



# Farmers and bovine tuberculosis: Contextualising statutory disease control within everyday farming lives



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## ABSTRACT

Farmers are important stakeholders to be enrolled in national efforts to control and eliminate endemic livestock diseases by state veterinary authorities. Their co-operation (or otherwise) has significant influence on the success of statutory disease control efforts, and when accomplishment does not meet aspiration, farmers may be blamed by the state for perceived failures. Approaching disease control within a political ecology framework and using a qualitative social science investigation of bovine tuberculosis (bTB) in Northern Ireland as a case study, this empirical paper explores the rationales and sensibilities of cattle farmers and the agricultural political economy and regulatory framework within which they operate in this region of the United Kingdom. This is important for understanding the farming context within which bTB is located, and this context is a feature of the disease landscape which has been underdeveloped in the bTB literature to date. Examining the premise that farmers are part of the problem of bTB, and a link in the chain of explanation as to why the disease has not yet been eliminated from the region, the paper will trace what everyday life is like for farmers living with multiple uncertainties and indeterminacies in their farming presents and futures. bTB as a disease is but one important influence on their farming lives – there are competing others which attract their attention and employ their resources, often pushing bTB down the list of priorities, despite its substantial cost to the economy. It will also demonstrate that farmers are embedded within wider structures, particularly global markets and European Union regulatory regimes, which profoundly condition and shape their actions, often elucidating resistance and a perceived loss of autonomy. A political ecology approach to investigating the complex multidimensional problems of First World agriculture, such as the effective control of endemic livestock disease in intensive production systems, is recommended if holistic interpretations and workable solutions are to be found and implemented.

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## 1. Introduction

Livestock farmers must be foregrounded in any analysis of state-sponsored disease control or eradication efforts. They own the animals which succumb to infection; determine their husbandry and welfare; buy and sell them; present them for disease testing; and receive statutory financial compensation for affected animals. Farmers are the actors who regularly interact with veterinarians and state officials, and who comply with (or resist) the legislative basis and biosecurity practices recommended or enforced for

disease control. Although much attention has been paid to the attitudes and behaviours of farmers in relation to disease, not enough, I would argue, has been paid to the farming conditions under which they operate, and which are likely to shape those attitudes. In taking a wider perspective, this paper investigates the political ecology of farming in relation to animal disease, incorporating situated, place-based knowledges, and illustrating the importance of what Tschakert et al (2016:161), call the 'lived experiences of people in day-to-day interactions with pathogenic landscapes'. In doing so the paper considers the example of one particular livestock disease – bovine tuberculosis (bTB) – and efforts to deal with its ongoing spread across cattle populations on farms in one part of the United Kingdom (UK) – Northern Ireland (N. Ireland).

Bovine TB has been the subject of state-sponsored eradication

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efforts in many parts of the developed world since the early twentieth century, but has been an economically-significant and politically-charged disease in the UK for all of that time (Atkins, 2016). N. Ireland has had a particularly high incidence of the disease over the last 30 years compared to other parts of Europe (Abernethy et al., 2006, 2013; Reviriego Gordejo and Vermeersch, 2006), with the annual herd incidence fluctuating between approximately 5 and 10% over the last 15–20 years with no stable incidence trend. Although there are inevitably parallels with other regions of the UK, especially those with high cattle density and a high incidence of bTB (such as the south-west of England), Northern Irish agriculture has some differences with the rest of the UK. This regional diversity has importance when analysing the socio-economic context, epidemiology and governance of bTB. Given the relatively higher importance of cattle farming to the N. Ireland economy, the higher percentage of family farms, more fragmented landholdings, different state governance structures, higher stocking densities and levels of cattle movement, and higher overall incidence levels of disease over a more prolonged period of time when compared to Great Britain as a whole, there is merit in focussing explicitly on bTB in this region. This provides a regionally-nuanced appreciation of farmers and farming lives, set within what Blaikie (1995:14) calls the 'larger, pervasive and often non-place-based political and ideational forces' which impact these lives. Such an approach fits well with a multiscalar political ecology approach: there is a need for political ecologists to 'analyse the historical and socioeconomic (or structural) context in which the *local* problem is situated, and ... to trace the links of causation to factors in the *wider* political economy' (Thrupp, 1993: 51; *emphasis added*).

