



AgBrief

Veterinary Diagnostic Labs

Animal Health Program

The goal of MDA's Animal Health Program is to prevent and control infectious and contagious diseases in livestock and poultry. MDA puts particular emphasis on preventing diseases that threaten the public health, endanger food supplies or threaten animal industries. **A key component of this effort is the state's veterinary diagnostic laboratory system**, which includes a livestock health laboratory in Frederick and a poultry health laboratory in Salisbury. Together, these labs provide a wide array of diagnostic services to MDA, other state and federal agencies, producers and other agricultural businesses, and farm animal veterinarians and animal owners.

The mission of the MDA Animal Health Diagnostic Laboratory system is to:

- Provide diagnostic support to MDA regulatory and emergency programs in Animal Health;
- Provide limited and targeted diagnostic support to USDA and other states in support of disease control programs impacting Maryland livestock and poultry health;
- Provide limited and targeted diagnostic support to animal disease control programs of the Maryland Departments of Health and Mental Hygiene and Natural resources for diseases with potential public health significance or that may impact livestock or poultry health;
- Provide a broad range of livestock and poultry diagnostic services to private veterinarians and producers to assist in improving the health and productivity of animal agricultural resources; and
- Provide limited and targeted diagnostic support to local animal control agencies to assist in investigations and prosecutions of animal neglect, abuse and cruelty cases.

Each of MDA's two animal health laboratories has a specific geographic and technical mission.

The Salisbury Laboratory focuses primarily on infectious poultry diseases and the commercial poultry industry of Delmarva and the Eastern Shore, although it is



also qualified to provide equine infectious anemia and salmonella diagnostics. The facility also has a large molecular diagnostic capability that is dedicated primarily to the detection of avian influenza, Newcastle disease, infectious bronchitis virus, infectious laryngotracheitis, and mycoplasmal diseases. The facility has a close working relationship and shares a laboratory information management system with the University of Delaware Poultry Diagnostic Laboratory. Together they operate a poultry health diagnostic network that seamlessly serves poultry producers of the Delmarva. Poultry is the largest agricultural sector in Maryland. MDA's Animal Health Laboratories provides surveillance testing to ensure poultry flocks are free of Avian Influenza prior to processing. The labs also test samples for Salmonella to ensure the flock complies with the regulations and programs established by the USDA National Poultry Improvement Plan (NPIP).

The Frederick laboratory focuses primarily on food animal livestock and horses; however, since 2011, it has been capable of testing and diagnosing poultry diseases so that it can assist the Salisbury laboratory during an emergency. The Frederick laboratory primarily serves constituents on the western shore of the state and can test and diagnose contagious equine metritis (CEM), equine herpes virus, equine infectious anemia, rabies,



Lyme disease, Johne's disease, and most recently, avian influenza. CEM is an infectious disease that most horses imported to or exported from the United States must be tested. CEM had been eradicated from the United States for many years; however, it was reintroduced in 2001. A large scale national investigation identified and isolated the infected horses and the United States is now considered CEM-free again. The reintroduction caused significant economic harm to the equine industries and triggered additional testing requirements on U.S. horses for export.

Credentials

Laboratory scientists in both labs are cross trained so that multiple people can perform each critical diagnostic test. This not only ensures continuity on a day to day basis but allows one lab to back up another if there is a disease outbreak. All laboratory scientists and technicians are also required to pass annual proficiency tests.

Both labs are long-standing members of the USDA's National Animal Health Laboratory Network and are approved to conduct numerous tests by the USDA's National Veterinary Services Laboratories (NVSL). The laboratories can also provide back-up services for USDA and laboratories in other states if there is a disease outbreak. In addition, both labs serve as Basic Sentinel Clinical Laboratories for the Maryland Department of Health and Mental Hygiene. Sentinel Clinical Laboratories analyze specimens that may contain microbial agents or biological toxins which would pose a serious threat to public health.

International Accreditation

In FY 2013, after a detailed three year process, the Salisbury and Frederick laboratories became the seventh and eighth animal health labs in the nation to be accredited for specific tests to the ISO/IEC17025 Standard by the American Association for Laboratory Accreditation (A2LA), an international laboratory accreditation organization.

To qualify for accreditation, the two laboratories had to demonstrate to A2LA, through detailed documentation, that they adhere to strict internationally recognized standards and protocols when conducting the accredited tests. The required documentation covers virtually every facet of laboratory testing – from how often staff members are trained to how often lab equipment is maintained

and calibrated to how samples are collected, handled, transported, processed, tested and disposed. Even processes that have no direct impact on the lab tests – such as how supplies are ordered and received – must all be carefully documented to ensure that the best laboratory practices are being adhered to, as defined and required by the international standard.



The Salisbury lab was initially accredited for Avian Influenza and Salmonella testing. It has since expanded its accredited scope of work to include Newcastle, Velogenic Newcastle Disease and Swine Influenza. The Frederick lab is accredited for Contagious Equine Metritis (CEM) and Avian Influenza.

What's does accreditation mean to industry?

Laboratory accreditation is important, especially for producers, because it assures national and international customers that Maryland poultry, livestock and horses are tested for infectious diseases according to internationally accepted protocols. **Accreditation demonstrates competence, impartiality, performance capability, and data traceability that meets or exceeds national and international standards.**



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