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Good morning, Chairman Mann, Ranking Member Costa, and Members of the Subcommittee, thank you for the opportunity to address you today. I'm Terry Hensley, assistant agency director of the Texas A&M Veterinary Medical Diagnostic Laboratory, or TVMDL. I have the privilege of serving at one of our nation's busiest veterinary diagnostic laboratories, which runs over 1 million tests annually. Most of our caseload comes from within Texas, but we also receive samples from all 50 states and 20 other countries. As you know, animal diseases don't respect geographic boundaries. It Is imperative that our veterinary diagnostic laboratories in all 50 states have the same capabilities to detect diseases quickly and accurately, to limit the spread and mitigate the impact on animal agriculture. The NAHLN has built a responsive, effective partnership of state and federal laboratories that leverage resources and talent across the nation.

Introduction

The National Animal Health Laboratory Network (NAHLN) was developed in response to the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, and the Homeland Security Presidential Directive/HSPD-9 of 2004 to "develop nationwide laboratory networks for food, veterinary, plant health and water quality that integrate existing Federal and State laboratory resources, are interconnected, and utilize standardized diagnostic protocols and procedures".

NAHLN laboratories provide animal health diagnostic testing, methods research and development, and expertise for education and extension to detect biological threats to the nation's animal agriculture, thus protecting animal health, public health, and the nation's food supply.

The NAHLN enables Federal and State laboratories to test for economically devastating and potentially zoonotic diseases such as foot-and-mouth disease, African swine fever, influenza in avian and swine species, and bovine spongiform encephalopathy (BSE) among other NAHLN scope diseases. This network serves as our nation's most vital early warning system for emerging and foreign animal diseases.

The laboratories within the NAHLN are equipped with state-of-the-art technologies and staffed by highly trained professionals. This, along with the requirement for third-party accreditation to internationally recognized quality standards, ensures the highest levels of diagnostic accuracy and reliability. By providing precise and timely diagnoses, NAHLN laboratories enable veterinarians and livestock producers to make informed decisions about animal health management, thus fostering the overall well-being of livestock.

The NAHLN's primary importance lies in its ability to facilitate early detection and rapid response to animal disease outbreaks. The network laboratories, strategically located across the United States, work collaboratively to conduct surveillance, diagnostic testing, and research. The rapid identification of pathogens enables swift action to contain and eradicate diseases, thus preventing their spread and minimizing their impact.

Effective disease control requires collaboration and coordination among various stakeholders. The NAHLN works closely with federal and state agencies, industry groups, and international organizations to ensure a unified response to animal health threats. This collaborative approach enhances the network's ability to address complex challenges and strengthens the overall resilience of the animal health infrastructure.

NAHLN celebrated its 20th anniversary in 2022, and it’s been remarkable to see how far the network has come since the early days of its inception. The NAHLN Program Office has worked tirelessly to forge and strengthen the relationships with every one of the NAHLN member laboratories so we can respond as a network to the ever-increasing disease incursions threatening our nation’s animal agriculture industries. It’s crucial that the NAHLN be fortified and enabled to provide preparation, prevention, diagnosis, response, and recovery from economically important and potentially zoonotic diseases. Ensuring the NAHLN has sufficient funding will aid in addressing our nation’s need for a safe, stable, and nutritious food supply. We want to thank Congress for the increased funding for NAHLN in the Reconciliation Bill and for Congressman Ronny Jackson in helping lead those efforts.

TVMDL Background Information

TVMDL was a charter member of the NAHLN, one of the original 12 labs identified as a Core Lab in 2002. To understand why TVMDL was chosen as one of the Core Labs, a closer look at the State of Texas is in order. Texas has several attributes that put it at increased risk for the introduction of animal disease threats. Texas shares a border with four Mexican states (1,248 miles long) and four US states. Texas has multiple land ports, seaports, and international airports. The state imports more live animals than any other state, including

1million cattle annually from Mexico, and 2.5 million cattle from other US states. In addition to domestic livestock species, Texas has an abundance of feral and farmed wildlife species, such as cervids, exotic hoof-stock, and feral swine. Three major migratory flyways lead birds to the state. The interface between domestic and wildlife species poses a tremendous challenge for disease surveillance, detection, and eradication. Texas' geographic location is obviously an urgent concern for the introduction of New World Screwworm into the U.S. from Mexico, and for African Swine Fever from the Dominican Republic and Haiti.

