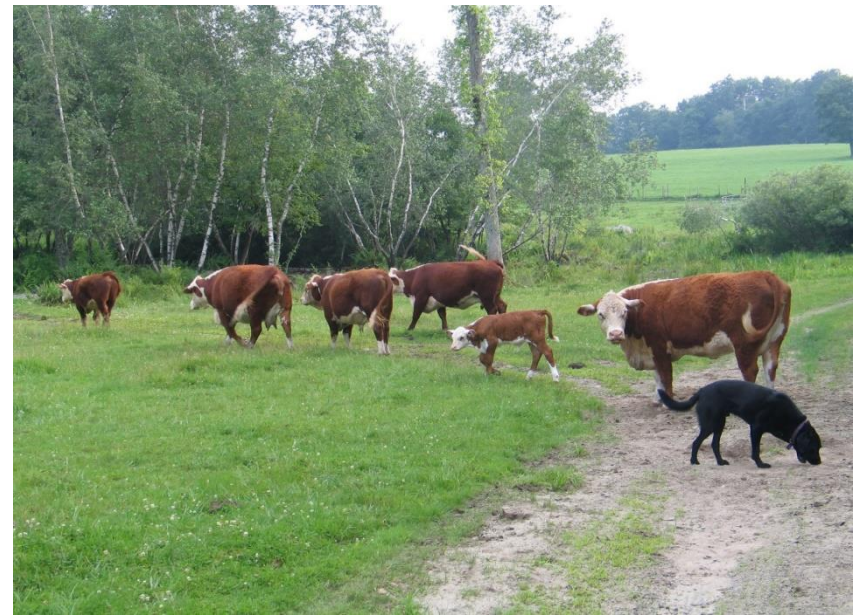


Antibiotic Stewardship for our Food Animals

CT NOFA Annual Winter Conference
March 11, 2017

Michael T. Keilty
Sustainable Agriculture Research Associate,
UConn Extension, Tri-State PDP Program

Jean C. King, UConn SARE Tri-State PDP,
Food Policy Consultant



Competitive Grant Opportunities

Large Grants Program

- ***Research & Education Grants***
- ***Professional Development Grants***

Small Grants Program

- ***Farmer Grants***
- ***Partnership Grants***
- ***Sustainable Communities Grants***
- ***Graduate Student Grants***



Alternative Health Practices for Livestock



2000 - UConn Alternative Health Care Practices for Livestock Conference

Important concerns about food safety, particularly about antibiotics and chemical residues in meat, milk and other livestock foods have stimulated new interest in alternative methods for livestock health.

Alternative Health Practices for Livestock, edited by Thomas Morris & Michael Keilty, Blackwell Publishing 2006

- ▶ A SARE Research and Education Grant



UConn
COLLEGE OF AGRICULTURE
AND NATURAL RESOURCES
EXTENSION

THE
UNIVERSITY
OF RHODE ISLAND

Tri-State SARE Project History

Connecticut, Massachusetts, Rhode Island

- 2008-2011 Producing Natural Local Meat for Consumers -Work to increase production of local meat in the three states
- 2011-2014 Grass Fed All Year Long - address issues of processing capacity by promoting year-round production
- 2014-2017 Health Care Practices for our Food Animals - address the use of antibiotics in food animal production

➤ A SARE PDP Grant

DRUG USE AND FOOD ANIMAL PRODUCTION



In a 2014 project survey of agricultural service providers,

84%

say they, and farmers, need education about the use of antibiotics.

"...extent to which antibiotic resistance in animal agriculture contributes to human infection is not known."

"...risks to human health posed by the agricultural use of antibiotics are, appropriately, a matter of serious concern."

President's Council on Science and Technology 2014

- Antibiotic use in animals is connected with human health
- Resistant bacteria can be transmitted from food-producing animals to humans through the food supply

*Dr. Robert Teus, CDC,
NAA Atlanta Symposium 2014
www.animalagriculture.org*

80% of all antibiotics sold in the USA are used in our food animals.

FDA 2014



In a 2014 project survey,

75%

of agricultural service providers receive questions from farmers about use of antibiotics.

CDC described antibiotic resistance as "one of the world's most pressing health problems"
*Dr. Theodore Zaoutis, Univ. of PA NAA Atlanta Symposium 2014
www.animalagriculture.org*



51%

of antibiotics administered in hospitals are unnecessary

Center for Disease Control



RESISTANCE



**80% of all antibiotic's sold in the USA are used
in our food animals**

FDA 2014



51% of antibiotics used in hospitals are unnecessary

CDC

Consumer Reports December 2016

- ▶ “antibiotics in animals contribute to the rise of antibiotic-resistant bacteria, which infect an estimated 2 million people each year in the U.S., of whom 23,000 die, according to the CDC.”





Tri-State SARE Workshop 2015

- Joseph T. Frost, MPH, RD, CD, Commander, US Public Health Service, Investigator, Food Specialist, FDA

“Current Regulations and Compliance Activities”

- Laura K. Unkauf, DVM, MPH, USDA’s Food Safety and Inspection Service

“FSIS Food Safety and Drug Residues”

- Nicholas Bennett MA(Cantab), MBBChir, PhD, FAAP, Assistant Professor of Pediatrics, Co-Director of Antimicrobial Stewardship, Medical Director, Division of Pediatric Infectious Diseases and Immunology, Connecticut Children's Medical Center.

“Antibiotics in Animals for Human Consumption - Hyperbole, Handwaving, or a Horror-story?”

