VS in 2015 & Beyond: Moving VS Forward Today

Goal One: Transform our organizational culture to meet the evolving needs of the animal health community

A new surveillance stream

- The VS2015 Surveillance for Action working group implemented a pilot project in Florida looking at the exotic pet industry as a potential surveillance stream.
- VS partnered with the Florida Department of Agriculture and Consumer Services, Florida Fish and Wildlife, APHIS Animal Care, U.S. Fish and Wildlife Service, and Florida Department of Health to record information on exotic pet sales outside of pet stores, and talk with owners about animal health.
- A public meeting was held with industry and regulatory officials to discuss project progress, elicit feedback, and explore opportunities for collaboration.
- As a result of this project, VS located 17 venues where exotic pets are marketed, 13 of which were unknown to animal health officials, and most of which are in close proximity to traditional livestock operations.

A grassroots network within VS

- Change is never easy, and great ideas for how to move VS forward can come from anywhere.
- VS has created a grassroots network of “early adopters” to ensure that information about change in VS can be shared up, down and across
- Traditionally, VS has been a hierarchical organization, with information flow and content set at higher levels. This grassroots effort gives a group of 12 VS-trained leaders the opportunity to create an effective network allowing everyone to be involved in moving VS forward.

Addressing the volume & complexity of animal product exports

- VS is implementing an interim measure to help provide better service to animal product exporters based in several Western US states.
- The VS offices in Kansas and Nebraska are currently providing personnel and resources for several surrounding states, including South Dakota, Wyoming, and North Dakota.
- Both industry facility inspections and health certificates prepared for VS endorsement are coordinated from the service centers. The result, better product consistency for

the industry.

A transparent regulatory overhaul for long standing VS programs

- VS is emphasizing rulemaking transparency in its development of a combined bovine tuberculosis and brucellosis rule, and in discussing the basic tenets of an improved animal disease traceability capability in the United States.
- VS held a series of public meetings around the TB program, and circulated for input a concept paper directly reflecting the input received from stakeholders.
- A brucellosis working group comprised of State, Federal, and Tribal officials created a concept paper focusing on designing a more appropriate surveillance plan and identifying current risks and challenges for the final eradication of brucellosis
- VS has now convened a broad-based working group to create the combined TB/brucellosis Proposed Rule. The framework prepared by the group will be presented at a series of public meetings for stakeholder comment.
- Through a set of productive public meetings with stakeholders, VS is also ensuring an improved animal disease traceability capability is implemented transparently.

Goal Two: Build new collaborations & partnerships while sustaining existing ones

Working together to stop interstate movement violations

- The Movement and Marketability working group implemented a pilot project in Iowa to check vehicles transporting livestock for animal movement violations when stopped for DOT compliance inspection. The project was a joint effort of VS with APHIS Investigative and Enforcement Services and the Iowa DOT.
- Iowa code 172B allows a law enforcement officer to stop and detain a person transporting livestock and request a livestock transportation certificate.
- This project promotes an interagency approach to enhanced surveillance of animal movements, increased awareness of animal movement regulations by law enforcement, and increased compliance with those regulations.
- To expand the project throughout Iowa, and into Wisconsin, Illinois, and Indiana, 370 State, Federal and local agriculture, wildlife and law enforcement personnel have been trained in animal movement regulations.
- During the pilot phase in Iowa, interagency partnerships resulted in detection and depopulation of a swine herd with brucellosis, as well as detection, confiscation and AI/END testing of multiple illegal fighting birds. 70% of the vehicles stopped were observed to be noncompliant; 50 cases were referred for investigation.

Providing opportunities for One Health relationship building

- VS field employees are encouraged to explore short term projects with wildlife, public health, food safety, environmental or other One Health partners. The goal is to determine how best to collaborate to support animal health.
- In Minnesota, a 2 week assignment with the FDA and FSIS based around drug residue testing and slaughter surveillance highlighted an opportunity for better

traceability of livestock found with violative drug residues.

- VS is now collaborating with FSIS at two slaughter facilities to provide animal identification information for residue investigations. A similar project is underway in a Nebraska; the project may be expanded to South Dakota and Wisconsin.
- In Louisiana, an interagency One Health relationship developed among VS, APHIS Wildlife Services, the Louisiana Departments of Wildlife & Fisheries; Agriculture; and Health, around captive wildlife health, feral swine management, and disposal.

