

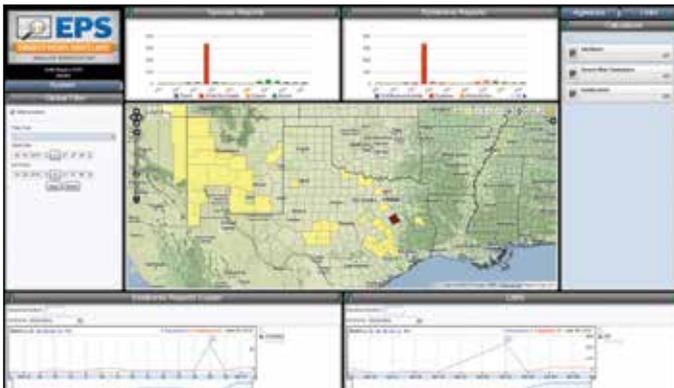
AgCONNECT

Coordinating the decision-making process is critical to successful outbreak management.

THE CHALLENGE

Outbreaks of infectious animal diseases can easily overwhelm decision makers with raw information, forcing them to cope with a torrent of news reports, official updates, spreadsheets, maps, photos and documents. The chaos can render a response both inefficient and ineffective. Coordinating the decision-making process is critical to successful outbreak management.

THE SOLUTION



- AgConnect is a suite of customizable data integration and analysis products designed to enhance situational awareness.
- Integrates data from authoritative data sources into a single, easy-to-use, real-time common operating picture.
- Supports the entire emergency cycle: planning, preparedness, mitigation, response and recovery.
- Supports sector-specific business continuity planning.
- Empowers real-time collection, aggregation and analysis of biosurveillance data.

FEATURES AND BENEFITS OF THE AgCONNECT SUITE

- Integrates multiple sources of information into a common operating picture that is defined by the users. This allows users to make decisions based on common information that is shared across organizations, locations, responsibilities and ranks. Information can also be customized or partitioned based on a user's role within the response.
- Features live informational components that may link directly to a single data source, synthesize two or more sources into a new product, or integrate the output of an external application to provide a custom visualization.
- May be customized to fit the specific needs of the decision-making process. It can be rapidly designed, launched and implemented by leveraging technology developed with previous government investment.
- Portable and customizable, allowing data to be combined and displayed in easy-to-understand formats, and can support the entire life cycle of an outbreak response, from planning to preparedness, from response to recovery.
- May be used as training tools to prepare decision makers and early responders, creating a team of "virtual veterans" before an outbreak occurs.
- Developed for the U.S. Department of Homeland Security and the U.S. Department of Agriculture (USDA). The underlying technology provides the foundation for related products developed for the U.S. Coast Guard and the U.S. Department of Defense.

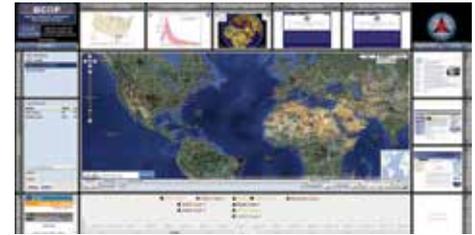
CUSTOMERS AND APPLICATIONS

The Emergency Response Support System (ERSS) has been developed for USDA's Animal and Plant Health Inspection Service (APHIS) and state animal health officials as a web-based tool for large- and small-scale incident management. ERSS was developed around a service-oriented architecture and provides enhanced response capabilities by organizing relevant data from authoritative sources to facilitate rapid information sharing between industry and government at the national level during an animal disease event. ERSS can be used as an operational tool during a response, as an analysis tool after an event is complete, and as a training tool to prepare for possible future incidents. An early version of ERSS has already been used for tracking of a foot-and-mouth disease outbreak in the Republic of Korea, and ERSS has been included as part of the USDA APHIS information management roadmap, making it a pivotal tool for the day-to-day operations and incident response performed by APHIS. The tool incorporates information from the "outbreak toolbox" developed by analysts at USDA's Centers for Epidemiology and Animal Health (CEAH) to allow calculation of the number of vaccine doses, personnel needs and sampling required when different size outbreak zones are "drawn" in the system. Features to support business continuity have also been developed, to include a survey tool used by dairy producers in six New England states to collect information about their production operations. Future efforts to support animal movement during a disease outbreak will help support secure food supply plans currently in development by a working group consortium under USDA APHIS funding.



The Bio-surveillance Field Entry System (BFES) provides an integrated application for collecting and analyzing enhanced surveillance data, and includes a mobile iPad2 interface to allow veterinarians and inspectors to enter clinical animal health data from livestock and poultry premises, feedlots, and markets. The mobile application links to the BFES dashboard and allows epidemiologists to aggregate real-time data through the use of visual, geospatial and temporal analysis tools to aid in early disease detection or changes in animal health status. The application also provides valuable information back to practitioners regarding other syndromic reports in their state, providing access to a unique information source to aid in animal diagnosis and treatment.

The Laboratory Capacity Estimation Model (LCEM) was developed for the USDA National Animal Health Laboratory Network (NAHLN) as a web-based tool to help increase the nation's capability to prepare for, and respond to a high-consequence animal emerging and/or zoonotic disease. This software system allows for the automated determination of diagnostic testing capacity estimates, supply and equipment usage, personnel requirements, and any process limitations for individual and overall NAHLN laboratories. Generated data can be used to improve knowledge of individual and overall NAHLN diagnostic testing capacity, supports decisions as part of the NAHLN



activation plan, assists in the prioritization of additional resources needed, and serves as a critical tool for managing a large number of diagnostic tests simultaneously. The system facilitates the distribution of samples to promote efficient diagnostic testing by allowing the NAHLN program office insight into laboratory capacity prior to and during an outbreak and promoting more efficient communications between the laboratories and the NAHLN coordinator. All NAHLN laboratories currently have access to the system, and nearly 200 users at more than 60 facilities have entered data since June 2012. The National Center for Foreign Animal and Zoonotic Disease Defense (FAZD) investigators have linked the LCEM to the NAHLN portal for data upload and integration into ERSS.



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