RANEMA e-learning

RANEMA e-learning
a distance learning tool for basic epidemiology

Training on basic epidemiology applied to livestock production in the tropics

What is RANEMA ?

CIRAD, in collaboration with the National Veterinary School of Alfort, already developed a computer assisted learning material in basic epidemiology, Ranema. Based on that experience and using the same approach, that says putting the trainee into different situations, Ranema-Flu module was developed involving different researchers with epidemiological, ornithological or training skills and using E-learning maker © software. It is used as a distance-learning training support in basic epidemiology and also as a support for group training using additional pedagogic supports (complementary exercises and pedagogic guidelines). A specific RANEMA package has been created for HPAI in poultry (see above) and a package about Classical and African Swine Fever will be shortly developed.

RANEMA-FLU Presentation

In the frame of the training activities of CIRAD within the 5 regional TCPs ?Emergency Assistance for early detection and prevention of Avian Influenza?, it was proposed to create a specific module on Highly Pathogenic Avian Influenza, called RANEMA-Flu.

Chapter 1. Epidemiology of avian influenza

Lesson 1. Review of Virology

- The trainee will review basic information on virus structure, genetic and pathogenicity characteristics.

Lesson 2. Diagnosis

-
- The trainee will review the different types of samples needed for HPAI diagnosis
- The trainee will understand the main requirements for sample transport in the field and for international shipment
- The trainee will review a summary of the main diagnosis methods for virology and serology

Lesson 3. Ecology and Epidemiology of AI virus

-
- The trainee will understand the principal introduction routes of HPAI in a country
-
    Lesson 4

    . Public Health aspects of AI virus

- The trainee will review the public health issues related to AI viruses
- The trainee will understand who is the population at-risk will be given additional reading about the prevention measures to be undertaken.

Lesson 5. Prevention and control of the virus

- The trainee will review the control strategies including the definitions of infected, restricted and control areas and main methods for culling and disinfection
- The trainee will review the bio security requirements within a farm in order to prevent from AI infection
- The trainee will review the main vaccines available for prevention as well as the different vaccination strategies

Chapter 2. Surveillance of the HPAI

Lesson 1. Case-definition adapted to the HPAI H5N1

- The trainee will understand the importance of choosing an appropriate case-definition when dealing with surveillance in general and HPAI in particular
- The trainee will understand the concept of sensitivity applied to a surveillance network
- The trainee will understand the principal steps of the investigation of a suspect case, including case confirmation and tracing back and forward in the case of AI
- The trainee will be able to discuss the use of epidemiological findings and laboratory results in an epizootic context.

Lesson 2. Surveillance methods for the domestic poultry

- The trainee will review the general principles for HPAI surveillance based on FAO and OIE guidelines including the concept of targeted and sentinel population surveillance.

- The trainee will be able to determine an appropriate expected prevalence when designing a surveillance protocol for HPAI.

- The trainee will review the objectives and recommendations of the surveillance on vaccinated populations

Lesson 3. Sample size calculation using software

- The trainee will understand the difference between the two approaches: estimating a percentage and detecting a disease
- The trainee will be able to use Winepiscope and FreeCalc software to calculate a sample size for surveillance purpose and to interpret the results of its work.

Chapter 3. Wild birds and Avian Influenza

Lesson 1 HPAI and wild birds

- To present a review of avian influenza in different birds species
- To describe ecological criteria important to identify higher risk species.

Lesson 2. Birds migration

- To present the main concepts and strategies of bird migration and bird movement.
- To describe the regional bird migration systems (adapted to the version of Ranema), focused on higher risk species

Lesson 3 Wild birds study

- To present available set of techniques for monitoring bird populations, with a specific concern on birds migration.
- To describe the main bird census techniques
- To describe the main birds capture techniques

Lesson 4. Birds species recognition

General objective: provide key element for identification of selected water birds

Chapter 4. Introduction to Risk Analysis

Lesson 1. General principles of risk analysis

- The trainee will understand the general principals of the risk analysis focusing on qualitative risk assessment.

Lesson 2. Application to HPAI

- The trainee will apply the general principals of the qualitative risk assessment to the exemple of the risk of introduction of HPAI

Chapter 5. Resources

This chapter will provide technical related documents on the following topics:
- Emergency preparedness and contingency plans
- Destruction and disposal methods
- vaccines for AI
- diagnosis methods
- vaccines for AIdiagnosis methods

Poster_RANEMAverdef-1.pdf[144,72kB]

.

Sí