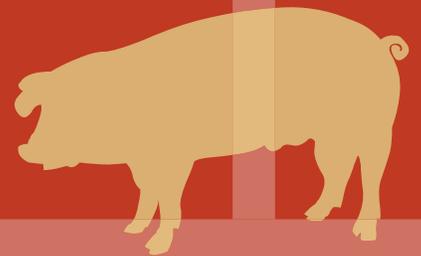


Animal Health Programs:

Combining Surveillance, Detection, and Response



The Animal and Plant Health Inspection Service (APHIS) is charged with protecting American agriculture in part by setting phytosanitary and zoosanitary standards that allow trade without the threat of introducing foreign pests and diseases into the United States or pests and diseases that are indigenous in the United States into foreign countries. APHIS is divided into several program areas that focus on different aspects of this mission.

Veterinary Services

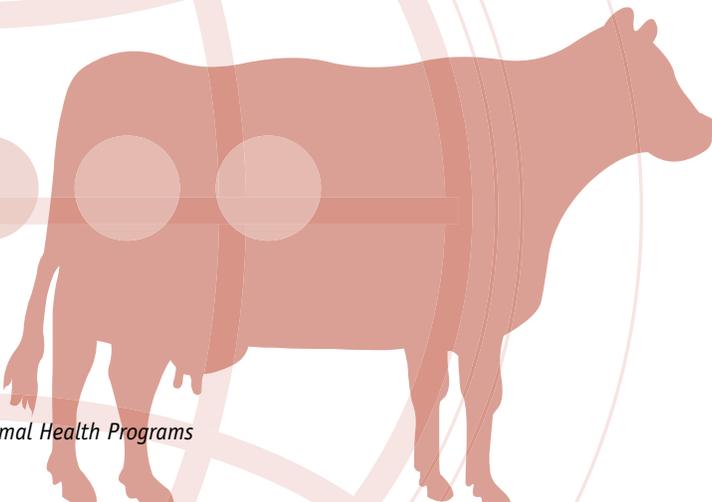
APHIS' Veterinary Services (VS) program mission is to protect and improve the health, quality, and marketability of our Nation's animals, animal products, and veterinary biologics. To accomplish this mission, VS prevents, controls, or eliminates animal diseases and monitors and promotes animal health and productivity.

The mission of VS is very important relative to U.S. agricultural exports and imports. The extent to which U.S. agricultural products can be made available in foreign markets is directly related to the certifiable health and quality of U.S. livestock and poultry.

Proving the health and quality of U.S. livestock and poultry is one of the goals of VS' National Animal Health Monitoring System (NAHMS). NAHMS does this by collecting information on the status of animal health in the United States. The program, which began in 1983, estimates the level of selected domestic diseases and also estimates producer awareness of foreign animal diseases. In addition, sera are collected and banked through NAHMS national studies and are a possible resource for determining the presence of new diseases.

VS also helps ensure the health and quality of U.S. agriculture by preventing foreign animal pests and diseases from entering and establishing themselves here. These diseases threaten the health of U.S. livestock and poultry and threaten this country's share of foreign markets due to trade restrictions that would result from having a foreign pest or disease establish itself here.

To combat this threat, APHIS inspectors at U.S. ports of entry prevent international passengers from bringing in foreign pests and diseases through inspections. Also, more than 300 APHIS veterinarians are stationed throughout the United States to investigate suspected foreign diseases that slip through this exclusion system undetected.



Regulating Trade and Opening New Markets for U.S. Agriculture

VS' National Center for Import and Export (NCIE) develops zoosanitary protocols that allow the safe import of animals and animal products and negotiates protocols that will allow the entry of U.S. animals and animal products into foreign countries.

As with their counterparts in APHIS' Plant Protection and Quarantine unit, who deal with plant material exports, VS officials provide health certification for animals and animal products designated for export. Examinations and tests, usually done by accredited veterinarians, cover both U.S. export health requirements and the frequently complex import requirements of the receiving nation. A VS veterinarian endorses export health certificates after all tests and other requirements have been met. Then a final examination is conducted by a VS veterinarian at the port of export before the livestock or poultry leave the country.

For example, during the week of May 14, 2000, the Miami Animal Import–Export Center reported exports of 92 cattle in 1 shipment to Venezuela, 40 goats in 1 shipment to Brazil, and 5 horses in 3 shipments to Barbados, the Cayman Islands, and the United Kingdom. The Center also reported imports of 40 horses in 5 shipments from Argentina, Brazil, and Colombia. All of these animal shipments required the proper zoosanitary certifications to reach their final destination.

VS regulates the importation of animals that enter the country through land ports along the borders with Mexico and Canada and through three animal import centers located in Miami, FL, Newburgh, NY, and Los Angeles, CA. Bird imports must enter through 1 of 6 VS-operated bird quarantine centers or through 1 of 60 privately owned, VS-supervised quarantine facilities.

