Case Study

Contract Research: Models in farm health for Defra

Key Facts

- In 2008 the total income from farming in the UK was £3.5 billion. However, disease in livestock can cost many millions of pounds each year and may run into billions when an exotic disease occurs such as the Foot and Mouth Disease outbreak in 2001.
- The Department for Environment, Food and Rural Affairs (Defra) is the government department responsible for environmental protection, food production and standards, agriculture, fisheries and rural communities in the UK.
- The health and welfare of animals is central to Defra's work of protecting and improving livestock and controlling and eradicating disease.
- Richard Bennett, Professor of Agricultural Economics at the University of Reading, has over 25 years of experience in the economics of animal health and welfare.
- Defra commissioned the University of Reading to produce a method to present to livestock keepers the benefits of disease control measures –showing costs associated with disease and the net benefits if action is taken.
- 12 models are now available freely online for vets, advisers and farmers to discover the potential costs of disease to the farm business and the benefits of effective control measures.

The Client

The Department for Environment, Food and Rural Affairs (Defra) is the government department responsible for environmental protection, food production and standards, agriculture, fisheries and rural communities.

The government's Animal Health and Welfare Strategy for Great Britain, published in 2004 after the Foot and Mouth Disease outbreak, sets out a vision for the health and welfare of the nation's kept animals. Its aim is to "develop a new partnership in which we can make a lasting and continuous improvement in the health and welfare of kept animals while protecting society, the economy, and the environment from the effect of animal disease".

The Challenge

Biosecurity means protection from transmission of infectious diseases, parasites and pests. Good biosecurity is a vital part of keeping new disease away from animals, as well as helping to improve farm efficiency and protect neighbouring farms and the countryside

Disease may not always be apparent, especially in the early stages; therefore maintaining a good biosecurity routine is always essential – not just when there is a major disease outbreak. Unfortunately not all farmers are not aware of the costs associated with a particular disease, and do not appreciate what the net benefits are if prior action is taken.

Defra had a challenge: how to convince farmers that it is worthwhile employing certain measures for managing disease and improving livestock performance.

Solution

Defra commissioned the University of Reading to produce a method they could present to livestock keepers which would convince them of the benefits of disease control measures – showing the costs associated with disease and the net benefits if action is taken.

Richard Bennett, Professor of Agricultural Economics with over 25 years experience in animal health and welfare, Isobel McClement and Ian McFarlane developed farm based models in response to Defra's need. The models,

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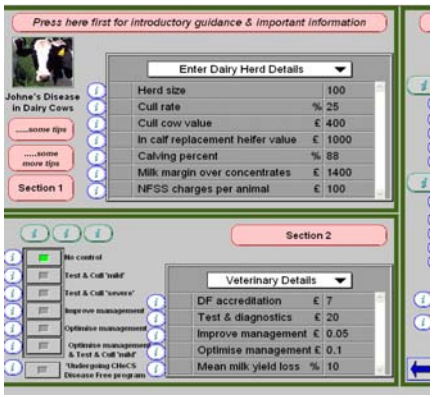
developed in consultation with industry, can be farm, disease and livestock specific.

Data to populate the farm models was obtained from published sources and multiple stakeholders, including species industry groups, farmers, vets, and researchers. Farm Health Planning sector groups were asked to suggest diseases they considered were of economic importance to their businesses. The diseases chosen were then developed into disease control cost benefit models.

The models' interface was designed to directly answer the needs of the end user. They allow the user to input farm specific details and disease assumptions to discover the potential cost of disease to their farm business and the benefits of effective control measures.

Twelve models, acting as demonstration or conversation tools, are now available free and online for vets, advisers and farmers at http://www.fhpmodels.reading.ac.uk/



'We were particularly pleased with the flexibility shown by the University of Reading in developing these useful tools. They took on board changing requirements, were always available to discuss the work and willing to take on additional promotional activity.

John Hefferman
Defra's FHP Policy Lead

Benefits to Defra

Access to the University of Reading's specialist expertise and research ability in the economics of animal health and welfare.

The University's unique research expertise enabled the development of a tool which has direct relevance for the industry and which can be used in the field.

The research had direct relevance to the Farm Health Planning Initiative – Defra's partnership with industry to promote farm level prevention and control.

Benefits to the University

The contract consolidated an historical relationship and raised the University's profile with Defra and industry stakeholders.

The University gained useful involvement in policy orientated work and research directly linked to animal health and welfare.

The contract provided an opportunity for publication in peer-reviewed scientific journals and presentation at conferences.

University of Reading

The University of Reading is a world-class research-intensive university covering a broad spectrum of disciplines across the Life and Physical Sciences, Arts and Humanities, Social Sciences and Henley Business School. Areas of particular strength include: Climate Systems Science, Preventative and Therapeutic Health Sciences, Sustainable Construction and Environments and Computational Science and Informatics.

The University works with businesses providing support for research and development, as well as access to expertise and equipment to solve business challenges. To find out how you can access the leading minds at the University of Reading please contact our Knowledge Transfer Centre.

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