

Biosecurity and animal health

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Introduction

In 2001, the UK experienced its worst outbreak of Foot and Mouth Disease. As attempts to bring the disease under control took hold, the countryside ground to a halt. Millions of sheep and cattle were slaughtered, and buried or burnt on pyres. Tourists shunned the countryside, and the rural economy suffered. And amongst it all farmers, their families and other rural businesses had to come to terms with a distinctly different way of living until normality could be restored.

Since then, geographers have paid close attention to the social effects of animal disease such as how rural populations are emotionally affected by animal disease; how they learn to cope with living with animal disease. Research has not just focussed on Foot and Mouth, but also on the ongoing problems of bovine Tuberculosis and the emergence of new diseases such as Highly Pathogenic Avian Influenza (so-called bird 'flu). This interest stems from the fact that animal disease is a geographical phenomenon.

Modern agriculture is reliant on the global mobility of its products: food and animals. Maintaining this mobility is important to the supply of food and workings of modern agriculture, but outbreaks of animal disease threaten the

safety of these global geographies of food. As a result much work goes into securing this international geography of agriculture through efforts known as biosecurity. This includes things like border controls, but also attempts to get farmers to change farming practices to help prevent animal disease. However, as studies have shown, the promotion of biosecurity is not without its problems.

This case study uses findings from two studies to explain the ways in which farmers and governments often differ in their approaches to biosecurity. The case study describes how new approaches are likely to improve biosecurity on farms in the future.

Findings

Geographies of biosecurity knowledge

The idea of better farm biosecurity has been promoted by the UK government especially for diseases such as bovine Tuberculosis. This disease can be passed between cattle but can also be transmitted by badgers which are a protected species. Whilst many farmers would like the government to cull badger populations, there is much public opposition and scientific evidence that suggests that it would make little difference. Instead, farmers have been encouraged to improve



their farm biosecurity by taking steps to keep badgers out of their cattle sheds, taking more care where they buy new cattle from, and adopting other farming practices that reduce the risk of spreading the disease.

My own research (Enticott, 2008a) shows that farmers understand the nature of biosecurity risks differently to the government and that these understandings are rooted in their local experience of disease. The study shows that farmers make sense of disease risks by creating ideal types of farmers and cattle who are likely to suffer from an outbreak of disease. These models are created through farmers' own experience, but are also shared within local communities. Whilst these explanations matched government accounts of diseases, many farmers also noted exceptions to these rules – cases where cattle shouldn't have got the disease but did and vice-versa. Again, these exceptions were shared locally and inspired a sense of fatalism about the benefits of adopting any form of biosecurity. The contrast between local knowledge and experience, and more general scientific assessments of risk is an important factor in the rejection of biosecurity advice. For bovine tuberculosis, this sense of fatalism was enhanced by a lack of trust in the governance and science of animal disease that emanated from their experiences during the outbreak of Foot and Mouth and the handling of the BSE crisis.

Recommendations

Another of my studies (Enticott, 2008b) suggests that these problems can be reversed with a different approach. A study of farmers in Wales showed that implementing biosecurity can be encouraged when farmers are: i] introduced to advice by people that they trust and; ii] they are given pragmatic solutions rather than generic advice. The study focussed on a pilot scheme in Wales which involved vets conducting a biosecurity assessment visit with farmers before agreeing a list of improvements that they could make. Results showed that on average, on farm biosecurity improved by 10%. Farmers cited their relationship with their vet as a key factor in helping them to improve biosecurity. They suggested that vets were able to offer much more pragmatic advice that could take into account local environmental and social contexts, rather than recommending general recommendations. Thus, by finding a way of weaving together local knowledges of animal disease

with general guidelines for all farms, vets were able to improve farms' resilience to animal disease.

Conclusions

- In the same way that people understand health and disease, so too do farmers generate their own knowledges of animal health from their own local experiences that are shared with their friends and neighbours;
- Exceptions to established 'rules' play an important role in rejecting scientifically defined biosecurity practices. Farmers' fatalism about biosecurity is itself encouraged by the very general nature of scientific advice which make these exceptions all the more noticeable.
- Trust in biosecurity advice can be enhanced when trusted advisors – in this case vets – are used to communicate biosecurity advice. However, this does not simply involve passing knowledge on, but translating it to fit social and environmental contexts.

References

- Enticott, G. (2008a) The ecological paradox: Social and natural consequences of the geographies of animal health promotion, *Transactions of the Institute of British Geographers* 33(4): 433-46.
- Enticott, G. (2008b), *Final Evaluation of the South West Wales Biosecurity Intensive Treatment Area*, Cardiff: Welsh Assembly Government.

Further information

- Controlling disease in farm animals: <https://www.gov.uk/guidance/controlling-disease-in-farm-animals>