Eradicating Foreign Pests and Diseases

Within 24 hours of suspicion of a foreign animal disease outbreak anywhere in the United States, a specially trained Foreign Animal Disease Diagnostician (FADD) is dispatched to collect appropriate samples for diagnosis. Depending on the findings, a specially trained Early Response Team (ERT) may be assembled to work on the issue. Initially, the team might consist of just a couple of epidemiologists but can quickly be expanded to include other FADDs, veterinary specialists, and administrative support. It's the job of the ERT to conduct an epidemiologic investigation in order to determine the source and nature of the suspected outbreak. The ERT is also responsible for taking the necessary blood, tissue, and other samples that are critical for diagnosing the suspected disease. The results of those tests determine what happens next.

In most cases, the test results are negative for a foreign animal disease, but should a major outbreak occur, APHIS has another team in place to begin controlling and eradicating the disease.

In the rare event of a serious foreign animal disease outbreak, a VS task force known as the Regional Emergency Animal Disease Eradication Organization (READEO) team can be onsite rapidly to implement the measures necessary to eradicate the disease. These task forces consist of VS employees, State veterinarians, military support personnel, industry liaisons, and representatives from other units within USDA. The last time a READEO was called into action was in 1984 to eradicate an outbreak of avian influenza.

At APHIS headquarters in Riverdale, MD, animal disease outbreaks are managed by VS' Emergency Programs (EP) staff, which was created in 1972. EP and its cooperators eradicate foreign animal diseases before they can establish themselves in American livestock.

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EP and its State and Federal cooperators eradicated avian influenza in 1984, classical swine fever (CSF) in 1978, exotic Newcastle disease in 1974, and sheep scabies in 1973. EP continues to coordinate the investigation of many suspected cases of foreign animal diseases each year.

Not every confirmed foreign animal disease, however, requires a READEO to combat the threat. Often, the cases are isolated incidents that can be quickly resolved. On March 4, 2000, VS' National Veterinary Services Laboratories (NVSL) in Ames, IA, confirmed that larvae discovered by an accredited veterinarian on an imported horse in Florida were screwworms. The United States eradicated screwworm in 1966. The horse that had screwworm was part of a shipment of 17 horses imported from Argentina several days earlier. EP swung into action, coordinating APHIS' response to this livestock threat. The horse and the premises were treated March 3. The horse received a second treatment March 6, and was declared screwworm free. No other animals were infected.

EP also provides training to Federal and State veterinarians, diagnosticians, animal health technicians, epidemiologists, port veterinarians, foreign veterinary medical officers, VS program specialists, and others whose responsibilities require knowledge of foreign animal disease diagnosis, identification, and eradication. In the event of a foreign animal disease outbreak, these trained professionals would be called upon to help prevent the spread of the disease.

Foreign animal diseases are diagnosed and researched safely at the Plum Island Animal Disease Center in New York. Plum Island's state-of-the-art biocontainment facilities, including VS' Foreign Animal Disease Diagnostic Laboratory (FADDL), allow the study and diagnosis of exotic animal diseases not found in the United States to proceed without threatening the national animal population.

FADDL also plays an important role in training private-sector and military veterinarians, USDA employees, and State and foreign veterinary officials on the most current science and disease-identification practices. Within Plum Island's biologically isolated environment, cooperators and employees are trained to recognize the signs of animal diseases such as CSF, exotic Newcastle disease, and foot-and-mouth disease (FMD).

Eradicating Domestic Diseases

VS works to improve the health and quality of U.S. livestock and poultry, and therefore U.S. agriculture's trade position, through the eradication of domestic animal diseases. Diseases such as brucellosis, pseudorabies, bovine tuberculosis, and scrapie are targeted for elimination, and eradication efforts are well underway. Other diseases like CSF and FMD and parasites like screwworm have been eradicated, resulting in more favorable trade conditions for U.S. exports.

VS' NVSL serve as key players in disease eradication by providing diagnostic services for domestic animal diseases and some foreign animal diseases. In late 1999, NVSL personnel were instrumental in diagnosing the West Nile virus that killed seven people in New York City and made dozens ill. Horses that became sick from the virus triggered VS' involvement and NVSL's diagnoses. Currently, VS is cooperating with several States and with other Federal agencies to monitor for the West Nile virus and respond to any new outbreaks.

NVSL employees also work closely with APHIS' International Services (IS) program to provide consultation, reagents (substances used to make vaccines), and training for foreign governments.

Working in Foreign Countries To Protect U.S. Agriculture and Create Trade Opportunities

VS and their IS counterparts also work with foreign governments to eliminate animal diseases in other countries that threaten U.S. agriculture. For example, APHIS worked with Mexico to eliminate screwworm. Mexico was officially declared free of that pest in 1991.

APHIS also cooperates with Central American nations to eradicate screwworm from that area and ultimately to establish and maintain a permanent sterile-fly barrier at the Darien Gap between Panama and Colombia. In areas where screwworm is a problem, sterile screwworm flies are released to mate with fertile, wild flies and breed any lingering screwworm population out of existence. Additional eradication activities include the regulation of cattle movement and treatment of wounds infested by screwworms.