A comprehensive approach to prevention and control of human *Salmonella* infections among persons exposed to live poultry

- As a result of continuing human Salmonellosis outbreaks associated with contact with live poultry from mail-order hatcheries, VS is partnering with CDC, the poultry industry, and state animal and public health agencies to prevent and control *Salmonella* at the hatchery, feed store, and consumer levels.
- These collaborative efforts include the implementation of intervention strategies at the hatchery level and development of educational materials for the feed store and consumer levels.
- Data suggests that interventions at the hatchery level have reduced human infections; however, further comprehensive measures are needed.

A collaborative approach to swine influenza virus (SIV)

- In 2005, VS began working with the CDC, and state officials, to investigate, prevent and develop control measures for humans with sporadic triple-reassortant swine influenza A (H1) virus infections reported to the CDC.
- As a result of that partnership, an interagency agreement between CDC and VS was developed to conduct surveillance in swine and to better understand the transmission and pathogenesis of SIV.
- VS and CDC work together to share reagents, assays, and isolates, and develop algorithms for notification and communication between human and animal health agencies when novel influenza A viruses are identified in humans and swine. This is a model which may be translated to other emerging pathogens.

VS collaborates to ensure animal health research is targeted, efficient, and relevant

- VS has a long-standing partnership with USDA's Agricultural Research Service (ARS) looking at avian influenza virus isolates from domestic poultry and wildlife. Assays ARS developed were adapted in collaboration with VS for use in both swine and avian influenza surveillance programs.
- The Department of Homeland Security (DHS) has partnered with VS and ARS to develop vectored, marker FMD vaccines such that no live FMD virus will be needed for production.

Reaching out to the equine industries

- The American Horse Council (AHC) and VS co-hosted an equine infectious disease workshop in 2010 to discuss how to address preparedness for and response to

equine infectious diseases in the U.S.

- Nearly 50 representatives of the equine industries, State animal health officials, VS, the National Institute for Food and Agriculture, ARS participated.
- Participants suggested ways their organizations could become more involved, such as using e-extension to disseminate educational information, and consensus was reached around key needs like funding, education, and research.
- As a result of the workshop, the AHC, the National Association of State Animal Health Officials, and VS will be working together to develop priorities for equine health and responses to emerging infectious diseases and issues.

Goal Three: Optimize and leverage our unique competencies in animal health

Providing animal health expertise to pre-harvest food safety issues

- FSIS and VS are looking at ways to capitalize on their partnership to address *E. coli* and multi-drug resistant *Salmonella* before cattle reach slaughter.
- Planning is underway to conduct on-farm surveillance for levels of *E. coli* in the live cattle population as part of a routine on-farm study by VS through its NAHMS unit. The goal is to determine the geographical and seasonal distribution of this organism.
- FSIS and VS are also looking to pool expertise to determine the on-farm sources of *Salmonella* currently traced back only to the slaughter level. This project will also be part of an on-farm activity already planned for implementation in 2012.

Proactively evolving the vaccine approval process

- In response to the emerging threat of the novel H1N1 virus in the swine industry, VS took the unprecedented actions of acquiring virus isolates in collaboration with the USDA's Agricultural Research Service, developing and establishing four master seed viruses, and providing these master seeds to licensed biologics manufacturers for vaccine production.
- Because of these actions, a new pH1N1 vaccine was available to prevent this disease in pigs in December 2009, reducing traditional product development and licensing timelines by an estimated 6-7 months and saving the biologics industry hundreds of thousands of dollars in development costs.
- VS is well positioned to proactively serve the biologics industry with a new treatment, preparedness, and prevention paradigm for emerging diseases.

VS puts an organizational focus on One Health

- VS seeks to make the transition to an organization recognized as the national authority for animal health at the animal-human-environment health interface.
- VS established a short-term virtual coordinating office of three people to coordinate agency resources, support and advance this expanded VS One Health mission. This group will provide the coordination for VS One Health activities and be a VS One Health point of contact for partners.

Goal Four: Enhance the readiness and response capabilities of our staff while balancing the needs of animal agriculture with the interests of people and the environment

Continuity of business plans for agriculture

- VS is focusing on ensuring continuity of business for agriculture industry sectors that might be affected as part of an animal health incident by preparing science-based plans in partnership with a broad range of potentially affected groups.

- The Secure Egg Supply plan now provides guidelines and requirements that have been developed and agreed upon by egg producers, processors, poultry disease experts, and public health experts, as well as Federal and State officials. The plan is available to the public. In the dairy industry, just-in-time supply practices of milk movement in the U.S. could result in interruptions of milk and milk products to consumers, as well as create significant milk disposal and animal welfare issues.

- VS realizes emergency response planning under the current animal health landscape must include options for addressing an outbreak of FMD.

