

SURVEILLANCE

Surveillance is critical to early disease detection. It is the systematic collection of animal health information that is used by the Incident Management Team (IMT) to determine where disease is and where it isn't. The Disease Surveillance Branch of the Operations Section within the IMT is responsible for sampling and collecting information that is critical to defining what actions are necessary to control and eradicate disease.



SURVEILLANCE PLANS AND ZONE DEFINITION

Epidemiologists develop a plan of action based on the type of premises, location of infection, and other risk factors so that control measures can be put in place.

Surveillance activities are executed in all the zones. There are many types of zones and premises designations. The designations often determine required surveillance and other activities. Below are a few of the most commonly used terms.



SURVEILLANCE

TWO PRIMARY TYPES OF SURVEILLANCE STREAMS DURING A RESPONSE



Active Surveillance

Data on animal health and/or presence of disease in the environment is actively collected. Examples of active surveillance include:

- ✓ Producers perform regular reporting of animal mortality, water and food consumption, and production parameters to IMT.
- ✓ IMT staff visit premises to collect epidemiological data and diagnostic samples from animals.



Passive Surveillance

Data on animal health status is relayed to the IMT. Examples of passive surveillance include:

- ✓ Networks of laboratories and practitioners submit pertinent regulatory test results.
- ✓ Owners of sick animals self-report to a sick animal telephone hotline or email box.

Active surveillance requires more regulatory effort and resources, while passive surveillance requires less direct regulatory involvement. Both forms provide essential information for early disease detection and response. Data collected through active surveillance is more predictable and can provide more accurate information about the disease of interest than data collected through passive surveillance.

SURVEILLANCE METHODS



Visual inspection



Data examples include:

- ✓ Animal demographics
- ✓ Biosecurity measures
- ✓ Clinical signs
- ✓ Premises pens/house construction types
- ✓ Production type



Survey census/epidemiological questionnaire



Data examples include:

- ✓ Animal census information
- ✓ Animal contact tracing
- ✓ Biosecurity evaluation
- ✓ Premises information
- ✓ Premises layout
- ✓ Sources of feed
- ✓ Susceptible animals present in neighboring premises
- ✓ Vaccination history



Diagnostic sampling, testing, and reporting

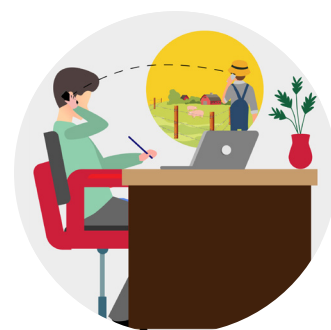


Data examples include:

- ✓ Disease causing agent
- ✓ Disease status
- ✓ Sampling methods
- ✓ Sample size



Disease reporting hotline



Data examples include:

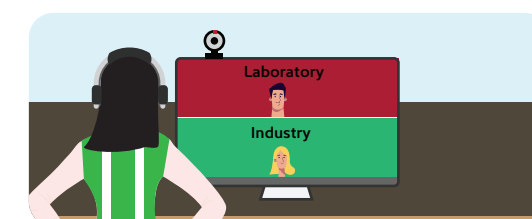
- ✓ Diagnostic appointment
- ✓ Number of symptomatic animals
- ✓ Premises location
- ✓ Symptoms



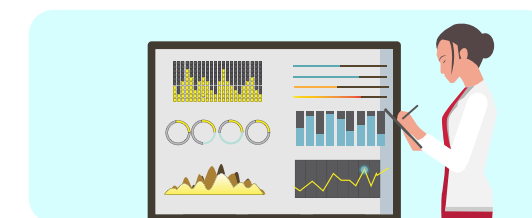
DIAGNOSTIC SURVEILLANCE SAMPLING

The sampling scheme is determined by an epidemiologist on the IMT and defines how often and where testing will take place and which animals will be tested. Sampling continues until there is no evidence of infection in an area/zone or until freedom from disease has been declared. A coordinated effort between the field IMT staff, couriers, IMT laboratory coordinator, the veterinary diagnostic laboratory, and the Disease Reporting Officer is essential to ensure timely testing and reporting.

Lab Coordination



Sampling Scheme



Sampling Procedure



Sampling Biosecurity



It is critically important that surveillance planning is integrated with current diagnostic sample collection, sample testing, surge capacity, and reporting capabilities.