

Evaluation of Complex Surveillance Systems using Scenario-Tree Modelling

Course Announcement

Methods for the quantitative analysis of risk-based surveillance and tools for the development of output-based animal health standards for disease control regulations

Monday 6th to Friday 10th December, 2010

Centre for Environment, Fisheries & Aquaculture
Science (CEFAS), Weymouth, UK

Current and future animal and public health professionals working in disease surveillance, policy, market access and trade-related areas are invited to register for a short course being offered by a collaboration of AusVet Animal Health Services and Cefas (Centre for Environment, Fisheries and Aquaculture Science)

Format

The course will be delivered in two parts, with optional registration for the whole course or just the first day:

Part 1: One-day introduction and overview

Day 1 will provide a complete overview of the theory and analytical framework that is used to analyse complex surveillance and establish quantitative output-based standards as part of regulations for disease control. It will be targeted at regulators and decision makers who have a need to understand the concepts but who have no responsibility for model development

Part 2: Four-day hands-on workshop

This intensive practical workshop will provide participants with advanced training and personalised support in the implementation of scenario-tree models using a variety of software tools. Participants of the four-day workshop will have also attended the one-day introduction.

Venue:

The course will be held at the Centre for Environment, Fisheries and Aquaculture Science (Cefas) in Weymouth, Dorset from December 6th-10th 2010. Weymouth is an attractive seaside town on the Dorset Jurassic coast, and an extremely popular holiday destination. See <http://www.visitweymouth.co.uk/> Weymouth can be easily accessed in 3 hours by train from London and 1^{1/2} hours from Southampton (by train) and Exeter airports (by car).

Registration fees and accommodation costs

Training costs are 850 GBP (excluding VAT) for the full course and 200 GBP (excluding VAT) for the first day only, which is targeted at decision and policy makers who need to 1) know of the existence of the methodology, and 2) be able to interpret the results of analysis. Refreshments and lunches throughout the week, and one evening meal on day 4 of the course, will be included. Attendees will be responsible for their own travel and accommodation costs. Weymouth accommodation costs per night are typically 60 to 80 GBP (incl. breakfast) in a middle class hotel or Bed and Breakfast for a single person. Details of local accommodation can be provided on request or via <http://www.weymouth.co.uk/>

Presenter:

The course will be delivered by Dr Tony Martin BA VetMB MPVM, Veterinary Epidemiologist with the Western Australian Department of Agriculture and Food.

Tony is an epidemiologist with expertise in the areas of surveillance, freedom from disease, and risk assessment. He has led numerous training courses in surveillance evaluation and risk assessment, in many countries. He has worked in private practice, university, international organisation, and government environments, and has published a range of papers on the subject matter of this course. His current work is primarily biosecurity-related, covering plants and invasive pests as well as livestock.



Course Summary

This two-part course will offer a one day introduction comprising theory and discussion and an intensive four day course offering advanced level technical training in applied epidemiology. The course will be of interest to veterinary epidemiologists and those working in surveillance, regulation of animal movement, market access and trade-related areas. The course will use examples from both aquatic and terrestrial animal surveillance systems.

The course is based on similar courses previously presented in Europe, Africa, North and South America and Australia, and will provide participants with the ability to evaluate complex surveillance systems quantitatively. This course will introduce new material specifically relating to the development and implementation of practical output-based regulatory standards for animal movement, using scenario-tree modelling as a tool for the optimisation of flexible surveillance inputs.

Part I (Monday) will include an overview of the methodologies and will be of interest to both senior managers and those interested in implementing the methodology using stochastic modelling.

Part II (Tuesday to Friday) will provide hands-on experience in planning and implementation of models to analyse surveillance and support movement regulations. Participants should have experience in using MS Excel and some understanding of the principles of modelling (such as experience with quantitative risk analysis, which uses similar tools). They will be first shown, step-by-step, how to create, run and interpret the results of an example scenario tree model to evaluate a surveillance system. After this, participants will have an opportunity to model surveillance systems from their own countries, guided by the training team, and sharing their experience with other participants.

The course will consist of presentations with associated discussion of background topics and methods, together with practical exercises. The exercises will involve participants in working through (on computer spreadsheets) an example prepared by the presenters, and also in developing an analysis of a surveillance activity of their own choosing.

Topics

- Calculating the sensitivity of a surveillance process using stochastic scenario tree models.
- Combining sensitivities of multiple, different surveillance processes.
- Estimating the probability that the establishment/country/zone/compartiment is free from disease at the design prevalence, based on the combined sensitivities.
- Incorporating historical evidence from ongoing surveillance processes.
- Principles of output-based regulatory standards.
- Development of models to design and support output-based standards.

Course Prerequisites

- Participants will be required to bring their own laptop.
 - MS Windows (XP, Vista) operating system preferred. Mac OS is supported, but Mac users may experience more complex software problems, taking time away from workshop learning activities.
 - The computer should have MS Excel installed.
 - For stochastic modelling either:
 - An existing licensed copy of @Risk, or
 - An installed copy of PopTools (free from <http://www.poptools.org>), or
 - Administrator privileges so that PopTools can be installed during the workshop.
 - A functioning wireless connection to establish a local-area connection during the workshop and administrator privileges which allow users to connect to the internet.
 - An available USB port to plug in a USB memory stick containing software and examples.
- Surveillance system for detection or demonstration of freedom from infection/disease.
 - For practical activities, participants should have a detailed knowledge of at least one surveillance system, preferably with raw disaggregated data (eg, the numbers of herds and animals processed by the surveillance system for a given period, with pertinent herd- and animal-level characteristics that influence risk of infection).

Training Materials

Participants will be provided with a USB memory stick containing all the required software, course notes, spreadsheets and data, as well as full PDF copies of several relevant books.

Further information

0044 (0) 1305 206661 Course-specific information (Dr Birgit Oidtmann).
0044 (0) 1305 206600 Local travel/accommodation information (Laboratory Secretariat).

HOW TO REGISTER

Registration/payment should be made via the following link:

http://www.cefastechnology.co.uk/shop/acatalog/Training_courses.html

Please:

- Ensure that you select the correct option.
- Follow the on-line instructions for registering payment.

When registering from within the EU, VAT will not apply if you can provide a EU VAT number.

It is expected that there will be significant interest for this course and as a result it will be necessary to limit attendance as follows:

- Day 1 Maximum of 30 participants.
- Days 2 – 5 Maximum of 12 participants.

Acceptance will be strictly on a first-come first-serve basis.