

Livestock, Seafood, Poultry, and Public Health: A Multi-Faceted
Field Experience at the Kansas Department of Agriculture
and
The International Mobility of Veterinary Students (iMOVES)
Program in Italy

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Outline

- Learning Objectives
- Field Experience Activities
- Field experience with the Kansas Department of Agriculture (KDA)
 - Disease control and surveillance
 - Dairy Inspection Program
 - Livestock Market
 - Meat and Poultry Inspection Program
 - *From the Land of Kansas* Program and International Marketing Programs
- Field experience with the iMOVES in Italy
 - What is the iMOVES?
 - Activities
 - Field trips in Italy
- Competencies

Learning Objectives

- To understand the structure and administration of the governmental public health organizations which related to animal health and food safety
- To integrate knowledge acquired in coursework with real-life activities of the Kansas Department of Agriculture
- To grow in knowledge of Kansas, the United States, and global food safety regulations and their implementation
- To learn more about veterinarians' roles in food safety and public health
- To learn about the public health challenges of state government programs

Field Experience Activities



Shadow biosecurity, animal health, and/or other regulatory officials involved in public health



Participate in KDA's on-site visits to livestock production facilities



Participate in a two-week food safety, public health, and animal welfare policy course (an International Mobility of Veterinary Students, or iMOVES program)

