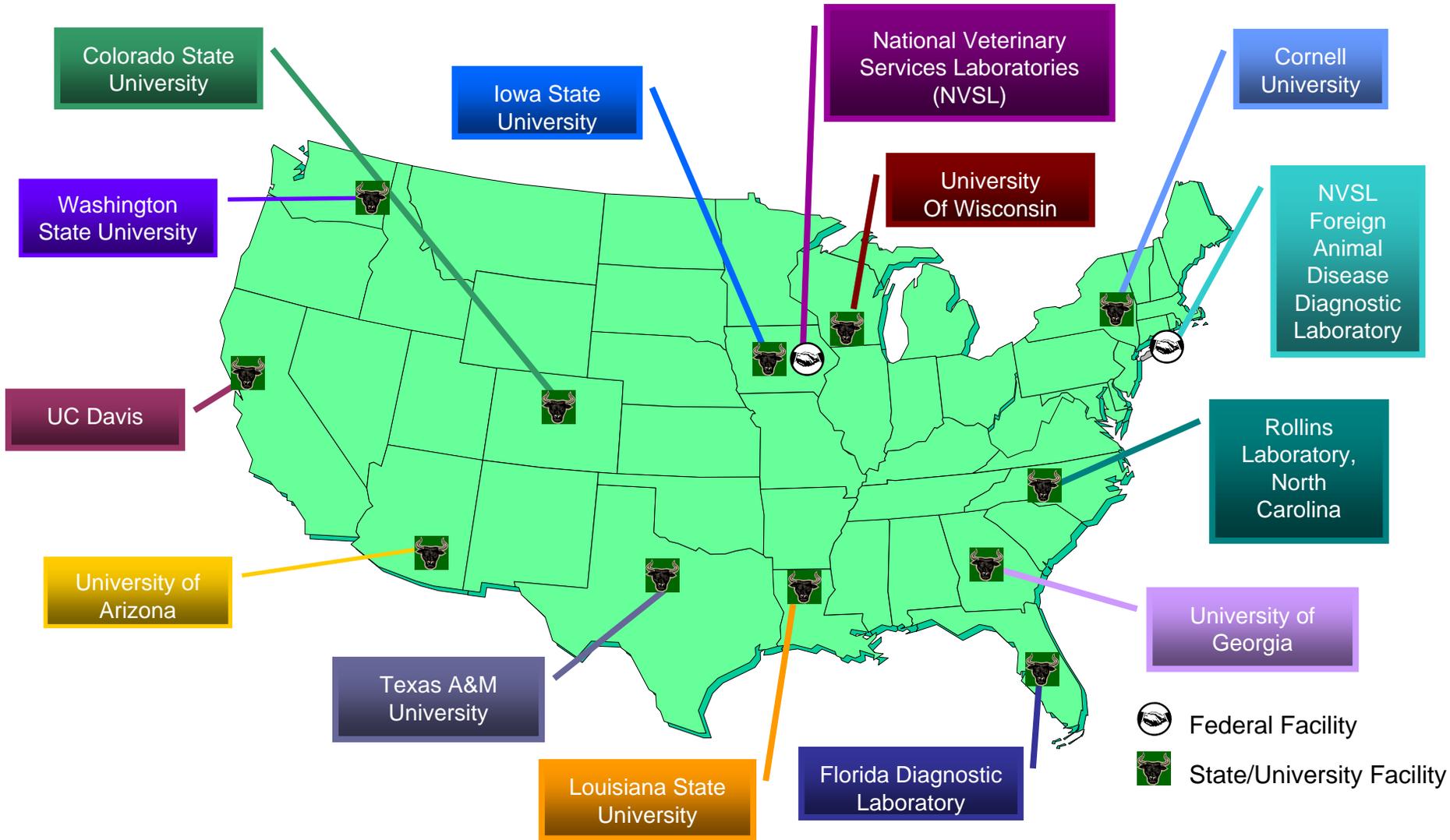


NAHLN Founding Principles



NAHLN- A State and Federal Partnership to Safeguard Animal Health

National Animal Health Laboratory Network-2002



National Animal Health Laboratory Network

- Partnership
 - USDA
 - Animal and Plant Health Inspection Service
 - Cooperative State Research Education and Extension Service
 - AAVLD
 - NAHLN laboratories
- Purpose
 - Early detection
 - Targeted surveillance based on population density & risk
 - Rapid response
 - Surge capacity to test outbreak samples
 - Appropriate recovery
 - Large numbers of samples tested to show freedom



