

EPIC SCOTLAND

Centre of Expertise on Animal Disease Outbreaks

CAN YOU PREVENT COWTASTROPHY?

by Stephen Catterall

Can you prevent Cowtastrophy?

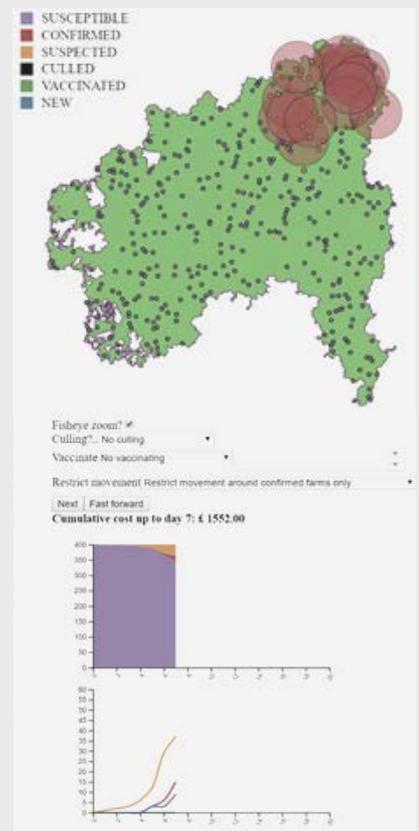
You are the Chief Veterinary Officer on an imaginary island. A disease is affecting cattle on the island and it is spreading fast. What are you going to do?

Outbreaks of livestock disease can lead to significant economic, welfare and social costs. The control policies required to reduce disease spread can have impacts of their own, meaning they can often be contentious. Mathematicians and epidemiologists from BioSS, SRUC and Moredun have developed an easy to use software app to explore these issues. The app, funded by the SEFARI Gateway Responsive Opportunity Fund, illustrates some of the key concepts which influence disease control policies, as well as the dilemmas faced in controlling livestock disease outbreaks.

The app - Cowtastrophy - starts by setting up a disease scenario. It is your job to control the disease using the available options: livestock movement restrictions, vaccination or culling. As the disease spreads, you are free to implement any combination of control measures. What can you do to reduce the size of the outbreak – and the associated costs – to a minimum and thereby prevent a Cowtastrophy? Come and visit EPIC's stand in the SAOS building to try out Cowtastrophy and meet EPIC researchers, exploring questions such as: Why are movement restrictions so important? Why might animals be culled on a farm before disease has even been confirmed? What effect does vaccination have on the rate of disease spread?

Try out the Cowtastrophy App at the EPIC Stand (SAOS Building - ringside)

For more information read the SEFARI Cowtastrophy blog



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**Come and visit
EPIC in the SAOS
building - ringside**



3 TOP READS:



Manipulation of contact network structure and the impact on foot-and-mouth disease transmission

Sibylle Mohr, Michael Deason, Mikhail Churakov, Thomas Doherty and Rowland R. Kao
September 2018

Veterinary
Record

Pestivirus infection of sheep - testing times?

George C. Russell
August 2018

PLOS ONE

A framework for estimating society's economic welfare following the introduction of an animal disease: The case of Johne's disease

Alyson S. Barratt, Matthieu H. Arnoult, Bouda Vosough Ahmadi, Karl M. Rich, George J. Gunn, Alistair W. Stott
June 2018

CHALLENGES TO ERADICATING A COMMON CATTLE DISEASE

by Orla Shortall

There are joint industry-government schemes in the UK and Ireland to eradicate the endemic disease Bovine Viral Diarrhoea (BVD). EPIC's scientists are exploring farmers' responses to the Scottish scheme and the governance of the schemes across the UK and Ireland.