Texas is home to the nation's largest livestock industry and leads in the production of cattle, goats, sheep, and lambs. The cattle industry is worth approximately $12.3 billion and produces 15% of the nation's fed beef. The state ranks sixth in the nation in poultry production (broilers and eggs) and fourth in milk. As one of the most popular game animals, white-tailed deer are important to the state's economy with deer hunting generating an estimated $1.2 billion in economic output. Texas is also one of the leading exporters of animal and animal products, and the state boasts a population of nearly 1 million horses. TVMDL offers state-of-the-art diagnostic services to each of these industries.

The Texas Legislature created the TVMDL as a state agency in 1967, and the first laboratory within the TVMDL system opened in College Station in 1969. Today, TVMDL is a member of the Texas A&M University System and has four locations throughout the state (College Station, Canyon, Center, and Gonzales). With its strategic locations, TVMDL is uniquely positioned to serve the animal industries of Texas and the surrounding region. TVMDL's work enhances the response preparedness of the NAHLN and protects Texas' $24 billion animal agriculture industries. Our College Station and Canyon laboratories harbor a tremendous amount of expertise in diagnostics that support the cattle-feeding and dairy industries. The staff foster strong, collaborative relationships with agricultural industries in the region. TVMDL's Center and Gonzales labs are strategically located in the poultry-rich regions of the state.

TVMDL employs 165 staff, including 31 veterinarians, 22 of which hold at least one board certification in their specialty. TVMDL processes over 180,000 submissions and performs over 1 million tests each year on samples submitted from throughout Texas, all 50 states, and at least 20 countries across the globe. Routine laboratory submissions provide the backbone of both a state and nationwide animal and public health surveillance system. With nearly 700 different assays in TVMDL's test repertoire, ranging from classic methods to cutting edge technologies, the agency has one of the broadest offerings of any veterinary

diagnostic laboratory in the United States. TVMDL staff routinely attend industry meetings and work with producers and veterinarians to establish priorities. Statewide, TVMDL has well-established, collaborative relationships with the Texas Animal Health Commission (TAHC), Texas Department of State Health Services (DSHS), Texas Parks and Wildlife Department (TPWD), Texas Poultry Federation, Texas Cattle Feeders Association, and numerous other industry and commodity groups.

With recognition as a Level 1 laboratory of the National Animal Health Laboratory Network (NAHLN), we participate in and maintain capacity and competency in testing for most of the diseases in the NAHLN program. We are also actively engaged in daily testing for notifiable and monitored diseases, select agents, as well as state and federal regulatory diseases. Our Canyon and College Station labs house the only BSL3 laboratories in Texas dedicated to animal disease detection.

TVMDL strives to identify and develop new technologies that strengthen our diagnostic capacities. In collaboration with national and international research scientists, TVMDL works to develop, test, and validate new diagnostic assays. In 2019, the Texas A&M University System Chancellor provided $3 million to TVMDL specifically designated to enhance TVMDL's research and development capabilities. This enabled TVMDL to establish a Research and Development Section (R&D) that works alongside the diagnostic testing sections to identify emerging disease threats that need targeted diagnostic assays. The R&D Section also coordinates with the Veterinary Services Section, a team of veterinary diagnosticians that have extensive clinical practice experience in large animal, small animal, equine, and wildlife medicine. This team also includes veterinarians with training in epidemiology and veterinary preventive medicine.

In the 88th Texas legislative session that ended in May of 2023, appropriations were approved for a new initiative called "Keeping Texas Prepared." This $96 million program brings together 5 state agencies that are tasked with disaster response and recovery: Texas A&M AgriLife Extension Service, Texas Division of Emergency Management, Texas A&M Engineering Extension Service, Texas A&M Forest Service, and TVMDL. These 5 agencies meet to discuss current and emerging disaster situations and threats. The State of Texas recognizes the crucial role each agency plays in mitigating the effects of natural disasters, including human and animal disease threats, and has seen fit to increase the base funding for each agency. TVMDL was appropriated $3.7 million per biennium specifically for the rapid detection of animal and human disease threats.

TVMDL's two full-service labs are located adjacent to higher education institutions that are leaders in veterinary medicine. In College Station, Texas A&M University's College of Veterinary Medicine & Biomedical Sciences (CVM) is one of the largest and highest-ranking colleges of veterinary medicine in the U.S. In 2009, CVM partnered with West Texas A&M University in Canyon to create VERO, the Veterinary Education, Research, and Outreach program in the Texas Panhandle. TVMDL's College Station laboratory also has strong partnerships with internationally recognized organizations such as the Texas A&M Institute for Infectious Animal Diseases (IIAD) and the Norman Borlaug Institute for International Agriculture.