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Founding Principles and Features of NAHLN

- Standardized, rapid diagnostic techniques
- Trained personnel, modern equipment
- Quality standards, proficiency testing
- Secure communication, alert, reporting system
- Adequate facility biosafety/biosecurity levels
- Scenario testing



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Standardized, Rapid Diagnostic Techniques

- Deployment of validated assays
 - Real time PCR
 - AI
 - END
 - CSF
 - FMD
 - ELISA
 - BSE



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Standardized, Rapid Diagnostic Techniques

- Established NAHLN Methods Technical Working Group
 - Provide input on methods validation and approval
 - Review of available methods and associated gaps
 - Identify potential new technologies
 - Determine equivalency of modified methods or platforms
 - Monitor performance of assays
 - Development of performance characteristic summary documents
- Dossier review and assay approval processes



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Training and Proficiency Testing

- Train the Trainer
 - 2005 Implemented with CSF & FMD
 - Increased the number of trained labs from 12 to 28
 - 2006 Activities
 - Incorporated AI & END
 - Cross training for PCR accepted across diseases
 - Interlaboratory Training
 - 2007 Activities
 - Increase personnel trained and PT'd to ≈200
- Proficiency testing
 - AI/END, CSF/FMD, >200 personnel PT'd
 - CWD, BSE, Scrapie, 26 labs



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Secure communication, alert, reporting system

- Established a system with data and messaging standards to ensure accurate and consistent diagnostic information is quickly and securely transmitted.
 - LOINC and HL7

- Production system in place July 2007
 - AI and CSF Messaging
 - Successful messages
 - CSF – 25 labs
 - AI – 24 labs



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Adequate facility biosafety/biosecurity levels

Modeling to Determine Diagnostic Capacity

- Data used
 - Current laboratory information
 - BSL-2 and BSL-3 space
 - Trained personnel
 - Equipment
 - Animal populations
 - Risk
- Other uses for model
 - Prioritization need for new/remodeled laboratory space
 - Assistance development of policy concerning where samples will be tested



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Scenario testing

- NAHLN Exercises and Drills Working Group
 - Formed September 2007
- Facilitated Tabletops
 - Focusing on laboratory issues with field input
 - Training and reusable tabletop exercise will be provided to each NAHLN lab
 - Beta testing to be initiated in February 2008
 - Iowa and Ohio
 - Regional presentations - 2008
 - NAHLN labs
 - State Vets and State animal health officials
 - VS Field Staff and AVICS
 - Other interested groups



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AI Wildbird Surveillance

- 45 laboratories participating
- Conducting surveillance for Wildlife Services
 - Real time PCR
 - 2006 - 80,000 pooled samples
 - 2007 – 50,000 samples from individual birds
- Inter and intra-agency coordination, communication and training



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CSF Surveillance

- Plan developed by National Surveillance Unit with stakeholder input
 - Target clinical signs, feral swine, slaughter condemned
 - All high risk states involved
- Implemented – January 2006
 - >20,000 samples tested
 - 36 laboratories participating
- Data submission
 - Web based and electronic messaging



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Successes of the NAHLN

- Strategically combines the infrastructure and expertise in the state veterinary diagnostic laboratories and the National Veterinary Services Laboratories.
- Established the animal health laboratory backbone of the United States emergency response and recovery program.
- Implemented national, standardized surveillance for high priority diseases.



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Conclusions

- From 12 to 54 State/University veterinary diagnostic laboratories
- Surveillance for foreign animal diseases in State facilities
- Increased levels of coordination and collaboration
- Much remains to be accomplished
 - Increased infrastructure support needed
 - Strategic planning and growth
- Partnerships are key to the success of NAHLN!



NAHLN- A State and Federal Partnership to Safeguard Animal Health

NAHLN INFORMATION

- Brochure and Information Cards
- Posters
- Website:
http://www.aphis.usda.gov/animal_health/nahln
- Contact information:

E-mail: nahln@aphis.usda.gov

Telephone: 515-663-7731



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