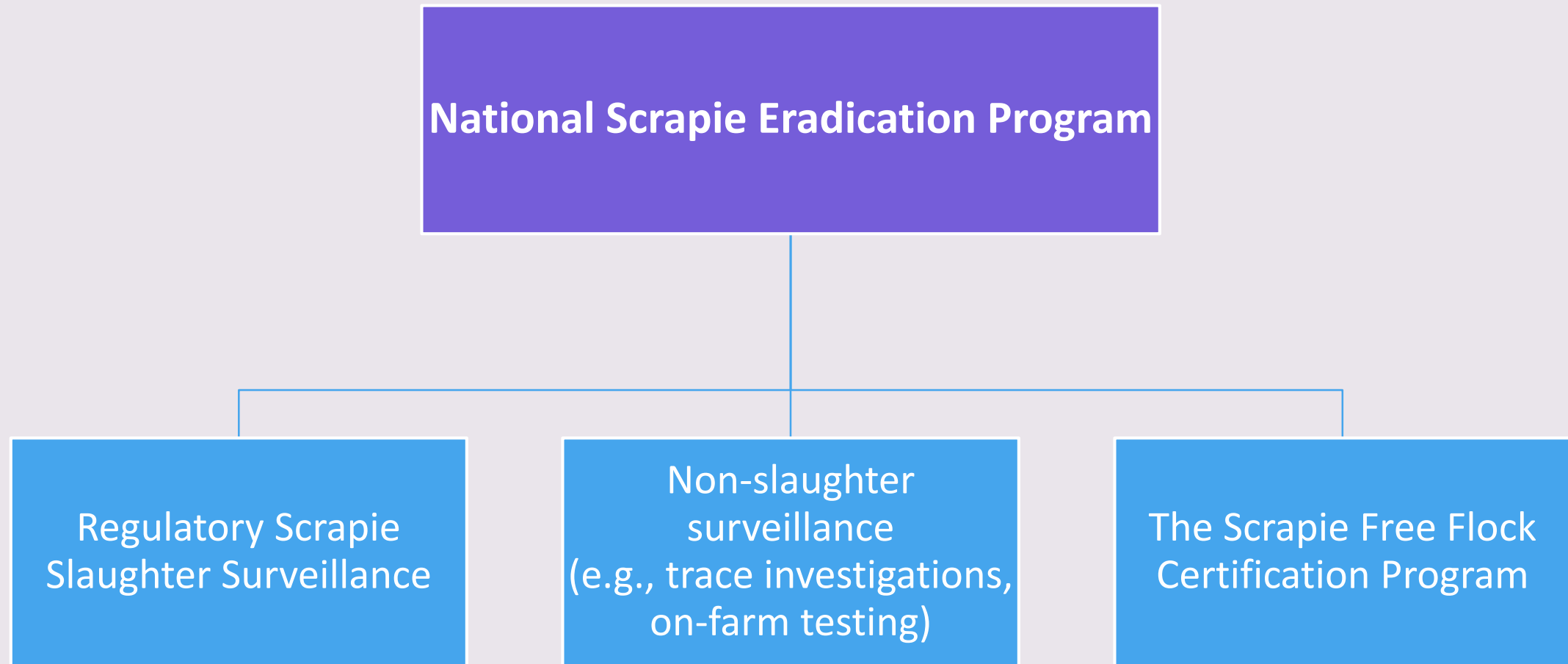
May 21 - September 13, 2018

FIELD EXPERIENCE WITH THE KANSAS DEPARTMENT OF AGRICULTURE



DISEASE CONTROL AND SURVEILLANCE

Scrapie Slaughter Surveillance



Regulatory Scrapie Slaughter Surveillance (RSSS)

- Started in fiscal year 2003
- A cooperative agreement between the Animal and Plant Health Inspection Service (APHIS) and the Departments of Agriculture in states
- Aim to identify and trace scrapie-infected carcasses back to the farm
- Percent of cull sheep found positive at slaughter has decreased 99 percent

What is Scrapie?

- A transmissible spongiform encephalopathy in sheep and goats
- Caused by an infectious protein, or called prion
- Affects the central nervous system
- Extreme heat resistance
- Related to Bovine Spongiform Encephalopathy (BSE), or Mad cow disease and Creutzfeldt-Jakob disease (CJD) in humans





Scrapie sampling for RSSS

- Select Kansas sheep and goat population (> 2 years old)
- Collect the brain stem and ear tag
- Put in the formalin transporting media

Bovine Tuberculosis

- A zoonotic disease caused by *Mycobacterium bovis*
- Long incubation period
- Persistent over the United States (USDA, 2018c)
- Public health concern
- The tests required before allowing movement to certain states