A voluntary scheme was introduced in Scotland in 2010 to eradicate BVD. Legislation was since introduced to enforce testing and movement restrictions for herds without a negative status. We carried out interviews with beef and dairy farmers in Dumfries and Galloway, Angus and Aberdeenshire in 2017 to explore their experiences of the scheme. The farmers interviewed agreed with the epidemiological framing of BVD as a 'straightforward' disease where testing was relatively reliable, mode of transmission was understandable, and eradication was achievable. Farmers had different responses to a 'Scottish' disease eradication scheme based on their location and the market structures they were involved in. Those in the north east involved in the beef supply chain which has a distinct 'Scottish' market identity saw the structures of the scheme as more logical than those in the south west who regularly trade with English farmers and where the dairy sector has no market mechanisms that differentiate Scottish animals from English animals.

Work of carrying out interviews with key stakeholders involved in the five different BVD eradication schemes in the UK and Ireland is ongoing. The schemes were designed in response to the different livestock industry structures in the countries and the involvement of different actors. The work explores the different types of interaction between industry and government, and challenges and opportunities presented by different schemes designs.

Find out more about BVD at the EPIC Stand (SAOS Building - ringside)

For more information on Orla's research visit www.docowseatgrass.org





DISEASE RISKS TO SCOTTISH LIVESTOCK: WHAT'S ON THE RADAR?

**1330h Thursday
20th June 2019**

What's on the horizon? Global threats to the Scottish industry

Harriet Auty

EPIC and SRUC Researcher

.....

How do we stop notifiable disease entering Scotland? How do we stop notifiable disease entering your farm?

Michael Park

Animal and Plant Health Agency

.....

Early detection of disease risks in our livestock: the role of disease surveillance

George Caldow

SRUC Veterinary Services

.....

The policy perspective on disease threats – from Scottish parliament to the farm gate

Sheila Voas

Chief Veterinary Officer for Scotland

EPIC Centre of Expertise on Animal Disease Outbreaks is organising an event entitled 'Disease risks to Scottish livestock: what's on the radar?', at this year's Royal Highland Show in the Scottish Government Pavilion. The event brings together EPIC, APHA, SRUC and Scottish Government to discuss global disease threats to Scotland's livestock industries.

The aim of the event is to share the latest intelligence about global disease threats to Scotland's livestock industries. Animal health experts will provide an insight into the science behind prioritising disease risks and the decisions taken by industry and government in managing disease.

Following the brief talks, representatives from EPIC, APHA, SRUC and Scottish Government will be available to discuss ideas and issues around veterinary disease risks in Scotland.

The 'Disease risks to Scottish livestock: what's on the radar?', event will take place at 1330h Thursday 20th June 2019. Tickets are available through Eventbrite, or contact epic.scotland@sruc.ac.uk for further details.



#MuckFreeTruck CAMPAIGN

from Alistair Driver, National Pig Association article 9th May 2019

#MuckFreeTruck

#MuckFreeTruck is a joint campaign by number of industry bodies, including the NPA, AHDB, the British Meat Processors Association, the Pig Veterinary Society, British Pig Association and Red Tractor to encourage producers, processors and hauliers to do everything they can to keep lorries clean.

African swine fever (ASF) is one of the most devastating swine diseases, and is currently spreading in South East Asia and in Europe. However, the campaign is not just about ASF. Over the past few months there has been a spate of swine dysentery cases confirmed on farms across the UK. Some of the outbreaks have been linked to contaminated vehicles.

“The campaign will stress how important it is for producers, processors and hauliers to take every precaution possible to prevent dirty lorries entering farms and leaving processing plants,”

NPA chief executive Zoe Davies

Work carried out at the Roslin Institute as part of EPIC - Scotland's Centre of Expertise on Animal Disease Outbreaks - has highlighted the role that contaminated lorries can play in spreading disease.

Models of ASF transmission using real data on movement of pigs, they show that the virus could spread across the country in weeks if it got into the key pig producing areas. When potential disease spread via contaminated vehicles is also included in the model, the numbers of premises likely to be involved in an outbreak increases substantially.

Visit the EPIC stand for more information
or see the NPA website

Meet the EPIC team at Royal Highland Show 2019



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