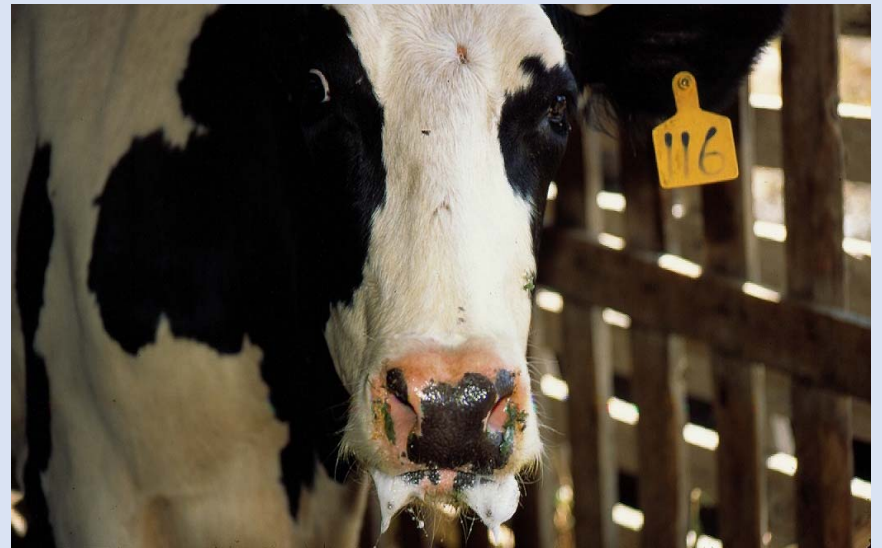


# Introduction to Foot-And-Mouth Disease (FMD)

by Tom McKenna for the  
Pre-Seminar Webinar  
May 19, 2015



# Topics



- **Disease**
- **Economics**
- **Vaccines**

# FMD the Disease



- **Affects cloven-hooved (two toed) ruminants primarily (cattle, pigs, sheep)**
- **High Morbidity (illness) but Low Mortality (death)**
- **Incredibly Contagious – spreads fast!**
- **Causes vesicles/blisters on feet and mouth**



# FMD the Economics



- **Disease of Trade**
- **Roughly 30% of Animal Ag Production is for Export (varies with industry).**
- **One of the few areas where the US has a positive trade balance**
- **Stigma of having FMD shuts down international trade**
- **It takes years to regain market share after losing it**

## 2013 Data Overview

- U.S. agricultural exports supported output, employment, income, and purchasing power in both the farm and nonfarm sectors. [ERS\\* estimates](#) that, in 2013, each dollar of agricultural exports stimulated another \$1.22 in business activity. The **\$144.38 billion of agricultural exports** in 2013 produced an additional \$176.0 billion in economic activity for a **total economic output of \$320.3 billion**. Every \$1 billion of U.S. agricultural exports in 2013 required 7,580 American jobs throughout the economy. Calendar year 2013 **agricultural exports required 1,094,400 full-time civilian jobs**, which included 793,900 jobs in the nonfarm sector. The agricultural export surplus **helped to offset some of the nonagricultural trade deficit**.

\* USDA/Economic Research Service



# FMD - Vaccines



- **7 serotypes, but over 60 antigenically distinct sub-serotypes**
- **Exposure to FMDv soon after vaccination may result in “carrier status”**
- **Vaccine supply challenges**
- **Trade implications from using vaccine**
- **Consumer acceptance of vaccination**

# Contact Information

Tom McKenna

USDA – APHIS – Veterinary Services  
160 Worcester-Providence Turnpike  
Sutton, MA 01590

Email: [thomas.s.mckenna@aphis.usda.gov](mailto:thomas.s.mckenna@aphis.usda.gov)

Work Phone: 508-363-2290

Cell Phone: 508-887-3421

