

Short Communication

Herd owner experiences of the voluntary phase of a BVD eradication programme

C. Devitt, D. A. Graham, S. Coughlan, J. O'Flaherty

CHALLENGES in eradicating BVD (bovine viral diarrhoea) include lack of farmer motivation, difficulties in encouraging compliance with biosecurity and testing protocols, and variations in opinions regarding responsibility to eradicate the disease (Gunn and others 2005, Booth and Brownlie 2012). A coordinated approach, industry support, farmer cooperation, achievable targets and effective communication can help support eradication (Lindberg and others 2006, Barrett and others 2011). Policy or legislative intervention is required when social pressures to eradicate disease are unsuccessful (Gunn and others 2005).

National action on BVD eradication in Ireland is coordinated by Animal Health Ireland, an industry-led, not-for-profit partnership to address the control of non-regulatory animal diseases endemic in Ireland through collaborative stakeholder action. In 2010, the eradication of BVD in Ireland was prioritised by industry and animal disease experts (More and others 2010). In 2012, the voluntary phase of an industry-led national BVD eradication programme began with the intention of progressing to a compulsory programme in 2013. Graham and others (2014) provide a comprehensive overview of the development and review of the voluntary phase. A web-based survey was conducted in mid-2012 as part of this review. The aim was to explore the strengths and weaknesses of components of the voluntary programme, and to use these results to assist with subsequent decision making and communications around the implementation of the compulsory programme. This body of evidence helped inform the decision taken by the BVDIG to progress to the compulsory programme that began on January 1, 2013 (Graham and others 2014).

Research ethical approval was granted by the University College Dublin (UCD) Human Research Ethics Committee. An invitation email, containing a web link to the online survey, was randomly administered via email to n=3000 herd owners on the Irish Cattle Breeding Federation (ICBF) database (a database of registered herd owners) who were participating in the voluntary eradication programme, and n=3000 herd owners on the database who had not participated in the programme. Each group was split evenly between dairy and beef herds. A total of n=520 (8.7 per cent of total number of invitations issued) completed surveys were returned. Survey data was transferred to SPSS V.15.0 (SPSS, 2007) for analysis. Table 1 shows

the distribution of respondents (n=520) according to herd type and participation in the voluntary phase.

The majority of participant respondents were satisfied with the components of the voluntary phase of the eradication programme (ie, 'ease with which information on the programme could be found'; 'ease with which tissue sample button tags could be ordered and samples submitted to the chosen laboratory'; 'testing of samples by the chosen laboratory'; and 'reporting of results'). These findings helped confirm to Animal Health Ireland (AHI) that the voluntary phase provided an adequate template for a compulsory national eradication programme. Well over three-quarters of respondents reported high levels of support in relation to the ease of complying with certain programme guidelines (ie, 'testing all calves born into the herd for BVD infection'; 'tagging calves within seven days of birth'; 'returning samples to a designated laboratory no later than seven days post sampling'). However, respondents indicated that compliance with guidelines requiring that virus-positive animals were not sold, and the culling of infected animals was challenging, with this being particularly evident among beef farmers. Despite this, a parallel review of programme compliance found that less than 3 per cent of calves with an initial positive result had been sold, and approximately 70 per cent had been culled (Graham and others 2014).

Respondents reported a lower likelihood of adopting some biosecurity measures, such as providing boots/overalls to farm staff and farm visitors, double fencing of boundaries, not borrowing equipment, and disinfecting borrowed equipment. This finding is similar to that of Booth and Brownlie (2012), who reported that herd owners had difficulty complying with recommendations regarding double fencing. Herd owners may not always recognise the relationship between the adoption of certain biosecurity measures and improved disease control and eradication outcomes, and/or may perceive these actions too difficult and time consuming to implement (Gunn and others 2008, Heffernan and others 2009). It is therefore important, as the national eradication programme progresses, to continue to communicate key biosecurity measures to herd owners to raise awareness of, and encourage compliance with, these measures. A Technical Working Group (TWG) on biosecurity, established by AHI in 2011, and a risk factor analysis on BVD (Graham and others 2013) are helping to inform ongoing communications on biosecurity measures. A detailed review was initiated in 2013 (continuing into 2014) to assess compliance with the guidelines in 2012. Only those deemed compliant will have their results for 2012 counted as a year of testing within the compulsory programme (Graham and others 2014).