Bovine Tuberculosis Test



Source: <http://yk8.sakura.ne.jp/E-Manual/i34.html>



Caudal fold tuberculin test

+

Comparative cervical tuberculin test

-

Allowed to transport

+

Quarantine & Collect the samples

-

Allowed to transport

Private veterinary practitioner

Veterinary officials



DAIRY INSPECTION PROGRAM

Dairy inspection

Performance-based inspection

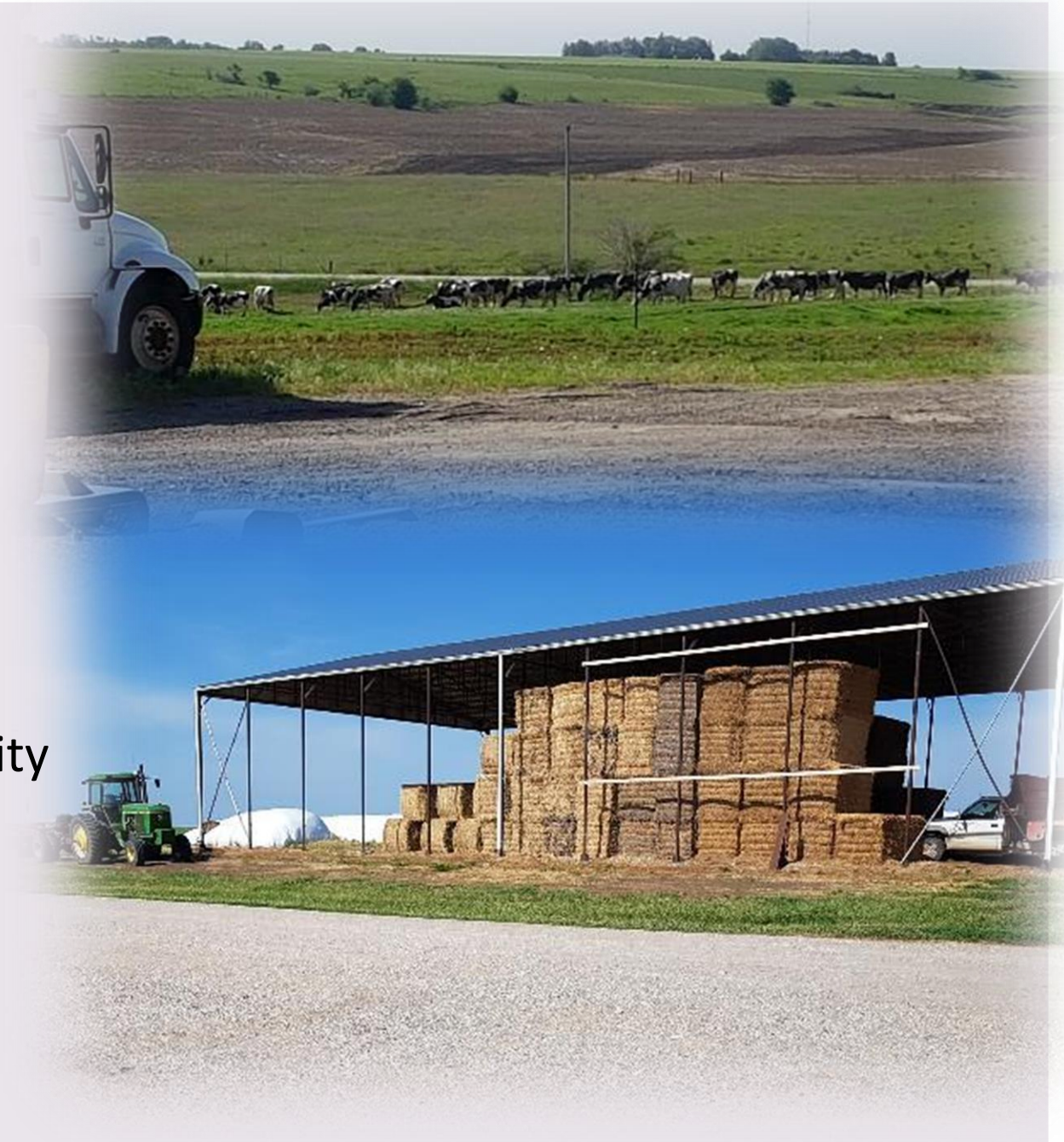
- Inspectors in charge
- Every 3-6 months
- Overall maintenance of the facilities and their production

Survey inspection

- Supervisors
- Once a year
- Overall maintenance of the facilities and their production
- Unannounced inspection
- Inspector performance

