STOC free

A Surveillance analysis Tool for Outcome-based Comparison of the confidence of freedom generated by control or eradication programmes

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Relevance

Examples of cattle trade related introduction of diseases:

- BVDV in Denmark associated with import from the Netherlands
- Bovine TB to Belgium and the Netherlands from calves imported from UK and Ireland
- Bovine besnoitiosis into Ireland through import of apparently healthy animals
- Etc..

Context

- Risk of transmission of diseases through cattle movements
- EU countries have:
  - Diverse control/eradication programmes (even more so with new Animal Health Law)
  - Different definitions of “free” status
- Therefore, outcomes of programmes cannot be compared and the degree of certainty about freedom of infection varies
- **We need:** standardized measures to enhance safety of trade

Aim of the project

Develop and validate a new tool:

STOC free

that enables a **transparent and standardized comparison of confidence of freedom** for control programmes.

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Development

Answering the question

When trading an animal: does it pose a risk of introducing an infection into the destination herd ?

p(freedom| information)

- **What is the probability and uncertainty that an animal is free of infection when leaving the farm given available information ?**

Outcome: framework

STOC free DATA

STOC free MODEL

OUTPUT

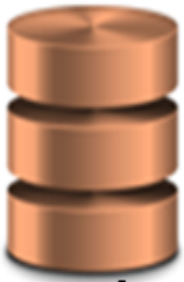
Challenges:

- Easy to use by stakeholders
- Heterogeneous inputs, uniform output
- Output on different levels of aggregation
- BVDV as case disease but adaptable to multiple diseases in multiple species

STOC free DATA

A data collection tool

1. Description of control programmes (CPs) for BVDV *(Van Roon et al., 2019)*.
2. Define risk factors for introduction and delayed detection
   - expert opinion,
   - literature review and meta analyses *(Van Roon et al., 2020)*
3. Create an expanded questionnaire
4. Transform questionnaire into a data-collection tool for STOC free model



Interface:

STOC free DATA

STOC free MODEL

- Includes risk of introduction
- Assumes a homogeneous biological system of a disease
- Deals with heterogeneous sources of input information
- Provide the probability and associated uncertainty that an animal from a free herd is truly free

Field application and decision maker uptake

- Independent
- Access to data

- Easy to use
- Freely accessible

Data

Qlip · ZuivelNL · CRV · Rendac

Origin

Interface

STOC free MODEL

Destination

efsa
European Food Safety Authority

SRUC · UCD DUBLIN · SVA NATIONAL VETERINARY INSTITUTE · Oniris Nantes-Atlantic National College of Veterinary Medicine, Food Science and Engineering · Universiteit Utrecht · FRIEDRICH-LOEFFLER-INSTITUT FLI Bundesforschungsinstitut für Tiergesundheit Federal Research Institute for Animal Health · GD · ahi Animal Health Ireland

Ultimate goal

STOC free will be used by every country or region to evaluate probability of freedom of traded animals for any disease

COST Action SOUND-control for sharing and disseminating knowledge with ~32 EU countries.

Impact

The use of the STOC free framework will stimulate:

- Safe trade
- Improved biosecurity on farms
- Economic benefits due to reduced risk in a flexible trade context

STOC free DATA

STOC free MODEL

OUTPUT

Thank you for your attention

http://www.stocfree.eu/

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