PDA Diagnostic Laboratory

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which could result in the quick and devastating spread of disease.

This observation is not an alarmist's call. It is a very real threat and the agriculture industry is leading the way in creating a solid, respected quick response effort to protect people and livestock.

The avaian influenza outbreak, the reoccurance of bovine tuberculosis during the 1980s, new strains of bovine virus diarrhea, bacteria, fungus, etc. are all recent examples of what health threats are present.

And for the first time since the 1980s outbreak of rabies in the state when no one state agency took responsbility for testing for the disease much less helping to control it, the tripartite animal diagnostic laboratory system offers the entire public a solid network of defense against health threats from animal disease.

On the farm, the term used to describe methods to detect and mostly prevent the spread of disease is "biosecurity."

Poultry producers especially and more recently swine producers have instituted greater biosecurity controls since having been faced with potentially devastating diseases. On these farms access to buildings is restricted and clothes and footwear are to be clean and uncontaminated by potentially disease carrying matter.

The dairy industry, especially with such recent diseases as strawberry wart (it is referred to by several common names) and new strains of bovine viral diarrhea, is starting to implement such protective practices on farms such as requiring footwear to be washed and clean or protected in a solid plastic slipover boot before visitors or non-essential people enter an animal traffic area.

On a grander scale that is what the state is undergoing. The state's tripartite diagnostic system is to serve as a coordinated and cooperative effort between producers, veterinarians, researchers and university and state diagnosticians to quickly identify and isolate animal disease.

Especially disease that poses risks to the rest of the agricultural industry and to the health of the residents of the commonwealth.

In order for the system to work, people need to know about it and support it.

Dr. C. Seymour Card, executive director of the Pennsylvania Department of Ariculture (PDA) laboratories, said last week that the breaking of ground for the new state laboratory to replace the old 1920s Summerdale Laboratory marks the nearing of the completion of a fully functioning and accredited Pennsylvania Animal Diagnostic Laboratory System (PADLS).

The state earlier this year received conditional accreditation that lasts for three years. Within three years, the new lab should be fully functioning, equipped and tied directly into a computer and telephone link between Penn State Univesity Animal Disease Laboratory and the University of Pennsylvania New Bolton Center Diagnostic Laboratories.

According to Dr. Card, the system is to work for the producer by having field people ready to investigate unusual disease occurances.

For now there are to be two such field investigators, both specially trained to access research, data, and assistance agencies in determining causes of animal health problems and possible solutions.

The support structure behind the field investigator is strong.

The directing agency is the Pennsylvania Animal Health and Diagnostic Commission, which was established by an act of the Pennsylvania Legislature in 1988. Chaired by the state secretary of agriculture, three veterinarians and six farmers sit on the commission along with the majority and minority chairman of the House and Senate Agricultural and Rural Affairs committees.

What has resulted in the following years has been a cooperative effort between PDA Bureau of Diagnostic Laboratories, the Penn State University Animal Diagnostic Laboratory and the University of Pennsylvania New Bolton Center Diagnostic Laboratories.

The new state diagnostic lab is to provide 30,000 square feet of space with 20,000 devoted to lab space and the rest to administration and management.

All three labs in the system are to have their own incinerators to dispose of biological tissues as a further safeguard to the community.

The state facility is to have a special area for bringing sick or dead animals to the laboratory for testing, necropsies, etc. The receiving dock is to have restricted access and a distinfecting bay so that vehicles hauling the animals can be cleaned before traveling anywhere else, reducing the chance of spreading any disease.

The system is not only to test, but it has research in place to develop testing technologies in such new areas as virology.

The state lab is to have a toxicology lab, bacteriology, microbiology lab, virology, immunology, serology and the special areas and equipment for handling animals and tissues suspected of carrying potentially dangerous disease.

That's for the protection of the lab workers as well. In fact, workers are being offered a voluntary rabies vaccination. Dr. Card said that during the time of the vaccination, blood is to be collected from each worker to serve as a background check so that, in case of suspected exposure to a disease, a worker's blood can be tested to check against changes that would indicate possible exposure.

The new lab system is to be truly state-of-the art. The use of biotechnology is planned in order to develop technology to evaluate materials.

Another small laboratory is to be devoted almost exclusively to testing the accuracey of the rest of the testing procedures used.

Quality assurance and quality control procedures are necessary in order to maintain a high level of dependability on the new system.

And although the money hasn't necessarily been allocated yet, the lab system still needs about $2 million in equipment to bring it up to full potential.

Air flow in the new lab is designed so that it maintains a high level of biosecurity. Basically the flow of air is to be in and up, and then through filters and out.

In this way air from one lab is not comingled with air from another laboratory, and also no air from any of the labs leaves the building without first being filtered for possible airborne pathogens.

The second floor of the new state lab will be available only to lab personnel. The main floor is to have offices for diagnosticians, a reference library, a conference room, several work areas, office equipment and instruments, and a reception area is to be located at the front of the building, facing the Susquehanna River.

The main delivery access to the laboratory is to be from around the back of the current PDA building. That takes advantage of the traffic light on Cameron Street, and allows traffic exiting the laboratory to use the light in order to travel south. The current exit from the lab site allows only a northbound lane exit.

The building itself has been architecturally designed to compliment the existing PDA building.

Functionally, a 24-hour receptionist desk is to be manned at the lab to accept cases, collect case history, and to send material to the appropriate lab areas.

Another area in the lab is for storage of a large volume of lab materials and to handle the shipping, receiving and sorting of mailed materials.

It is imperative that the system function efficiently and quickly, according to Dr. Card. Even with outdated equipment and its crowded and obsolete building design, the Summerdale lab currently conducts about 500,000 tests per year, handling many tests including many required for export.

According to Dr. Card, increasing the potential for exporting agricultural products, especially live animals, requires various tests, depending on the requirements of the importing country.

As it is, Summerdale can conduct some of the necessary tests, but not all. He said it currently has the ability to conduct about 60 to 70 percent of the tests necessary for exporting, etc.

But many exporters have opted to send samples to other states and universities in order to complete a full-range of tests instead of splitting up testing between labs.

"But more than that," Card said, "many vets were sending samples of tissue to labs all over the country for evaluation."

That doesn't allow for easy access to animal health conditions

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