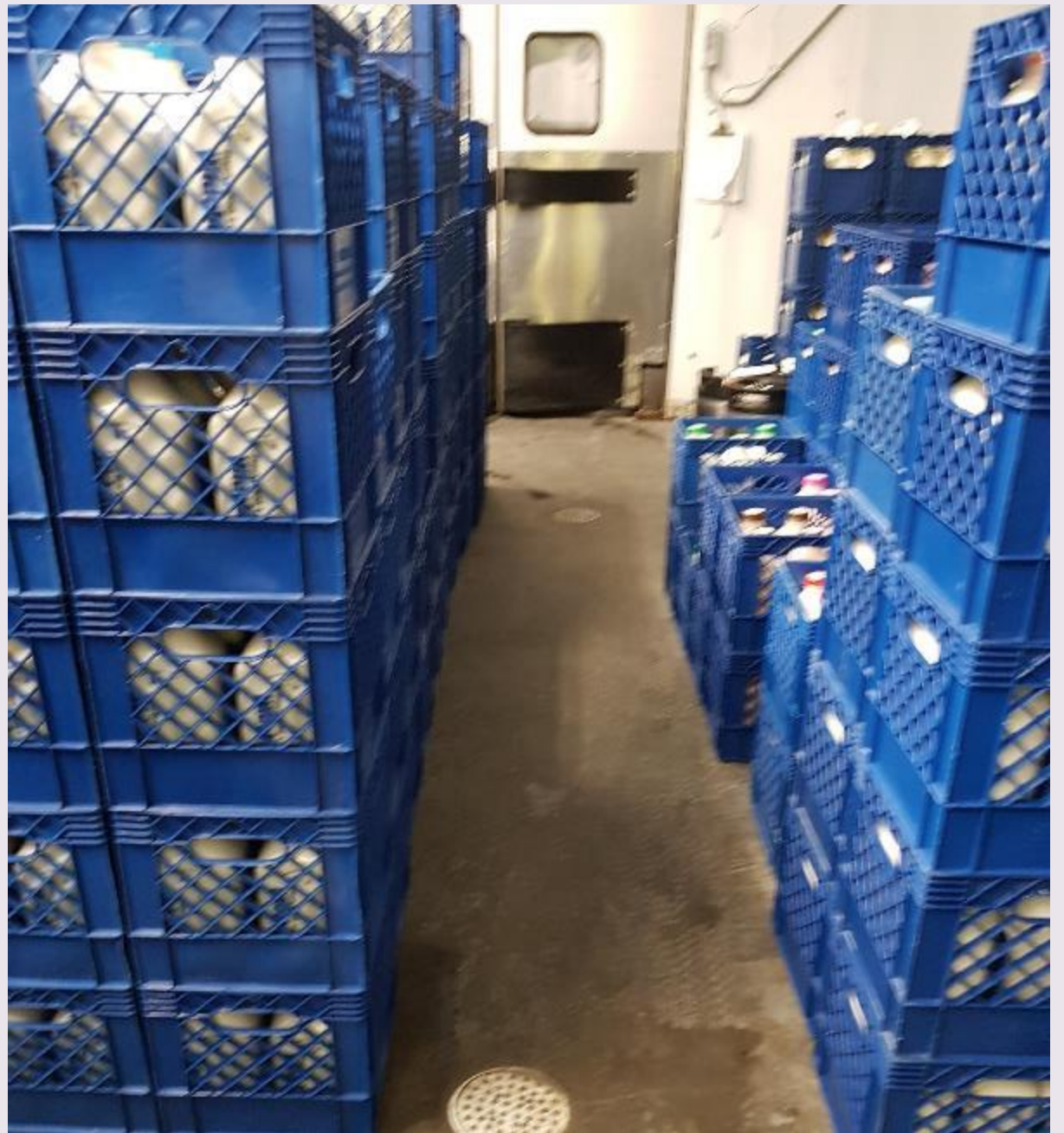
Performance inspection

- A milk processing plant in Junction City
- A comprehensive SME business
- Facilities: a dairy farm, a milking parlor, pasteurizing facilities, and a cold storage facility







