Regulatory agencies are prepared to respond to any animal disease outbreak, whether accidental, natural, or intentional. However, education is the key to identifying these diseases so they can be detected and reported rapidly.

**Detection and Response**

Clinically diagnosed and laboratory-confirmed animal cases of regulatory diseases must be reported within 24 hours to state regulatory animal and/or human health agencies. Reportable animal diseases may be reported to either agency; that agency will inform the other.

The U.S. Department of Agriculture (USDA), specifically the Animal and Plant Health Inspection Service (APHIS) is the agency responsible for controlling and eliminating livestock and poultry problems.

The U.S. Department of Health and Human Services, specifically the Public Health Service is the agency responsible for eliminating human health problems. These federal agencies collaborate with state agencies, state animal health commissions, and state departments of health on issues common to animals and people.

In some instances, the health of animals can be an indication of potential human health risk. After all, animals commonly share the same environment, drink the same water, and breathe the same air as people do. Some animals are biologically or genetically more susceptible to disease agents than people.
A foreign animal disease is one that occurs in other parts of the world but not yet in the United States. In other countries, these diseases have caused tremendous economic losses to the livestock industry and have had devastating sociological and economic effects on communities.

Endemic animal diseases are currently present in the United States but are not increasing in prevalence. An emerging animal disease is a new disease or a new form of an existing disease that is endemic to the United States and increasing in prevalence. This emergence may be related to animal movement in commerce, mutation of disease-producing agents, or changes in environmental conditions. An epidemic animal disease is an outbreak of a disease in regional animal populations. A pandemic animal disease is an outbreak of a disease in world-wide or global animal populations.

A zoonotic disease is one that is shared between animals and people. Familiarity with various zoonoses enables animal owners and veterinarians to take precautionary measures to prevent them. The battle against disease requires constant attention and the cooperation of the public, regulatory animal and human health agencies, veterinarians, animal owners, and medical doctors.

**Prevention**

The first line of defense against biosecurity threats from foreign animal diseases in livestock will be the owners. They monitor livestock carefully and report any unusual signs of disease promptly. Early detection and reporting could prevent the loss of billions of dollars for our livestock industries and communities.

The United States is at risk of foreign animal disease outbreaks. Based on epidemiologic studies, state and federal animal health regulatory agencies have developed safeguards to prevent the entry of these diseases into the country.

When an infectious disease spreads, it is generally because diseased animals have been moved into a susceptible population. The United States is constantly on guard against the introduction of foreign animal diseases into this country.

USDA-APHIS, specifically Veterinary Services (VS) is the agency that determines which diseases are considered to be foreign animal diseases. VS has the primary responsibility to develop trade agreements and regulations to prevent the introduction of foreign animal diseases into the United States, to conduct investigations of suspected foreign animal diseases, and to respond to incursions when they are discovered. VS also respond to emerging disease incidents, which may include new diseases or new manifestations of old diseases.

**Preparedness**

Preventing animal diseases requires:

- Surveillance to identify reservoirs of infectious diseases
- Keeping healthy animals from being exposed to disease
- Ensuring that animals have proper nutrition, adequate physical activity, and optimum environmental conditions to help build resistance to disease
- Implementing selection and breeding programs to enhance the productivity and economic efficiency of animals

Emergency management of foreign animal diseases also involves preparedness for bioterrorism against people. Biological warfare agents or pathogens such as anthrax, plague and tularemia affect both animals and people. In fact, livestock producers, county extension agents, and veterinarians might be the first to realize that a biological attack has occurred, because they may see the evidence in large numbers of animals before evidence is seen by medical doctors.

**References**


**Questions**

1. Explain the potential risks of animal disease outbreaks.
2. Explain endemic, emerging, zoonotic, and foreign animal diseases.
3. Who is the first defender against foreign animal disease outbreaks in livestock?