The Darien Gap is the narrowest geographic region in southern Panama, stretching only 102 miles. The region is mainly jungle and has no roads, but a number of rivers and trails lead to North America, so APHIS continues to monitor the borders of Panama and Colombia.

In addition, a new facility to produce sterile flies is being built in Panama to replace, by 2003, the existing one in Mexico. Locating the new facility in Panama, an area where screwworm has not been eradicated, will reduce the risk of reinfestation of the United States through accidental release of fertile flies.

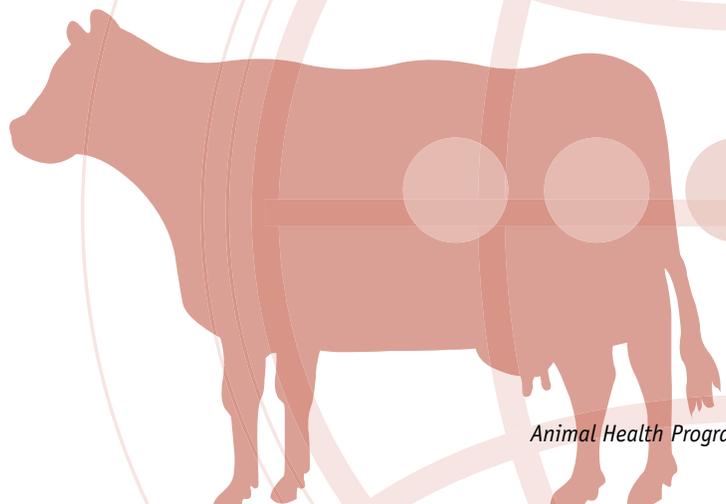
To date, Belize, Costa Rica, Guatemala, El Salvador, Honduras, and Nicaragua have been declared free of screwworm. Once the pest has been eradicated from Panama, Central America will be declared screwworm free.

VS and IS are also helping to combat CSF in the Dominican Republic and Haiti. CSF was eradicated from the United States in 1978 after a 16-year effort by the industry and State and Federal Governments. Today, only 16 other countries are free of CSF.

In the spring and summer of 1997, outbreaks of CSF were confirmed in Haiti and the Dominican Republic; both countries had eradicated the disease in the early 1980s. VS is working with IS in those countries to eliminate the disease and lessen the threat of CSF's getting into the United States.

Working with the governments of the Dominican Republic and Haiti, APHIS is planning to establish a passenger predeparture inspection program in all international airports in those countries. The belongings of passengers headed for the United States will be inspected before they leave so that any illegal agricultural products will be confiscated before they ever enter the United States.

Another disease of concern for the United States is FMD. The United States has been free of it since 1929, but FMD outbreaks in Europe and South America will continue to pose a threat to American agriculture until the disease is eradicated. Although a large portion of South America is free of FMD, the region continues to battle outbreaks of the highly contagious disease, which debilitates cloven-hooved animals, resulting in great economic losses for producers.



VS and their IS counterparts also work with foreign governments to eliminate animal diseases in other countries that threaten U.S. agriculture.

To protect U.S. borders, APHIS works with PANAFTOSA, a South American organization created to eradicate FMD. An IS employee is stationed in South America to develop eradication strategies and help affected countries implement those plans. APHIS contributes more than \$1 million each year to eliminate the disease in South America. Additional funding is spent on maintaining an FMD-barrier program in Panama and Colombia and managing prevention programs in Central America and Mexico.

In order to be recognized by APHIS as FMD free, a country must not discover any signs of the disease in its livestock for 1 year. During that period, countries are not allowed to use vaccinations as a means of protecting livestock against FMD.

Suriname is the only South American country that has never reported a case of FMD. French Guyana has been free of FMD without vaccination since 1953, and Guyana, since 1978. Chile has been free of FMD without vaccination since 1981.

While eradication efforts are taking place throughout South America, the continent recently experienced a setback in the fight against FMD. Argentina, Brazil, and Uruguay experienced animal-health emergencies in 2001 with FMD outbreaks confirmed in all three countries. In Argentina and Brazil, the outbreaks devastated livestock populations in regions where the disease had already been eradicated. The disease was just as devastating to Uruguay, which had been free of FMD without vaccination since 1996.

Despite these outbreaks, APHIS continues to work vigilantly in South America to eradicate FMD. Ecuador, Peru, and Bolivia have initiated FMD eradication programs but will require significant assistance from neighboring countries and international organizations to eliminate the disease. APHIS' goal is to eradicate FMD from all of South America by 2009.

Working with the other programs of APHIS, State and Federal cooperators, and foreign governments, VS ensures that American agriculture is safe from foreign animal pests and diseases and competitive in foreign markets.

For more information about APHIS programs, visit the APHIS homepage at <http://www.aphis.usda.gov>

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