December 14, 2016 SARE Workshop

- ▶ ***FDA Veterinary Feed Directive -***
Michael Murphy, Veterinary Medical Officer, Center for Veterinary Medicine, FDA
- ▶ ***Agricultural Applications for Antimicrobials. A Danger to Human Health: An Official Position Statement of the Society of Infectious Diseases Pharmacists***

The link between antibiotic use in animals and antibiotic resistance in humans is unequivocal.

Michael D. Nailor, PharmD, UConn School of Pharmacy





- ▶ ***Panel - Moving Forward***
 - Michael Darre, UConn
 - Henry Talmage CT Farm Bureau
 - Craig Jones, Agri-Mark
 - Sheila Andrew, UConn

VETERINARY FEED DIRECTIVE



The marketing status of medically important antimicrobials for use in feed or water for food animals changed from over-the-counter to prescription or to veterinary feed directive (VFD) on January 1, 2017.

FOUR Key Points

- 1  Establish a VCPR with your veterinarian
- 2  Obtain a VFD for feed containing antibiotics medically important to human health
- 3  Use VFD antibiotics only on animals as directed
- 4  Keep a record of each VFD for two years



.....the shift in Animal Agriculture away from Antibiotics, more rules on Animal Welfare, the ability for tracebacks as needed, the increased productivity of our animals and the need to help feed the billions in the world. The good old days were not as good as some people would like to paint them.....

Michael J. Darre, Ph.D. P.A.S.

UCONN Professor and Extension Poultry Specialist



Livestock health-primary
grazing versus primary confined

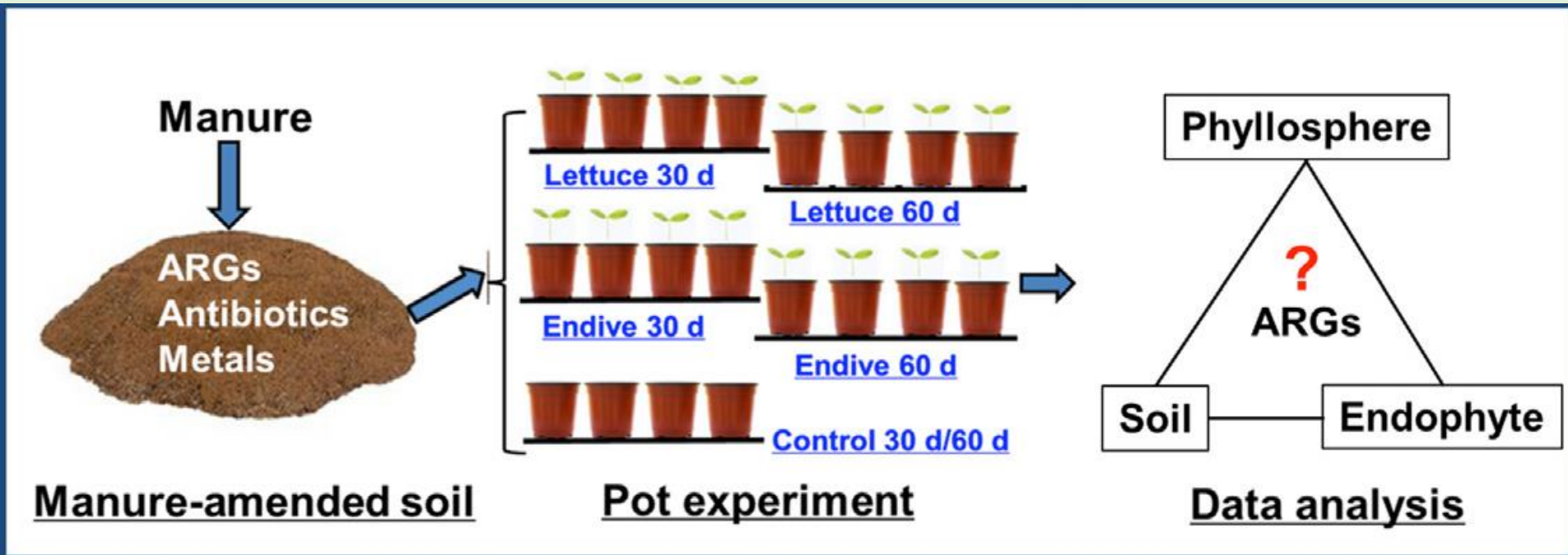
A man in a green uniform is kneeling in a barn, looking at a tablet. A brown cow is looking at him. The text "Adequate antibiotic protocols" is overlaid in green.

Adequate antibiotic protocols

Medicinal and nutritional qualities of plants



Antibiotics and soil/water health



Antibiotic Resistant Genes (ARGs) were detected on harvested vegetables grown in manure-amended soil, including root endophytes, leaf endophytes, and phyllo-sphere microorganisms--*Journal of Hazardous Materials* 2015

Food animal **production** systems

A large indoor poultry farm with many white chickens and red feeders. The word "RESISTANCE" is overlaid in white capital letters.

RESISTANCE



**Farm infrastructure/land
carrying capacity**

A photograph of a rainbow in a cloudy sky over a field of trees with autumn foliage. The rainbow is the central focus, arching across the sky. The trees in the foreground and middle ground are mostly bare, with some showing autumn colors. The sky is overcast with grey clouds.

ANTIBIOTIC STEWARDSHIP

www.meatsystems.uconn.edu