Cited reasons for non-participation in the voluntary phase included: (1) the belief that BVD is not a problem on the farm; (2) the perception that existing eradication measures on the farm are sufficient; (3) concerns over using a third tag and (4) apprehension about the perceived costs of participating and lack of financial incentives. Not all non-participants were aware of the voluntary phase, and of those that did, nearly half reported feeling 'poorly informed/very poorly informed'. Information provision and content was a key theme throughout the results. Print media (leaflets and the farming

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C. Devitt, MSocSc
Glendalough, Co., Wicklow, Bray, Ireland
D. A. Graham, MVB, PhD, MRCVS
J. O'Flaherty, MVB, MBA, BA,
European Studies, MEconSc
Animal Health Ireland, Main St, Carrick
on Shannon, Co. Leitrim, Ireland
S. Coughlan, B Comm, MBA, ACMA
Irish Cattle Breeding Federation,

Shinagh House, Bandon,
Ireland;

E-mail for correspondence:
catherine.devitt@ucd.ie

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TABLE 1: Distribution of respondents (n=520) herds according to herd type and participation in the voluntary phase of the BVD eradication programme

Participating herd	Overall total n (%)	Herd type	
		Dairy n (%)	Beef n (%)
Yes	364 (70)	193 (53)	171 (47)
No	156 (30)	79 (50.6)	77 (49.4)
Total	520 (100)	272 (52.3)	248 (47.7)

BVD, bovine viral diarrhoea

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press) and information provided via discussion-based fora (such as formal discussion groups and information sessions) were particularly popular, and were regarded as the most helpful by the majority of respondents (participating and non-participating), who also identified these as the preferred sources of increasing BVD knowledge among the farming population. Results also show that more than one source of information was helpful in communicating the message. The private veterinary practitioner was identified as being an important source of information. This supports findings from other studies on disease control and biosecurity at a farm level (Gunn and others 2008).

The results pertaining to information provision when taken together, helped shape the communication strategy for the compulsory programme. This included the development of updated herd owner and veterinary information leaflets; the use of SMS messages to issue reminders on overdue test results; the development of a series of articles on key programme steps in the farming press (and made available on the AHI website); a series of information meets for veterinary practitioners; 23 herd owner meetings, the majority of which were conducted in marts to maximise their accessibility to herd owners; and the further development of the AHI website. Additionally, presentations were provided to Teagasc (the agriculture and food development authority in Ireland) dairy and beef advisory staff. Communication with herd owners was further advanced through (1) the making available of a helpdesk for herd owners and (2) the making of direct, unsolicited contact (telephone calls) to herd owners by helpdesk/AHI staff to herd owners with positive results.

The delivery of an initial time-limited voluntary phase to an eradication programme can prove beneficial to policy and programme makers when devising eradication schemes, providing the opportunity to test programme components, establish suitable targets, and allow stakeholder groups to demonstrate support, before implementation at a national level. The use of social science research provides important insight into the non-technical aspects of biosecurity, such as herd owner attitudes and motivations, reasons for compliance and non-compliance. Understanding these issues is central to programme design and delivery and to building continued support and engagement among herd owners. This Short Communication highlights

the importance of consulting with herd owners as part of programme design and delivery.

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References

- BARRETT, D. J., MORE, S. J., GRAHAM, D. A., O'FLAHERTY, J., DOHERTY, M. L. & GUNN, H. M. (2011) Considerations on BVD eradication for the Irish livestock industry. *Irish Veterinary Journal* **64**, 12–22
- BOOTH, R. & BROWNLIE, J. (2012) Establishing a pilot bovine viral diarrhoea virus eradication scheme in Somerset. *Veterinary Record* **170**, 73–79
- GRAHAM, D. A., CLEGG, T. A., LYNCH, M. & MORE, S. J. (2013) Herd-level factors associated with the presence of bovine viral diarrhoea virus in herds participating in the voluntary phase of the Irish national eradication programme. *Preventive Veterinary Medicine* **112**, 99–108
- GRAHAM, D. A., LYNCH, M., COUGHLAN, S., DOHERTY, M., O'NEILL, R., SAMMIN, D. & O'FLAHERTY, J. (2014) Development and review of the voluntary phase of a national BVD eradication programme in Ireland. *Veterinary Record* **174**, 67
- GUNN, G. J., HEFFERNAN, C., HALL, M., MCLEOD, A., HOVI, M. (2008) Measuring and comparing constraints to improved biosecurity amongst GB farmers, veterinarians and the auxiliary industries. *Preventive Veterinary Medicine* **84**, 310–323
- GUNN, G. J., SAATKAMP, H. W., HUMPHRY, R. W. & STOTT, A. W. (2005) Assessing economic and social pressure for the control of bovine viral diarrhoea virus. *Preventive Veterinary Medicine* **72**, 149–162
- HEFFERNAN, C., MISTURELLI, F., NIELSEN, L., GUNN, G. J., YU, J. (2009) Analysis of Pan-European attitudes to the eradication and control of bovine viral diarrhoea. *Veterinary Record* **164**, 163–167
- LINDBERG, A., BROWNLIE, J., GUNN, G. J., HOUE, H., MOENNIG, V., SAATKAMP, H. W., SANDVIK, T. & VALLE, P. S. (2006) The control of bovine viral diarrhoea virus in Europe: today and in the future. *Revue Scientifique et Technique* **25**, 961–979
- MORE, S. J., MCKENZIE, K., O'FLAHERTY, J., DOHERTY, M. L., CROMIE, A. R., MAGAN, M. J. (2010) Setting priorities for non-regulatory animal health in Ireland: results from an expert Policy Delphi study and a farmer priority identification survey. *Preventive Veterinary Medicine* **95**, 198–207



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