TVMDL and the NAHLN

Routine surveillance and monitoring by laboratories such as TVMDL are vital components of the NAHLN's operations. Through regular testing and data collection, the network can identify disease patterns and emerging threats. Ideally, this results in timely implementation of control measures to prevent disease spread. As Texas is vulnerable to many of these disease threats, TVMDL tests for most of the diseases under the NAHLN scope, including African Swine Fever, Classical Swine Fever, Scrapie, Chronic Wasting Disease, Avian Influenza, Swine Influenza, and Newcastle disease. TVMDL's involvement in diagnosis and surveillance for the NAHLN includes the 2002-2003 outbreak of Exotic Newcastle disease, requiring the depopulation of over 3 million poultry and a total cost of $161million for eradication. In 2005, TVMDL found one of only six cases of Bovine Spongiform Encephalopathy (BSE) ever diagnosed in the U.S. In 2004-2006, 2015, and 2020, Texas and other states experienced numerous outbreaks of Vesicular Stomatitis Virus (VSV). TVMDL has worked closely with the NAHLN, TPWD, and TAHC on surveillance testing for Chronic Wasting Disease since the discovery of the disease in Texas in 2012. Texas was not impacted by the outbreak of highly pathogenic avian influenza (HPAI) in 2014-2015, which at that time was the largest animal disease outbreak in U.S. history, but 15 other states were not as fortunate. The direct losses of this outbreak were ~$1billion, with a loss of 50 million birds and an overall economic loss of $4.4 billion (adjusted to 2025), and NAHLN laboratories performed approximately 80,000 PCR tests for HPAI. There were many lessons learned and shared throughout the network from this outbreak, but it would soon be eclipsed in 2022 by the current outbreak of the H5N1 strain of HPAI.

The 2022-present outbreak of Highly Pathogenic Avian Influenza

The largest animal disease outbreak in U.S. history and the biggest challenge faced to date by the NAHLN and its member laboratories started in early 2022. This H5N1 strain of virus,

carried and spread by wild birds, was first detected in February of 2022 in Indiana and spread quickly. In Texas, TVMDL's first detection was in March of 2022 in a flock of captive gamebirds. By the end of 2022, all four of TVMDL's labs throughout the state had detected the virus in backyard poultry flocks and wild birds, but our commercial poultry industry remained unscathed. The outbreak persisted throughout 2022 and 2023, as the virus spread to nearly every state in the U.S. This strain of virus also showed an unusual ability to jump into mammalian species, generally causing a fatal neurologic disease in omnivores and carnivores such as foxes and skunks, and large cats such as mountain lions, tigers, and lions. As months turned to years, NAHLN and its partner laboratories shared data and information daily and weekly and maintained lines of communication with State and Federal veterinarians, commercial industry stakeholders, and others involved in the battle to contain this disease. However, a further demonstration of NAHLN's important role and the collaboration of NAHLN laboratories was to play out in 2024.

Highly Pathogenic Avian Influenza in dairy cattle

In February and March of 2024, many dairies in the Texas Panhandle reported a mysterious illness amongst their lactating cattle. The cattle were showing various signs of illness, but the most striking feature in every herd was dramatic decreases in milk production. Dairy veterinarians sent samples to TVMDL, as well as our fellow NAHLN labs at Cornell University and Iowa State University. For several weeks, our laboratories ran every test we could think of that might provide an explanation, but there were no definitive answers. A few dairy veterinarians reported that some premises had large numbers of dead wild birds. To no one's surprise, the birds tested positive for H5N1 HPAI. Still, no one suspected the link between the virus and the illness in dairy cattle. One of the veterinarians reported that on several of the dairies, the barn cats had all died suddenly or had simply disappeared. TVMDL tested the brains of several dead cats, and it contained high amounts of H5N1 HPAI virus. With that, the possibility of a connection between the virus and sick cattle was suggested. On Friday, March 22, 2024, a nasal swab from a cow tested weak positive for H5N1 at TVMDL. TVMDL shared tissue samples with our colleagues at Iowa State from a sick cow that was sacrificed in hopes of getting a diagnosis. On Friday, March 22, 2024, Iowa State ran tests demonstrating the presence of H5N1 virus within infected mammary gland tissue and milk. These striking results were reported to NAHLN and confirmed by the National Veterinary Services Laboratories over the weekend. By Monday, March 25, 2024, the USDA made the unprecedented announcement of an outbreak of Highly Pathogenic Avian Influenza in U.S. dairy cattle.[1] We now know that unfortunately, before this discovery, asymptomatic cattle had already shipped outside of Texas. The virus spread from one state to another and there are currently 17 states and nearly 1100 herds affected nationwide.

