

ANIMAL DISEASES

prevention and control



Prevention and control of diseases by Veterinary Services worldwide positively impacts a whole range of sectors crucial to animal and human health. Over the last 20 years the sanitary crises caused by BSE, H5N1 and foot and mouth disease have shown how countries grapple with important sanitary and socio-economic impacts when appropriate animal diseases prevention and control measures are not implemented.

CONTROLLING DISEASES AT SOURCE

National Veterinary Services (VS) are at the very core of the system for the prevention and control of animal diseases. Among other aspects, they are responsible for early detection and rapid response to outbreaks of emerging or re-emerging animal diseases. Enhancing VS governance must be the focus worldwide so that, the quality and efficiency of disease prevention and control systems is ensured and is supported by appropriate legislation.

VS in developing and in transition countries are most in need of resources and technical assistance so they will be able to guarantee animal health and thus public health worldwide, including food security and food safety.

NOTIFICATION OF ANIMAL DISEASES TO THE OIE

118 terrestrial and aquatic animal diseases are listed by and are notifiable to the OIE by the VS of Member Countries, i.e. the first occurrence or the re-occurrence of a listed disease in their country, as well as the occurrence of new emerging diseases. These notifications are complemented with follow-up reports as the situation evolves.

Compensation: key to transparency

The existence of a compensation scheme encourages early notification of diseases by farmers who are the first to detect the occurrence of diseases. Farmers will more easily report illness provided they are assured of getting compensation for losses and animals killed as part of possible governmental stamping-out measures.

SURVEILLANCE

Upstream of all action in preventing and controlling animal diseases is an effective active or passive surveillance. This can only be guaranteed provided an awareness campaign includes and rallies all actors at all levels of the animal production chain that is to say from the farmer, to his local veterinarian and laboratories, to the highest private or public veterinary authority.

The OIE defines surveillance as "The systematic ongoing collection, collation, and analysis of data, and the timely dissemination of information to those who need to know so that action can be taken." (*OIE Terrestrial animal Health Code; 2011*).

Passive surveillance: it is the direct collection of field information from the network of farmers and veterinarians.

Active surveillance: it is the sampling of animal populations and the search for diseases and pathogens or their evidences that may be found in the samples.

EARLY DETECTION AND RAPID RESPONSE MECHANISMS

Early detection system (*OIE Terrestrial animal Health Code; 2011*):

A system for the timely detection and identification of an incursion or emergence of disease/infection in a country, zone or compartment. An early detection system should be under the official control of the Veterinary Services complying with relevant OIE standards and should include the following characteristics:

- representative coverage of target animal populations by field services;
- ability to undertake effective disease investigation and reporting;
- access to laboratories capable of diagnosing and differentiating relevant diseases;
- a training programme for veterinarians, veterinary para-professionals and others involved in handling animals for detecting and reporting unusual animal health incidents;
- the legal obligation of private veterinarians in relation to the Veterinary Authority;
- a national chain of command.

Collecting samples

In order to have a rapid and efficient diagnosis of a disease occurrence, the veterinary authorities must have a responsive mechanism of sample collection and laboratory analysis. Particularly in developing countries, because of the shortage or the high cost of field veterinarians, the detection of disease and collection of samples will rely on well trained farmers or para-professionals under close supervision of accredited veterinarians.

Diagnostic

Once aware of a disease outbreak, the veterinary authorities must ensure rapid diagnosis, that the national and international community is well alerted, and that a final confirmation and characterization of pathogen of animal origin may be determined if necessary in OIE Reference Laboratories for the specified disease. OIE has a global network of 265 Reference Laboratories and Collaborating Centres covering relevant animal diseases.

BIOSECURITY

Biosecurity policies and measures taken to protect human and animal health from all biological hazards is essential. In case of a disease outbreak in a non endemic area, depopulation by humane killing - using OIE standards -, followed by disinfection of establishments, equipments and vehicles, and a ban or control of movements of infected and in contact animals, will in most cases efficiently prevent the spread of pathogens. Appropriate biosecurity levels must be in place at global scale. Member Countries must comply with OIE standards and guidelines, provide training where relevant for those involved, and appropriate material and human resources. Financial compensation of owners whose animals may have been killed for disease control purposes is a key element for successful control policies of transboundary diseases.

COMPARTMENTALISATION

Maintaining trade despite the presence of diseases

Compartmentalisation makes it possible to continue to trade from disease free compartments within a country or zone affected by one or more animal diseases.

Under the terms of the *OIE Terrestrial Animal Health Code*, a compartment “means an animal subpopulation contained in one or more establishments under a common biosecurity management system with a distinct health status with respect to a specific disease or specific diseases for which required surveillance, control and biosecurity measures have been applied for the purpose of international trade”.

This new OIE provision makes it possible for countries that still have areas infected with diseases to access international markets without placing importers at risk, whereas until quite recently they would not have had this possibility.

VACCINATION

Vaccination is not a form of treatment, and is not always a recommended measure. Stamping-out policy is sometimes necessary in order to control and ultimately eradicate a disease, particularly when detected early. However, preventive vaccination remains an indispensable global tool to prevent and control the majority of the diseases listed by the OIE.

Implementing a vaccination strategy

If it is determined that vaccination is an option, before launching a specified vaccination policy Members need to look at critical pre-requisites to guarantee a successful outcome, i.e; ensure vaccine quality and define the conditions under which any vaccination policy must eventually be stopped (exit strategy).

Vaccine quality: vaccines should be produced in accordance with international guidelines prescribed in the *OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*.

Ensuring a permanent cold chain (continuum of temperature control) is critical to the successful implementation of a vaccination campaign, applicable to most of the vaccines available in the world.

IDENTIFICATION AND TRACEABILITY OF ANIMALS

Animal identification and traceability are very useful tools in the effective control of animal diseases. In case of outbreaks, such measures will ease the identification of animals and animal products potentially exposed to the pathogen and allow isolating or destroying them, vaccinating or treating them thereby reducing the spread of the infection. This policy will also result in a reduction of possible trade restrictions.

The *OIE Terrestrial Animal Health Code* gathers the organisation's international recommendations and guidelines on animal health.

Notification of animal diseases: chapter 1.1 (2011)
http://www.oie.int/en/international-standard-setting/terrestrial-code/access-online/?htmfile=chapitre_1.1.1.htm

Animal Health Surveillance:
Section 1 (2011)
http://www.oie.int/index.php?id=169&L=0&htmfile=chapitre_1.1.4.htm

Disease Prevention and Control
Section 4 (2011)
http://www.oie.int/index.php?id=169&L=0&htmfile=titre_1.4.htm

Animal disease summaries:
<http://www.oie.int/en/for-the-media/animal-diseases/animal-disease-information-summaries/>