State Veterinary Laboratory Is Strong Defense Against Disease

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ments of total service performance.

The lab also divides its concerns between regulatory testing (meaning regulation-fulfilling and thus a more predictable and regular program of testing that requires dedicated staff), and the rest of animal disease discovery and control.

The system basically works this way:

• For non-regulatory disease research and testing, a veterinarian in the field has a suspect case and calls the lab and then ships the tissues or carcass. (Mostly tissues are sent to the lab, since the proper practice of diagnosing disease requires at least the use of deductive reasoning, employing a type of cause-and-effect, step-by-step, troubleshooting approach. That usually means isolating and testing certain organs or tissues that, based on symptoms or likely possbilities, can be expected to reveal the next likely possibility.)

• Materials are received at a loading dock. Whole animals are received and lifted from trucks with an overhead crane and chains. The carcass is passed to what essentially is a dissection room, though it looks as though it would make a good butchering floor.

Proper authorization, protective dress and footwear, and passage through a footbath, are required to enter the dissecting floor.

There, staff essentially begin the testing process, by removing tissues and fluids for testing and directing those initially prepared tissues to the proper labs for further preparation.

Certain tissues from materials received may be sent for processing in wax before being sliced thin, stained, and placed on a microscope, etc.

• If the materials are received and are part of a routine testing program, such as for brucellosis (The state has just been recently delcared brucellosis-free, which further adds to the cattle industry's exporting abilities.), the materials are prepared and then sent to those testing labs. There are several specialized testing labs located throughout the building — a brucellosis lab; an avian influenza lab; a Johnne's lab; and a psuedorabies testing lab.

The PDA diagnostic lab also employs the use of high-tech testing, whereby they are able to analyze small amounts of a virus or bacteria and replicate it enough to develop a picture of its DNA for identification through gene markers.

Three partners in the PADLS system have the capabilty to develop testing, given the funding and time, for new diseases of concern, or for diseases which have only recently stimulated concern for testing.

For example, several years ago, New York state faced a major problem with its trout angling program. New York, as does Pennsylvania, sells fishing licenses, and the general public has come to expect the fish agencies to stock trout for spring fishing in exchange for buying a license.

New York state trout hatcheries were devastated just before the regular April 1 trout season opening day, when many of its trout died or were destroyed because of something called "whirling disease."

Whirling disease is the result of a parasite that can be carried through the feces of water birds. It affects the nervous system of the fish in such a way as to cause them to exhibit a strange rapid swimming behavior — twisting around in a whirling motion.

As a state, Pennsylvania has a large trout production industry, and there were plenty of fish to be sold to New York state for stocking its waters for its crowd-drawing and license-selling first day event.

However, New York regulations required that fish entering the state be tested for whirling disease. There was no test available.

However, through cooperative effort, researchers with PDA and Penn State University quickly developed a test that was acceptable to New York and the fish were sold to New York.

New York made out in saving the New York fishing and hunting agency from embarrassment and the loss of potentially tens of thousands of dollars or more in lost license sales; Pennsylvania trout producers were able to export a large number of trout and realize increased sales.

Further, there is now a test for whirling disease.

But the ability of the state diagnostic lab and the tripartite to conduct tests and to develop testing procedures are considered invaluable to Pennsylvania's competitiveness as an agricultural power.

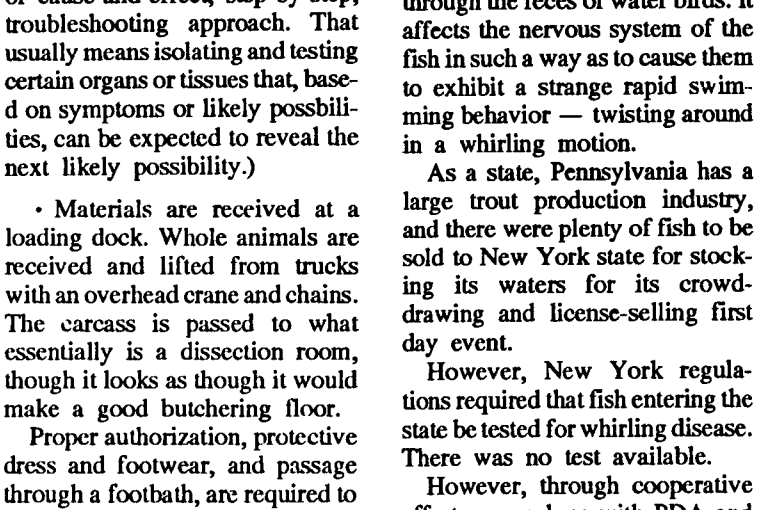
It keeps the PDA lab busy.

