

# Management of Infectious Disease Outbreaks in Animal Populations

## Overview

This module is designed to teach both the theoretical and practical information required for the management of a major infectious disease outbreak of farm animals.

Topics will include epidemiology of infectious diseases, risk and cost-benefit analysis, surveillance, diagnosis and vaccination strategies before and during an outbreak, contingency planning and case studies to illustrate how disease outbreaks could be better managed.

## Welcome to the course

Management of Infectious Disease Outbreaks in Animal Populations is an optional course in the Livestock Health and Production and the Veterinary Epidemiology and Public Health programmes of the Royal Veterinary College. The module may also be studied as a 240-hour Individual Module. This course is designed to provide you with both comprehensive theoretical knowledge and practical tools for the management of major infectious diseases in livestock.

Infectious diseases of livestock are no longer only the domain of farming communities and the veterinary profession. Many of the infectious diseases that affect livestock are of the epidemic type and tend to have rapid and explosive spread. The impact of these diseases is felt not only in their effect on the animal (sickness and sometimes death), but also as the consequent loss of productivity and reduced farm income, the economic losses from curtailed international trade in live animals and their products, and often the effect they have on people who may become infected with zoonotic diseases.

We are now living in an increasingly interconnected world with high levels of national and international population movements and changing climatic conditions; episodes of emerging and re-emerging diseases are a consequence of these global changes that the world has to contend with. The appearance of diseases, such as West Nile virus in the USA and bluetongue in the UK, illustrates the ease with



## **What will you learn from this course?**

By the end of this course you should be able to:

- describe the epidemiological concept of disease transmission and related factors, and explain the epidemiological aspects of the relationship between host, agent and the environment
- explain the role of economic analysis in animal health management
- describe monitoring and surveillance approaches
- outline measures needed to prevent the introduction of a disease into a country
- make recommendations on the most appropriate control methods for different diseases
- identify the highest-threat emergency animal diseases for your country, know where those threats are likely to come from and recognize how they will manifest themselves.

## **Course structure**

## **Tutor-marked assignments**

In addition to your work on the 11 units, you are required to complete and submit at least one tutor