

# **Bovine Viral Diarrhoea (BVD)**

## **Consultation on Phase 5 of the Eradication Scheme**

**Animal Health and Welfare Division**

**21 August 2017**

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**Closing date for responses: 6 November 2017**

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## **Bovine Viral Diarrhoea (BVD) Consultation on Phase 5**

### **Introduction**

The Scottish Government, together with industry, veterinary practitioners and scientific partners, is committed to eradicating bovine viral diarrhoea (BVD) from Scotland. We have been working together through the BVD Advisory Group to ensure we achieve the ambition of eradicating BVD in an efficient way that suits the distinctive nature of Scottish farming.

BVD eradication will make Scotland's cattle businesses more profitable and sustainable. In 2010 Scottish Government economists' analysis showed that, once BVD was eradicated from the herd, the average dairy herd could save £15,800 per year, the average beef herd £4,800<sup>1</sup>. BVD eradication also has a role to play in the global effort against antimicrobial resistance: avoiding the need to treat PIs and transiently affected animals will reduce the use of antibiotics, thereby reducing the risk of developing antimicrobial resistance.

Since the introduction of Scotland's BVD eradication scheme, we have seen the level of exposure drop from 40% to 10% of breeding herds. The reduction is due to great efforts on the part of cattle keepers and their vets to test the Scottish breeding herd, identify sources of BVD infection and remove them.

To progress the scheme to a satisfactory conclusion, the BVD Advisory Group have agreed that there should be further restrictions on "not negative" herds to prevent disease from spreading in the Scottish national herd. These further restrictions will particularly focus on keepers who choose to retain Persistently Infected (PI) animals or do not investigate the cause of their "not negative" status.

We welcome views on these proposals.

This consultation will run from 21 August 2017 to 6 November 2017.

### **Background**

BVD virus causes a complex of diseases in cattle, the most important of which can interfere with reproduction, affect the unborn calf and ultimately lead to fatal mucosal disease. BVD virus can also cause enteritis during transient infection, which is usually mild but is occasionally severe enough to cause death, even in adult cattle. Transient BVD virus infection is also associated with significant suppression of disease resistance, contributing to outbreaks of other disease such as pneumonia or scours.

The virus is mainly spread by Persistently Infected (PI) cattle. These animals are infected with the virus in the womb during the first 120 days of pregnancy. The unborn calf's developing immune system does not recognise the virus as "foreign", so does not produce antibodies, instead the animal becomes persistently infected. PIs remain infected with BVD all their lives and they continuously shed large

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<sup>1</sup> <http://www.gov.scot/Resource/Doc/915/0099584.doc>

quantities of virus, infecting any unprotected cattle around them. Many die as calves but some live much longer and some PI animals can appear normal. If a PI gives birth to a live calf, it will also be a PI. Removing PI cattle from the national herd is critical to any eradication attempt.

Cattle that are otherwise healthy (non-PIs) can become infected with BVD virus at any point in their lives, which is known as transient infection. They will produce an antibody response to the virus and normally fight it off in 2-3 weeks. They will then have antibodies in their blood and tissue, which persist for years. Reliable tests exist for BVD virus antibodies.

An animal infected with BVD virus will have virus in their blood and tissue. This applies to both PI animals and those that are transiently infected. A number of different tests are available to detect the virus, currently the most commonly used is the antigen ELISA. This detects a component of the virus, the antigen. Animals that test positive in this test are therefore frequently referred to as being “antigen positive”. There is a range of reliable, commercially available tests for BVD virus and antibody

If an animal gives a positive result to its first virus test, it is a suspect PI. A second sample taken at least three weeks later will either confirm that the animal is a PI, or if virus is no longer present, will show that the animal was transiently infected with BVD at the time of the first test.

As a consequence, testing for BVD virus is simple but interpreting the results can be complicated. If an animal tests positive for viral antigen, it may be a PI animal or it may be transiently infected. If it has antibodies it has been exposed to infection, is still benefiting from its mother’s colostrum or has been recently vaccinated, and is very unlikely to be a PI animal. Understanding test results is vital to controlling the disease.

For more information on BVD, please see [www.scotland.gov.uk/bvd](http://www.scotland.gov.uk/bvd).

## **The Scottish BVD Eradication Scheme**

The Scottish BVD eradication scheme has been developed by our stakeholders via the BVD Advisory Group, with backing from Government through legislation throughout the various phases of the eradication scheme.

The eradication scheme is designed to reduce the number of PI calves being born by firstly putting responsibility and power in the hands of farmers, and then by making it increasingly difficult for them to continue to have BVD virus active in their herd. The intention is to encourage farmers to eliminate BVD from their own herds, but those who choose not to will be inconvenienced in terms of trading disadvantages, movement restrictions and biosecurity controls.