According to Purchase, in one year the lab can expect to conduct about 150,000 brucellosis tests; 50,000 psuedorabies tests; and a lot of Johne's Disease and other types of monitoring testing.

In light of June being Dairy Month, the state Diagnostic Laboratories should be recognized for the role it plays in helping the state's dairy industry remain competitive and healthy.

Purchase said the largest number of tests done now are for dairy related cases, regulatory and non-regulatory.

Laboratory technicians concentrate on their work duties at the Pennsylvania Veterinary Laboratory. The full compliment of employees at the laboratory is about 50.



A very small collection of preserved tissues awaits testing. Some of the labels indicate the species being tested. The new Pennsylvania Veterinary Laboratory conducted more than 100,000 tests in its first year.

The avian influenza testing is right up there now, also, as the state attempts to contain and continue to monitor a non-pathogenic strain of avian influenza that has been discovered on several different farms in Lancaster and Lebanon counties during the past two years.

The lab does two types of testing for avian influenza — one costs about $2 per test and is used as an indicative test and confirms the presence of antibodies; the other costs about $200 per test and confirms the presence of a virus.

Having the two types of tests helps the lab contain costs while being aggressive in keeping on top of the avian influenza virus.

Antibodies are the "smoke," and the virus is the "fire." The $2 antibody test prevents having to spend $200 for each test.

After a positive antibody test, samples can be tested for the actual virus. The virus test can confirm its presence in very small amounts. Then the virus can be cultured, and sent off to national laboratories for identification.

As of this week, there were seven site quarantines for avian influenza in place in the state, and all are expected to be lifted soon. Barring any new outbreaks, the last quarantine order is expected to be lifted by August 1.

The state charges no fee to cover the cost of regulatory testing, but it charges for elective testing. The fee schedule for elective tests changes periodically, so those interested in the cost of specific tests can contact the laboratories.

The PDA Diagnostic Laboratory generally doesn't work directly with livestock producers, but with veterinarians.

In fact, including Purchase, there are four veterinarians overseeing testing operations at the state lab, as well as overseeing the staff of 50 in Harrisburg — while Purchase is chief administrator, there is Dr. Donald Singletary, poultry pathologist; Dr. Hyun Kim, immuno/histochemsitry specialist; and Dr. Mark Walter, chief pathologist.

In a recent news release, the state announced the hiring of Dr. John Enck Jr. of Dillsburg, to direct the PDA Bureau of Animal Health and Diagnostic Services, of which the state Veterinary Laboratory is a key element.

Enck was on the committee that designed the laboratory.

In a news release, State Agriculture Secretary Samuel Hayes Jr., said, "We look forward to his leadership in keeping our animal industry healthy and competitive. Dr. Enck's background in diagnostic work will be valuable in promoting the functions of our world-class laboratory."

In the Pennsylvania Veterinary Laboratory avian influenza lab, Bill Logoda shows a multiple-cell testing dish used to detect the presence of avian influenza antibodies in samples. This 48-hour test costs about $2 and is a first-line detection test in a disease survielance program.

Cove Mountain Opens Doors June 25

MERCERSBURG (Franklin Co.) — Cove Mountain Farm, a seasonal grass-based dairy, has scheduled an open house for farmers and the general public on Thursday, June 25. Farm tours will be conducted from 11 a.m.-3 p.m. and a milking demonstration is scheduled at 4 p.m.

American Farmland Trust (AFT) developed the grass-based dairy as a demonstration site to help other farmers and landowners learn about the economic and environmental benefits of grass-based livestock management systems.

Scheduled activities will include tours of the 330-acre property, the New Zealand-style milking center, and the USDA's water quality research site. The open house will conclude with a milking demonstration.

On hand will be Bryan Petrucci, AFT's director of farms; Glenn Moyer, Cove Mountain Farm; Donna Mennito, AFT's Mid-Atlantic field projects specialist; the Pennsylvania Association for Sustainable Agriculture; the USDA Agriculture Research Service; and the USDA Natural Resources Conservation Service.

Sponsors include the Maryland/Virginia Milk Producers Co-op, the Schlueter Company, Pastures Unlimited, and KenCove Fence Company.

The farm is located on Rt. 456 seven miles north of Rt. 70 (exit 5) and nine miles south of Rt. 16.

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