Fortunately, due to measures enacted by USDA and affected states, the spread of the disease in dairy cattle appears to be slowing. However, commercial poultry operations continue to be infected, with over 100 million birds lost, and a direct cost of over $1.4 billion as of November 2024.[2]

The initial outbreak in Texas cattle was determined to be caused by a single spillover event from a wild infected bird into a cow, likely around December of 2023. Disease spread from the index herd to other herds within Texas and to other states was largely due to movement of infected cattle.[3] Whole genome sequence analyses have demonstrated the ability of the virus to cross species barriers.[4] There is also a public health threat, as there are numerous documented transmissions of the virus to dairy and poultry farm workers exhibiting influenza-like symptoms. The human illnesses have mostly been mild, although there have been several requiring hospitalizations and one death in an individual with underlying health conditions.[5,6]

Funding for the NAHLN

NAHLN has been authorized for funding at $30 million since 2012 but has only been allocated $24.9 million from APHIS ($20.7 million) and NIFA ($4.2 million). These amounts are far below the $45 million needed for the NAHLN to fully support its mission.[7]
In 2024, of the $24.9 million total NAHLN funding, $7,885,335 (32%) was used for fee-for-service testing supporting the surveillance and diagnostic testing for NAHLN program diseases (BSE, Scrapie, CSF/ASF, HPAI, etc.) and foreign animal disease (FAD) investigations. Another $14,343,000 (58%) was used to support NAHLN member laboratories, with funding levels apportioned by the number of labs at each of the Level 1, 2, and 3 designations.

While all NAHLN laboratories are grateful for the federal funding we receive, these amounts distributed across 64 laboratories do not go far. In TVMDL's case, as a Level 1 laboratory, we receive the highest level of NAHLN funding possible: $250,000 from the NIFA Line Item, and $128,000 in infrastructure funding, for a total of $378,000, or approximately 1.5% of our annual revenue budget. The money goes towards supporting portions of select staff salaries and purchasing certain equipment used for NAHLN testing. It is therefore easy to see how this federal funding leverages resources available at the state level to conduct testing that benefits the nation. However, it should be noted that all states are not resourced equally and many NAHLN laboratories are much more reliant on NAHLN funding to afford the equipment and personnel necessary to carry out the mission of the NAHLN.

Additionally, the $24.9 million has remained level for several years and has not increased despite the heavy burden placed on the network by HPAI in poultry and dairy cattle.
In conclusion, the USDA's National Animal Health Laboratory Network is a cornerstone of the United States' efforts to protect livestock and ensure the health and productivity of the agricultural sector. Through early detection, diagnostic excellence, economic protection, research advancement, and public health enhancement, the NAHLN plays a vital role in safeguarding the nation's livestock and supporting the livelihoods of farmers. Its contributions are invaluable in maintaining the prosperity and security of the US agricultural industry.

References

1. USDA announcement March 25, 2025

2. Bird flu outbreak costs U.S. poultry industry $1.4 billion. Forbes, Jan 30, 2025.

3. Nguyen TQ, Hutter CR, Markin A, et al. Emergence and interstate spread of highly pathogenic avian influenza A(H5N1) in dairy cattle in the United States. 2025;388

4. Caserta L, Frye EA, Butt SL, et al. Spillover of highly pathogenic avian influenza H5N1 virus to dairy cattle. Nature. 2024;634(8034):669-6763.

5. Garg S, Reinhart K, Couture A, et al. Highly pathogenic avian influenza A(H5N1) virus infections in humans. The New England Journal of Medicine. 2025;392(9):843-854.

6. Louisiana Department of Health press release, January 6, 2025

7. NAHLN is Essential to the Health of Food Animal Agriculture, Food Security, Bioterrorism Surveillance, and the U.S. Economy: $45 million total annual funding is needed. AAVLD/USAHA position statement.