Overview of USDA Role in Equine Health

Rory O. Carolan, DVM
Equine Health Team, Lead
Surveillance Preparedness & Response
Veterinary Services
USDA
Riverdale, Maryland
A study commissioned by the American Horse Council in 2004 reported 9.2 million horses in the United States with $39 billion in direct economic impact.

In 2012, Kentucky’s equine industry had a statewide economic impact of almost $3 billion and generated 40,665 jobs.

Global trade in horses in 2014 was approximately $2.4 billion and the value of horses exported by the United States totaled $456 million, which puts the U.S. as the world’s leader in exports by value.

The value of U.S., live, exported equines exceeds the value of cattle, swine, sheep & goats combined and is double the value of all exported live poultry.
Very limited regulations regarding control of equine diseases compared to other livestock.

Yet there have been some very costly and impactful disease outbreaks – Industry or State Animal Health authorities have requested USDA help in their management.

USDA support and infrastructure is often less visible to the equine industry, but no less important.
USDA supports State and industry responses to equine disease incidents by providing:

• **Coordination** among States
• Disease-specific **technical guidance**
• **Epidemiological expertise**
• **Database** maintenance
• **Diagnostic** assistance
• Approval for biologics, including vaccines

USDA creates **reports** and **information** to inform Stakeholders about disease or disease outbreaks.
USDA’s support or response is coordinated by the **Equine Health Team** working closely with USDA **District or field offices** and staff.

**Surveillance, Preparedness & Response Equine Activities**

- Respond to equine health incidents
- Conduct epidemiological investigations, provide timely and accurate tracing and information
- Equine disease monitoring and surveillance
- Equine specific health planning
Disease response can only be accomplished an extensive:

**Animal Health Infrastructure**
- District/Field Staff
- National Veterinary Services Laboratories
- Center for Epidemiology and Animal Health
- Center for Veterinary Biologics
- Agricultural Research Service
- Veterinary Accreditation
- One Health
- Animal Disease Traceability
- National Preparedness and Incident Coordination
- National Veterinary Stockpile
- Investigation and Enforcement Services
National Veterinary Services Laboratories

• International (OIE) & National Reference Lab
• Diagnostics
  o Clinical
  o Surveillance
  o Import/Export
• Foreign Animal Disease investigations
• Laboratory Approvals
• Provide consultation & support expertise
• Maintain an EIA + herd
National Animal Health Laboratory Network

• Strategy to coordinate national animal disease surveillance & testing

• Expanded laboratory infrastructure

• Activated in large scale outbreaks – thousands of samples

• State/University/Federal cooperation & communication
Center for Epidemiology & Animal Health

- strengthen animal health infrastructure
- timely and accurate information and analysis
- surveillance, monitoring, risk analysis, spatial epidemiology, and modeling
  - Monitoring & Modeling Group
  - Surveillance Design & Analysis Group
  - Risk Identification & Assessment Group

- National Animal Health Reporting System
- National List of Reportable Animal Diseases
Some examples of equine activities:

- National Animal Health Monitoring System (NAHMS) Equine Studies
- Equine Herpesvirus Case Control Studies
- Develop Plan for Equine Comprehensive Integrated Surveillance
- Project Related to Assessing Potential Distribution of Cayenne Tick
NAHMS National Equine Studies

- Previously conducted in 1998 and 2005
- The third study is ongoing NAHMS Equine 2015-2016
  - Phase I data collected, validated and undergoing analysis
  - Phase II planned to begin in spring 2016
NAHMS Equine Study 2015-2016 Objectives

• Trends in equine care and health management

• Occurrence of lameness and management of lameness

• Health practices for important equine infectious diseases

• Health related costs of equine ownership

• Evaluate control practices for gastrointestinal parasites

• Evaluate for ticks and describe tick-control practices

• Collect sera & create a serum bank for future studies
Center for Veterinary Biologics

• Licenses and regulates veterinary biologics
  Vaccines, antibodies, diagnostic kits

• Ensure that the veterinary biologics that are available for the diagnosis, prevention, and treatment are:
  Pure, safe, potent, and efficacious

• Adverse event reporting
Agricultural Research Service

- Develop & validate Piroplasmosis diagnostics
- Evaluate efficacy of Piroplasmosis treatment
  - Vesicular Stomatitis Virus
  - Insect vector research
National Veterinary Accreditation Program

• Inform and train veterinary practitioners about regulatory diseases and matters

• Interstate & international movement

• Protect public health

• Almost 65,000 veterinarians are accredited; of which over 5,000 are equine veterinarians

• Equine specific training is available and offered on line and in lecture format at veterinary conventions
One Health

- Concept that the health of animals, the health of people, and the ecosystem are linked. Healthy productive livestock and pets lead to healthy people and a sound environment.