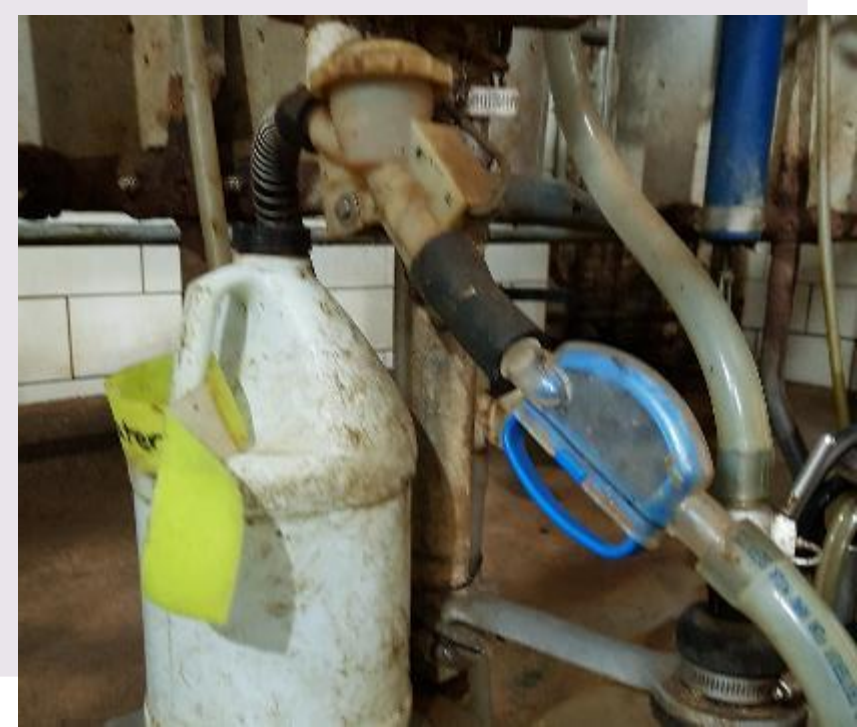


Survey inspection

- Occurred in Reno County, Kansas
- Examined the cleanliness of the infrastructure, the cleanliness of pipelines and cooling tanks, drug labelling, chemicals









LIVESTOCK MARKET

State government agencies

- Department of Commerce
- Department of Revenue
- Department of Health and Environment
- Department of Agriculture

Licensing

- Physical examination
- Pregnancy status check
- Estimation of the animal's age
- CVI endorsement

