Homeland Security

Science and Technology

Improved Decision-Making During Outbreaks: AgConnect

A DHS Science and Technology Center of Excellence

Protecting Agriculture Infrastructure

Infectious disease outbreaks in animals are one of the most serious threats to the nation's agriculture industry. During an outbreak, decision-makers can easily become overwhelmed with industry data, news reports, official updates, spreadsheets, maps, photos, and other documentation. A coordinated decision-making process is critical to ensuring business continuity, avoiding inefficient and ineffective industry response, and minimizing the impact of an outbreak to human health and to the economy.

Suite of Products Aids in Daily Operations, Preparedness, and Response Activities

Developed by the Department of Homeland Security (DHS) Science and Technology (S&T) Center of Excellence for Zoonotic and Animal Disease Defense at Texas A&M University, **AgConnect** is a suite of data integration and analysis products designed to enhance situational awareness during infectious animal disease outbreaks.

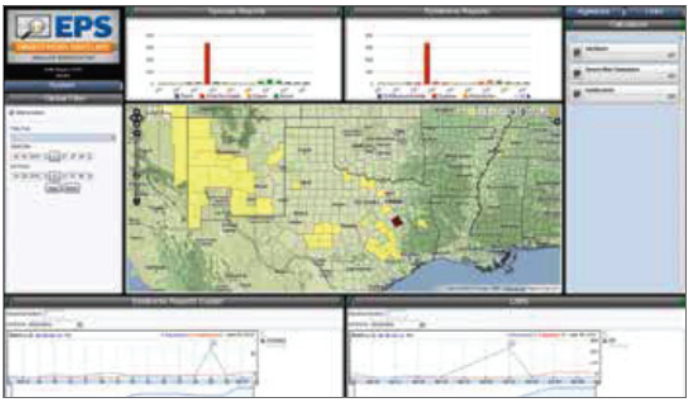
AgConnect is a portable system that can be rapidly launched and implemented. It combines a variety of data sources into customizable applications that are easy-to-use, provide updates in real time, and are based on a single common operating picture.

Features and Benefits of AgConnect

- Supports the entire emergency cycle: planning, preparedness, mitigation, response, and recovery
- Supports sector-specific business continuity planning
- Collects, aggregates, and analyzes multiple data sources (e.g., field reports, incident details, sample collection test results, maps, live data, video feeds) that update in real time
- Can be customized to fit the specific needs of end users during an incident
- May be used as a training tool to prepare decision-makers and early responders before an outbreak occurs

Applications and Customers

The **Bio-surveillance Field Entry System (BFES)** provides mobile and desktop applications for collecting and analyzing animal health surveillance data. BFES includes an iPad interface for veterinarians and inspectors to enter animal health data on site from livestock premises, feedlots, and markets. Valuable information is provided to practitioners about health reports in their state, aiding them in animal diagnosis and treatment.



Analyst workstation during the management of outbreaks

The **Enhanced Passive Surveillance Analyst Workstation** has been piloted in four states and aggregates information from the BFES app to enable the analysis of surveillance data at multiple levels of detail for early disease detection.

The **Laboratory Capacity Estimation Model (LCEM)** calculates diagnostic capacity for the U.S. Department of Agriculture's National Animal Health Laboratory Network (NAHLN). LCEM determines resource availability, enabling users to prioritize lab activities during an outbreak. All NAHLN laboratories have access to the system, and nearly 200 users at more than 67 facilities have entered data since 2012.

The **Business Continuity Tool** links livestock premises' information, diagnostic test results, and animal movement data to maximize production, transportation, and processing of animals and animal products during an outbreak. This allows authorities to make faster decisions on how to move animals safely during an outbreak. Multiple states are piloting the tool; one goal is to develop partnerships with 30 percent of the commercial swine industry in 2014.

*To learn more about AgConnect, contact the DHS S&T Office of University Programs at **universityprograms@hq.dhs.gov.***