- Equine surveillance data on arboviral infections reported through State Animal Health and in collaboration with CDC.

Animal Disease Traceability

- Where diseased and at-risk animals are, where they've been, and when. Important to ensure a rapid response when animal disease events take place. Reduce the number of animals involved in an investigation, reduces the time needed to respond, and decreases the cost to producers and the government.
National Preparedness and Incident Coordination

• Strategies and policies for effective incident management and help to coordinate incident response.

• Liaison

National Veterinary Stockpile

• Logistics Center

• Protect food supply

Vaccines, antivirals, supplies, equipment, and response support for use in high impact animal disease incidents
Investigation & Enforcement Services

- Investigations of potential violations of USDA’s regulations
- Enforcement action when warranted
- IES works with program leaders to establish alternative solutions for addressing low-risk compliance issues
- Serious cases referred to USDA’s Office of General Counsel (OGC); higher penalties and more serious sanctions against alleged violators.
Many Possible Streams of Reporting Animal Diseases

- State Requirements
- Public Health Requirements
- FBI/DHS notification
- Internal USDA reporting
- Public USDA reporting
- National Reporting
- International Reporting
  - OIE
  - Trading Partner communication
Reporting Animal Diseases

- **National Animal Health Surveillance System**
  - integrates animal health monitoring and surveillance activities conducted by many Federal and State government agencies into a comprehensive and coordinated system.

- **National Animal Health Reporting System**
  - State animal health officials report monthly on the occurrence of confirmed OIE-reportable diseases
National List of Reportable Animal Diseases

- In progress
- Single uniform, standardized list of reportable diseases
- Consistent reporting
- Facilitate commerce; national and international
- Assist in meeting OIE & other reporting requirements
- Based on the OIE list of reportable diseases
- Minor variations from the list of diseases currently being reported through the National Animal Health Reporting System
World Health Organization (OIE)

Mission: support safe international trade of animals/products.

- Information on the occurrence and distribution of animal diseases throughout the world.

- Define animal health related standards all for governmental use in making risk based regulatory decisions.

- There are 180 member countries, uses a democratic process.

- USDA VS expends considerable resources meeting the reporting requirements and providing our input into the OIE standards. In the event of a trade dispute the WTO refers to these standards in formulating a resolution.
World Health Organization (OIE)

OIE Member Countries' official AHS status map
Last update May 2015

Member Countries recognised as free from AHS
Countries without an OIE official status for AHS
World Health Organization (OIE)

Some OIE listed diseases that affect equines:

- Contagious equine metritis
- Dourine
- Equine encephalomyelitis (Western)
- Equine infectious anemia
- Equine influenza
- Equine piroplasmosis
- Glanders
- Infection with African horse sickness virus
- Infection with equid herpesvirus-1 (EHV-1)
- Infection with equine arteritis virus
- Venezuelan & Eastern equine encephalomyelitis
- Surra
- West Nile Virus
USDA’s Equine Health Team

Equine specific planning and support:

• Options for control of Equine Infectious Anemia

• Assist industry with development of a National Equine Health Plan

• Provide subject matter expertise & funding the Equine Disease Communication Center
USDA’s Equine Health Team

Equine specific planning and support:

• High level APHIS stakeholder annual meeting

• Annually revised Equine Health 5 year activity & strategy plan

  • Transparency & Clarity
  • Greatly increased awareness of stakeholders
  • Posted on VS website
APHIS/BLM Wild Horse & Burro Partnership

- Interdepartmental agreement provides BLM with veterinarians & experts in animal health and welfare that provide consultation/support for BLM WH&B.
- APHIS veterinarians provide a second opinion and epidemiologic support for BLM facilities & consultation on animal health and welfare issues.