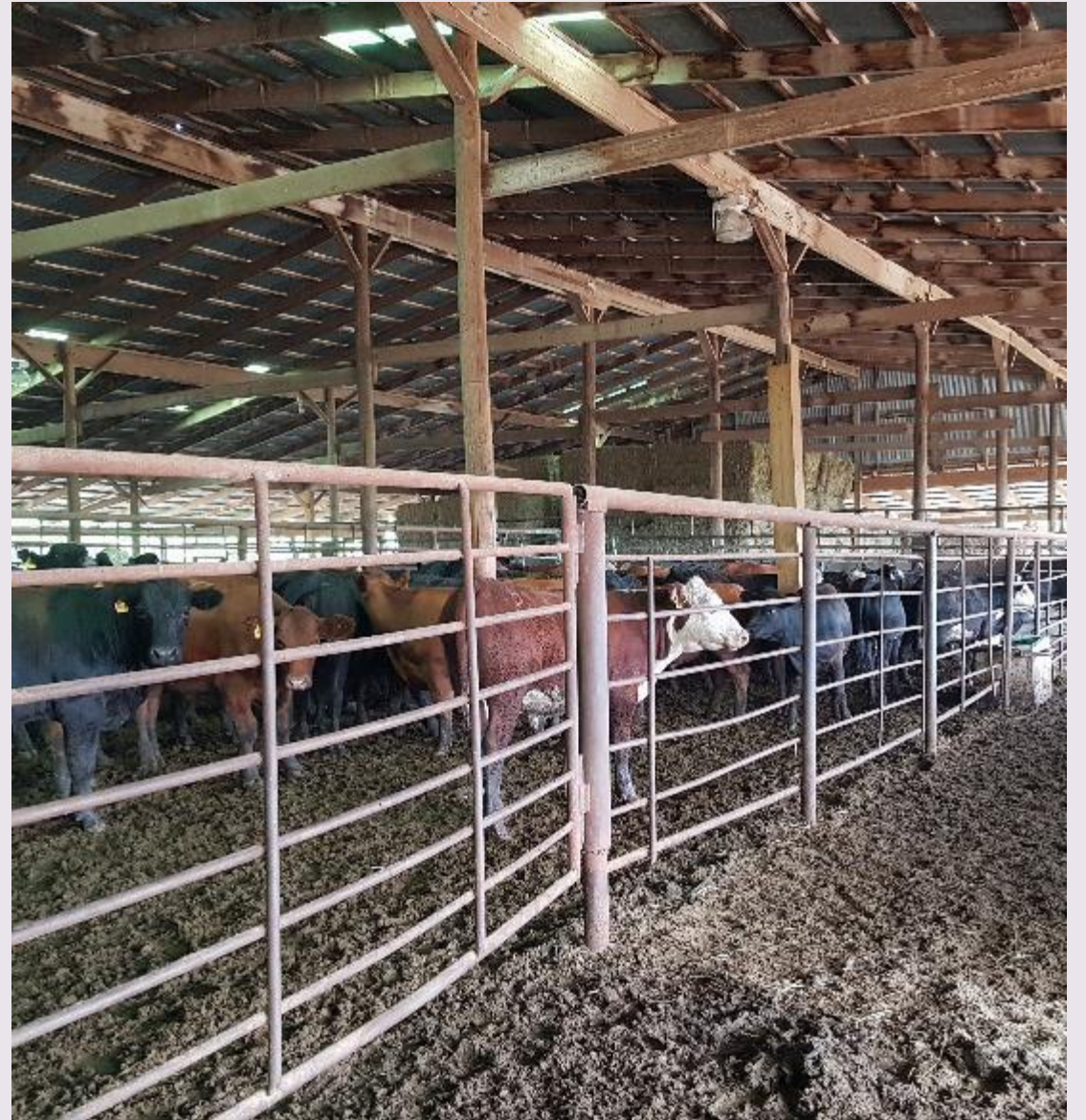
Livestock market

Veterinarian

Tagging

- Ear tags
 - 2-years old or older
 - ID number
 - Transported across the state lines
- Back tags
 - Going to the slaughterhouse at the other state







MEAT AND POULTRY INSPECTION PROGRAM

Slaughter and processing plants

Types

46 plants

Inspected operations

Custom operations

In-state consumption
and selling



- Sanitation of the facilities
- Animal welfare
- Meat wholesomeness



Exported
products under
USDA inspection









***FROM THE LAND OF KANSAS* PROGRAM AND
INTERNATIONAL MARKETING PROGRAMS**

Marketing, Advocacy and Outreach Team

From the Land of Kansas

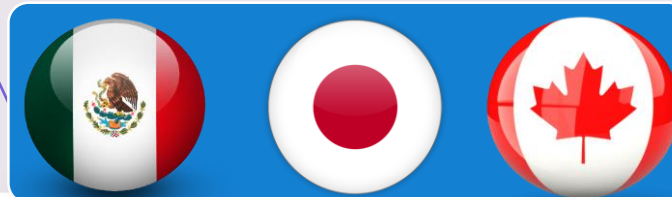
Provide online market place and marketing support

Collaborate with KSU faculty members to give advice and assistance on nutrition, safe food production, and HACCP

Kansas agriculture product to a global market

Export training & travelling budget support

International Marketing Program



June 16 – 29, 2018

FIELD EXPERIENCE WITH THE iMOVES IN ITALY

What is the iMOVES?

- International **MO**bility of **VE**terinary **St**udents
- A student exchange program hosted by the University of Padova, Italy.
- The Texas A&M University, Colorado State University, Kansas State University, the University of Pennsylvania, and the University of Padova (Italy)

Activities

- The lectures from the UniPD professors, an Australian professor, a European Union veterinary official posted in the United States, faculty members from KSU and Texas A&M
- Field trips to an import-export seafood company, a broiler farm, and a cattle slaughter plant.



Field trips in Italy

Seafood company

- Located on a bank in Venice, Italy
- Established in the 1960s
- Expanded to a large-scale retail market later in the 1980s
- Seafood markets: Milan, Venice, Torino