While there are undoubtedly ecological and technical reasons for the persistence of bTB in N. Ireland (Abernethy et al., 2006; Doyle et al., 2014, 2016; O'Hagan et al., 2016a, 2016b; Skuce et al., 2010; Wright et al., 2015), socioeconomic and sociocultural factors affecting the economies of cattle farming and its regulation by the institutions of the state are an important part of the 'chain of explanation' (Blaikie and Brookfield, 1987), emphasizing the need to combine natural and social science in the search for potential solutions. Within veterinary epidemiology and animal health research in general, the value of qualitative research investigating attitudes and behaviours of farmers is increasingly recognised. For example, studies examining mastitis control in dairy farming (Jansen et al., 2009), zoonotic disease control (Ellis-Iversen et al., 2010), attitudes to biosecurity in Johne's disease control (Benjamin et al., 2010), and the use of antibiotics (Moreno, 2014) all found that the attitudes and behaviours of farmers, including their knowledge of disease, had an effect on the intended outcomes of improved animal and human health.

The same premise can be applied to bTB, and human geographers in particular have focussed on the attitudes and behaviours of stakeholders involved in bTB control (farmers and vets) in England and Wales. With the state traditionally having framed the issue of bTB as purely a scientific and veterinary problem, Enticott has argued that the social and cultural aspects have been largely disregarded, to the detriment of disease control efforts (Enticott, 2008a). Enticott particularly focuses on biosecurity, the attempt to separate disease agents from animals in time and space (Enticott, 2008a, 2008b; Enticott and Franklin, 2009; Enticott and Vanclay, 2011). Connecting biosecurity and animal health policy, Enticott describes how this has become a key component of the state's strategy to regulate the flow of disease between and within agricultural enterprises, but finds that farmers have resisted such policies, dismissing them as unworkable (Enticott, 2008b). Farmers may therefore legitimize illegal badger culling as they seek to protect their herds from bTB, and emphasize the alienation which they feel from both scientists and the state due to the perception of

unrealistic expert advice (Enticott, 2011). Vanclay and Enticott (2011) use script theory to discuss the routines, catch-phrases, narratives and lines of argument when farmers speak of the disease. Developing this further, they also demonstrate that farmers value their own lay knowledge of bTB, and have a fatalistic view on disease striking their herd, in spite of state veterinary advice on biosecurity (Enticott, 2008a; Enticott and Vanclay, 2011). Likewise, Fisher (2013) describes how trust and confidence in the state in relation to bTB control is low, with farmers being unlikely to act on state advice concerning the protection of their herds from the disease, which may also be linked to their perception of, and attitude towards, risk (Naylor and Courtney, 2014). Maye et al. (2014) criticise the neoliberal approaches of the state to bTB control which fail to appreciate and incorporate the 'narratives of nature' which farmers particularly strongly hold on the control of the wildlife reservoir of the disease in the British Isles - the European badger. Cassidy (2012) analyses the framings of badgers in the UK media, and also the planning, aims and conduct of the Randomised Badger Culling Trial (RBCT) in England (Cassidy, 2015). Rather than focussing on biosecurity or badgers, other work has centred much more explicitly on the framings of the disease and the ontologies of the bacteria which cause it (Atkins and Robinson, 2013; Robinson, 2017).

Here I build upon these social science literatures of bTB to further explore why farmers may resist rather than actively co-operating with, the state, and why bTB control is just one aspect of farming life demanding attention – there are competing others. Alienation and isolation from the state is a feature of farming lives which comes to the fore partly because of EU subsidy inspections, and this ultimately affects state efforts to eliminate disease. But the pressures of falling milk prices, globalisation, bad weather, stress and sense of despair also play their part in a complex amalgam of factors which may either bring the disease and its consequences even more sharply into focus, or alternatively hinder elimination efforts by deflecting attention away from disease to other matters of more pressing concern.

## 2. Blaming farmers for ongoing bTB spread

How important are the attitudes and behaviours of farmers in relation to statutory disease control? Historically, Robinson (2015) has shown that praise was showered upon farmers by state authorities in N. Ireland when progress was made towards eradication in the early years of the statutory scheme which had started in 1959, but this changed to apportioning blame in the mid-1970s. An influential audit report (NIAO, 2009) described how a minority of farmers in N. Ireland had not complied with legislative requirements on bTB testing, or had been involved in fraudulent activity such as deliberately interfering with the skin test sites on animals to reduce or create skin swellings. The auditors called for more enforcement activity by the state to curb errant farmer behaviours which had been hindering progress towards eradication. A more recent state report on bTB in N. Ireland suggested that 'the eradication of bTB in cattle ... cannot be achieved without constructive co-operation between government, industry stakeholders and individual farmers' (DAERA, 2016), highlighting the lack of a current partnership approach without explaining why.

Taken as a whole, farmers are certainly being apportioned with blame when it comes to the failure to eliminate bTB in N. Ireland, but to varying degrees. This paper will present evidence from interviews with stakeholders involved in bTB control in N. Ireland, but two interviews excerpts are important at this early stage to prepare the ground for considering the issues which this paper investigates concerning the farmers' role in ongoing disease spread and disengagement from state authorities. State vets felt that on the

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