



Exploring the challenges to **Bovine Viral Diarrhoea (BVD)** eradication in Scotland

Introduction

Bovine Viral Diarrhoea (BVD) is an endemic cattle disease in the UK, which causes scouring, infertility, abortions, illness and is seen to be responsible for significant production losses in the beef and dairy industries. The BVD eradication

programme was introduced in 2010, led by industry stakeholders and supported by the Scottish Government. This research examined (1) farmers' experiences of the BVD eradication scheme, and (2) how the scheme could be improved in the future.

Methods

Interviews were carried out with beef farmers (9 in Aberdeenshire, 1 in Angus) and dairy farmers (14 in Dumfries and Galloway, 1 in Aberdeenshire, 1 in Angus), 2 livestock auctioneers and 2 expert vets. Seven farm videos were also conducted, either through a farm walk or farmer-recorded with follow up interview.

Results

Why the BVD scheme is working

BVD is considered a 'straightforward' disease

BVD was framed by most farmers as an understandable, detectable and controllable livestock disease, and Persistently Infected (PI) cattle were understood to be the principle threat. Farmers also indicated that the tests for BVD were relatively reliable and easy to interpret.

There is an economic need to comply with the BVD scheme to sell animals

The point at which the BVD eradication scheme was having an impact on farmers was through the formal sale of animals, since farms or individuals animals must have a 'negative' BVD status for cattle to be sold.

BVD eradication is good for the industry

Some farmers were supportive of the BVD scheme because they saw it as **good for the Scottish dairy and beef industries**, and they generally saw eradication of BVD as good for the productivity and profitability of individual farms. It was considered fair that the scheme applied equally to all cattle farmers in Scotland, and accepted BVD as **an issue requiring collective action** to tackle.

Recommendations for improving the BVD scheme

Tighten BVD biosecurity regarding private sales & reduce social burden on farmers to communicate BVD status

A key transmission route for disease onto a farm is seen as buying in animals.

The scheme was proving more difficult to implement in the sphere of private sales between farmers, compared to public sales at markets. There was a reluctance to check the BVD status of animals traded privately. Farmers either did not ask about status of the farm or animals, or asked once early in the trading relationship, or asked for verbal reassurance but not documentary proof. Cases were reported where tests had run out and non-negative animals had been brought onto farms. Measures which automatically alerted farmers buying in through private sale of the animal's BVD status would remove the social burden of having difficult conversations with often trusted and longstanding trading partners. This is the case with the sale of breeding animals at market.

Tighten 'neighbourly' biosecurity of main holdings AND seasonal grazings

Another key transmission route is direct contact between animals on neighbouring farms, but the **scheme did not appear to sufficiently influence farmers' biosecurity practices relating to neighbouring farms and to farms used for seasonal grazing.** Few farmers knew their neighbours' BVD status and there was limited awareness or use of ScotEID system for finding out. A County Parish Holding (CPH) number is required to access another farmers' BVD status on ScotEID, but can only be acquired through establishment of an animal trading relationship. Farmers often perceived they had less control over the biosecurity of rented, seasonal grazing.

Acceptability of compensation for PIs

Farmers expressed mixed views about the possibility of compensation to incentivise farmers to remove PI animals from their herd. Some stated it could be unfair on farmers who have already done this voluntarily, but others took a pragmatic stance stating that it would be acceptable if it safeguarded the efforts of other farmers to eradicate BVD and resulted in the success of the scheme.

Clarify relationship between Scottish scheme and UK animal health management

Whilst some (especially beef) farmers saw the scheme as good for selling Scottish cattle-related commodities, **others (particularly in Dumfries and Galloway) maintained that it did not make political or logistical sense to create a scheme in Scotland separate from the rest of the UK.**

Clarify BVD status change reasons and procedures

Farmers stated that they found aspects of the scheme difficult to understand and implement, particularly regarding the reasons for their status changing from negative to non-negative (e.g. whether administrative error, inconclusive tag test results, test timing, or transient infection), and how they should go about regaining their status, particularly farms with year-round calving.

Tackle testing problems: in particular, increase trust in check test

Many farmers saw tag testing as the most reliable – albeit most expensive – testing method at the farm and national scales since every animal was tested and believing that PIs could not go undetected. However, **problems with tag tests producing 'inconclusive' results** (due to insufficient tissue in the sample) were common, especially with the most affordable tags. Re-testing is felt onerous for farmers and can result in a status change to non-negative. Farmers expressed a desire for more guidance about the best, most affordable and reliable tags to use. Some farmers expressed **uncertainty about the accuracy of the blood sample 'check' test.** Uncertainties surrounded the adequacy of the sampling strategy, and the frequency of testing. Farmers knew of PI animals 'slipping through the net' of the check test.

Clarify the risk posed by indirect contact

It was also suggested that there were instances of indirect inter-farm contact **where risk for indirect transmission of BVD virus was not fully mitigated through hygiene practices.** Farmers were unsure about the importance of these transmission routes. As the scheme progresses and there is less transmission through the sale of animals, these transmission routes may become more important.

Recognise that a valuable animal is not the same as a 'disease free' animal

Farmers did not always report a straightforward relationship between BVD presence and productivity. To all farmers it felt counterintuitive to get rid of a 'normal', 'healthy' animal diagnosed as a PI, both if high value breeding stock (which often have strong emotional and social value), but also influencing the keeping of low-value PIs on the farm to finish to help recoup losses. In some cases, farmers felt there was a business case for holding onto PIs if the costs of extensive testing, vaccination and culling of animals were estimated as more than costs of treating and management of chronic BVD infection. Different farmers differed in their estimation of BVD costs and benefits, depending in part on how particular problems (e.g. failure to thrive, pneumonia) were seen as 'BVD' issues. **Further disincentives are required to prevent keeping of PIs.**

Acknowledge scheme fatigue and lack of capacity (v. will) to respond to scheme

The feeling that the regulatory and administrative burden on farmers was already too high was widespread, and that the extra costs in terms of skilled labour, equipment and infrastructure were exacerbating farmers' financial struggles. This was particularly true for farmers identifying little choice but to put short-term profit before strategic investment or those already 'left behind' in terms of knowledge, social, technological, labour, infrastructural and mental health resources.

Establish clear responsibilities for communicating BVD action points

Some farmers felt that others (vet or government) could or should clearly take responsibility for providing prompts at particular key junctures (e.g. when tests are due, when status needs checked, or explaining status changes).

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