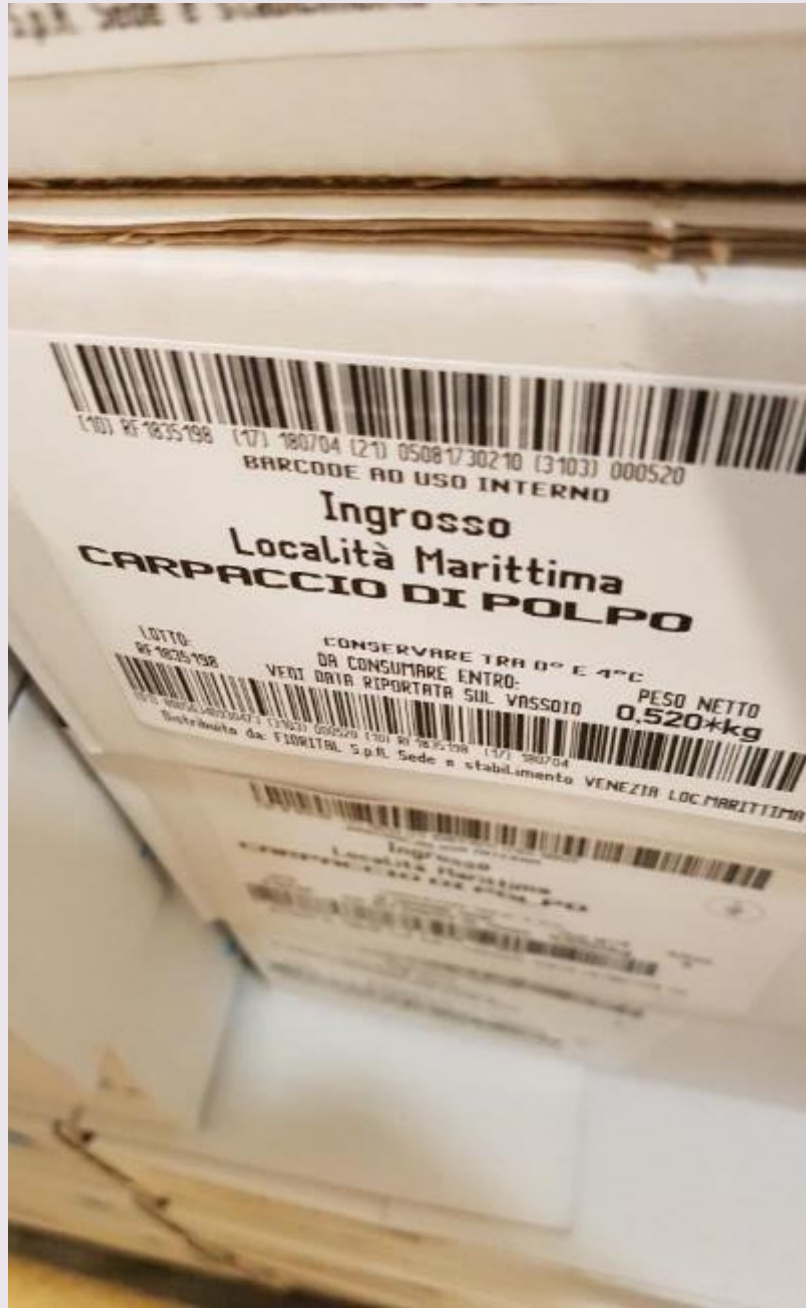




Seafood company

- Imported from over 70 countries worldwide, but mainly from Ecuador and Brazil
- Fresh seafood and processing products
- Exported to several countries in the European region







Broiler farm

- Belonged to an integrated company which is in the top 3 of all poultry production businesses in Italy
- Raise broiler chickens; females and males were in the same house but separated zones
- Good biosecurity practice









Necropsy practice

Cattle slaughterhouse

- Treviso province in Veneto region (Northeastern of Italy)
- Established in the 1950s
- A high-technology cattle slaughterhouse
- Products sold domestically and over European region