Veterinary Services moves forward on policies for FMD response

- Having already drafted general FMD response plans, VS is now moving to the next level by creating documents that includes use of vaccine in potential control strategies. The VS FMD vaccination policy document will be developed through the use of scenarios, modeling and subject matter expertise, and will include input from a broad range of stakeholders over the next several months.

- VS is evaluating a pen-side FMD diagnostic test, developed by an international biotech firm. This test would have the advantage of providing support to foreign animal disease diagnosticians while conducting a field investigation.

- The One Health working group has developed a pilot project to make VS expertise, experience and infrastructure available in a scalable way to investigate, analyze and respond to reports of disease incidents where animals may have a role.

VS teams are prepared to provide animal health expertise to One Health events

- VS Assessment Teams (VSATs) will be formed as triggered by One Health events and as requested by appropriate officials. Teams will investigate, take necessary actions, interface with One Health partners, make recommendations and report to the VS One Health authority about the scope and implications of the incident.

- Continued engagement and relationship building with One Health partners includes demonstration of our willingness to work together, and active engagement through listening to our partners to gain trust and respect. VSAT teams are now available.

Goal Five: Invest in an integrated technical infrastructure to support our mission

- The VS2015 Movement and Marketability working group implemented a project to evaluate an electronic record system that can provide primary or backup evidence of animal identification, testing and certifications for cattle entering the United States from Mexico.

Sharing electronic data across international borders

- Access to this system, developed by the state of Chihuahua, Mexico, could speed up border crossing, and provide additional assurances to importers. This system is currently being used at one U.S./Mexico border crossing in New Mexico, and has proven to be comprehensive and easy to use. Paper health certificates for roughly 15-20 shipments weekly are now being compared against the database.

Using technology to create efficiencies in field

- As VS shifts to targeted sampling at slaughter plants, we are developing technology, algorithms, and best practices to enable officials at slaughter plants to quickly

surveillance

identify and collect samples from animals from targeted populations.

- The Surveillance for Action working group is implementing a project at a swine slaughter facility aimed at collecting only those samples needed to meet State status goals. By only collecting necessary samples, there is no unnecessary sample collection, shipping or sorting
- Thus far, more than 1,300 samples have been scanned into the software, and only 43% of those were targeted samples that were shipped to the lab for testing. If the data from the first phase of the project is consistent, scanning and assessing all the swine samples from this plant for FY2010 before shipping would have saved $50,000 in shipping costs and sorting time for lab technicians.
- Changes to VS' program for accredited veterinarians have been implemented as part of collaborative efforts of multiple State and Federal agencies, veterinary medical organizations such as the United States Animal Health Association and AVMA, and academic organizations such as the AAVMC.

VS upgrades its veterinary accreditation program

- Practitioners accredited by VS have long been viewed as critical to bolstering the overall effectiveness of our national animal disease surveillance system; live animal exports often start with the efforts of these key partners as well.
- To date, the new veterinary accreditation program has renewed the status of over 30,000 of the estimated 50,000 veterinarians expected to be interested in accreditation, allowing VS to better serve these partners and more fully utilize 21st century technology to communicate with them.

A one-stop shop for information during an animal health incident

- VS is leveraging technology already developed by the National Center for Foreign Animal and Zoonotic Disease Defense to create a common operating picture to be used during animal health incidents.
- An emergency preparedness and response "dashboard" of available information, situation reports, manuals, and links will be accessible to responders and key stakeholders during 2011.
- By partnering with stakeholders, VS is able to bring technology such as this to an operational status much faster than if it were developed from the ground up.

VS implements new technology for animals entering the United States

- The VS Process Streamlining information infrastructure in VS has added two modules to capture data for animals entering the United States at both land/ocean borders and through quarantine centers.
- The Animal Import Center Reservations Module allows importers to make electronic reservations for space at both the Florida and New York center, and VS to better follow traffic through these critical gateways.
- The Animal Import Module allows VS port veterinarians to create multiple electronic forms associated with animal importations, and States now have real time access to release forms for animals entering their state. This new VSPS module

is also designed to allow for more efficient analysis of import data.

Improving the reliability of VS information technology investments

- VS realizes the need for IT systems, especially those accessed by stakeholders, to be on-line consistently, and repaired quickly when problems arise.
- Of the 10 major IT systems VS currently uses, only one has historically been housed at an enterprise data center, a location which provides IT hosting services with constant monitoring aimed at assuring good customer service.
- The VSPS system is preparing to move to the USDA's National Information Technology Center (NITC) in the next few months. This should significantly decrease the down time experienced by customers.
- VS, working with the broader federal IT community, considers security and customer service to be significant to our future. We are looking at all investments, either in use or planned, to ensure they are as stable as possible.