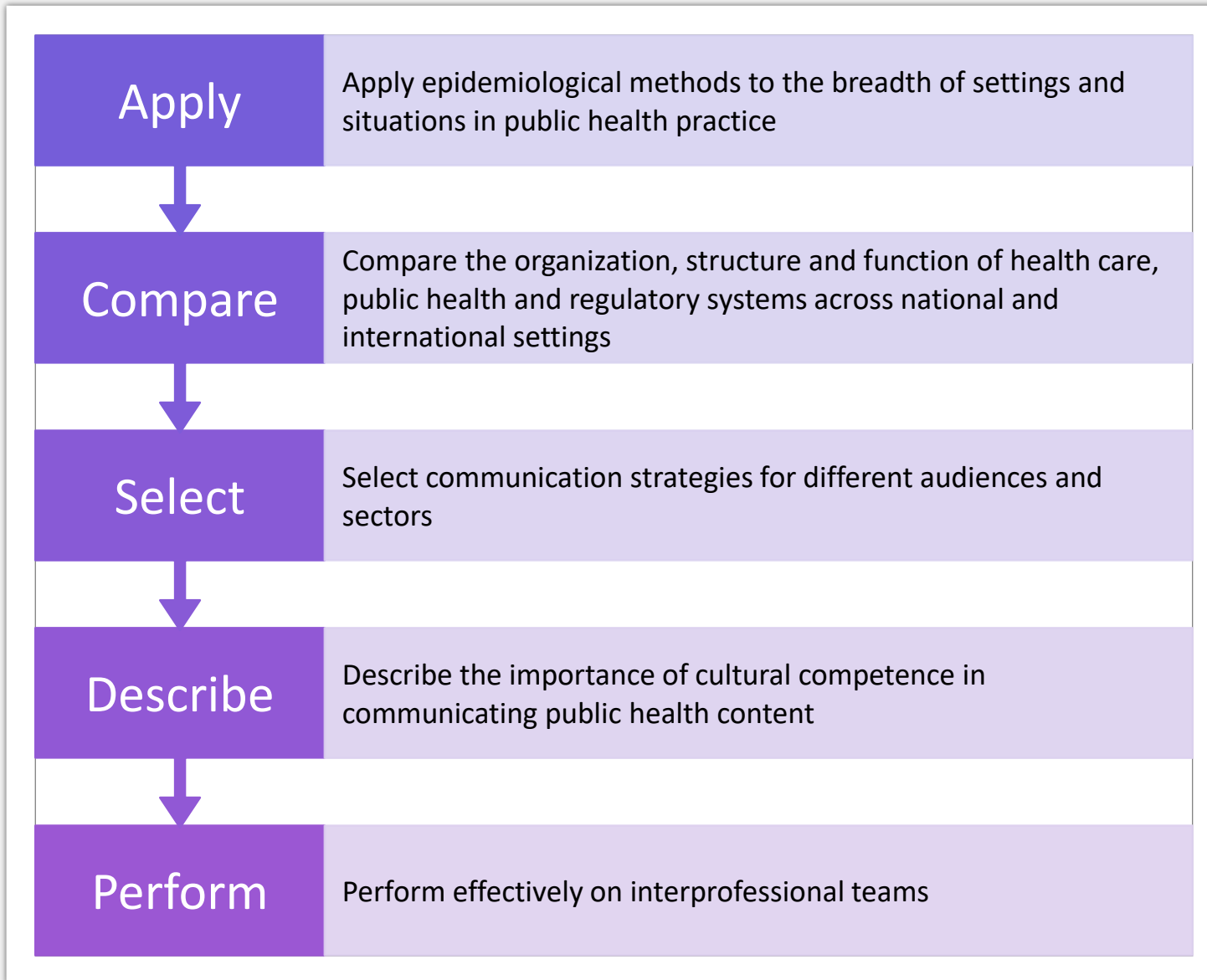












Summary of MPH Foundational Competencies

Summary of MPH Emphasis Area Competencies



Food safety and biosecurity



Threats to the food system



Food safety laws and regulations



Food safety policy and the global food system

- Dr. Justin Kastner
- Dr. Abbey Nutsch
- Dr. Valentina Trinetta
- Dr. Ellyn Mulcahy
- Barta Stevenson
- Dr. Tarrie Crnic
- KDA staff members
- University of Padova, Italy
- Thai government
- My family, friends and Thai community
- My mother

Acknowledgement