The guiding principles are:

- The scheme is industry-led. The Scottish Government is working with all stakeholders and the scheme has been developed to reflect the interests of all parties; we would not act against the wishes of industry.

- Industry benefits directly from BVD eradication, so it bears some of the costs.
- As industry is bearing some costs, the requirements are flexible with a range of options for testing.
- The scheme encourages rather than forces, becoming stricter over time.

Over the course of the eradication scheme, the Scottish Government has introduced the legislative requirement for keepers of breeding herds to screen their cattle annually for BVD and has introduced control measures based on the result of the annual screening test. There is also a requirement to test all calves that are born on non-breeding holdings and a prohibition on moving PIs and suspect PIs anywhere other than direct to slaughter.

### **Proposals for Phase 5**

Through the BVD Advisory Group, we have agreed to consult on the following proposals for the next phase of the eradication scheme that would:

- Increase pressure on “not negative” herds to investigate the cause of BVD exposure in their herd
- Increase pressure on “positive” herds and protect neighbouring holdings/herds
- Require tissue sampling to be done via an official (primary/secondary) tag
- Improve the effectiveness of the check test
- Speed-up reporting of lab results to the BVD database
- Track PIs back to herd of birth
- Prevent dispersal of animals immediately prior to a change of herd status

We would welcome views on the following proposals to ensure that they progress the eradication scheme and do not hinder it by introducing measures that are impractical, unenforceable or counter-productive.

### **Proposal 1 – Testing requirement for “not negative” breeding herds**

Under the current BVD Order, keepers of breeding cattle herds must screen their herd annually for BVD and in doing so obtain a BVD herd status. If the status is “not negative” animals cannot be moved out of the herd unless they have an individual negative BVD status, they are going direct to slaughter or (under exceptional circumstances) they can move under licence. Currently, there is no legal requirement to investigate the cause of the “not negative” herd status.

To increase pressure on herds with a “not negative” BVD status, we plan to introduce a new testing requirement that forces cattle keepers to investigate the cause of BVD exposure in their herd.

This new testing requirement would apply to all “not negative” herds that have had a “not negative” BVD status for at least 13 months. In these herds, the cattle keeper must determine an individual status for each animal. For many herds, this “sweeper test” would require only partial testing of the herd as some animals will already have

an assumed status or individual status due to previous testing in the herd: animals that already have a status will not need to be retested.

**Question 1:** Do you think that keepers of cattle breeding herds that have recurring annual “not negative” BVD statuses should investigate the cause of BVD virus exposure in their herd?

**Question 2:** Should there be exemptions to the “sweeper test” where farms have a breeding herd but also buy stores for further fattening or finishing? If so, how would this work in practice?

**Question 3:** How long should affected herds be given to complete the “sweeper test”? Should it be completed relatively quickly, e.g. between 1 and 3 months?

**Question 4:** To take account of “Trojan cows” (which appear healthy but are carrying a PI calf) should the “sweeper test” include calf screening for 12 months following completion of the individual testing?

## **Proposal 2 – Restricting cattle in “BVD positive” herds**

PIs are known to be the main cause of BVD infection, excreting large volumes of virus from the moment of birth until death. For this reason, BVD control is centred on the identification of PI animals and the removal of these cattle from the herd.

In April 2017 we introduced a new BVD “positive” status to highlight herds that pose a higher BVD risk for those purchasing or moving cattle. This “positive” status only applies to holdings where there is a virus positive animal in the herd. Once the virus positive animal has been removed from the holding, or the animal has been re-tested, allowing the presence of virus to be ruled out, the BVD herd status reverts to “not negative”. The prompt removal of PIs will reduce the level of on-going and new infections in Scotland.

To increase pressure on “positive” herds to remove their PI(s) we are seeking views on the following two proposals:

- **Prohibiting cattle movements** by restricting “positive” herds from purchasing, or otherwise bringing in, animals. This prohibition would be in addition to the restrictions already in place for “not negative” herds for animals moving off the holding. Restrictions on bringing in animals would remain in place until the herd has achieved a “not negative” status by removing all their known virus positive animals, or retesting them with a negative result. The options for removal are to kill on farm or send direct to slaughter. This measure would need to allow a reasonable time period for re-sampling of suspect animals to confirm that they are PIs.
- Adding a new **requirement to isolate virus positive animals**. As soon as a PI is suspected (first positive antigen result received, or calf born from a virus positive dam) the animal must be isolated from the rest of the herd, e.g. by housing in a separate airspace from non-PI cattle.

**Question 5:** Do you think that holdings that contain one or more live PIs should not be allowed to move cattle on to that holding? If so, what would you consider to be a reasonable time frame to allow the keeper to resample or remove the suspect PI/PI animal(s) from their holding? Should moves on to the holding be permitted, but limited to animals with an individual BVD negative status that have been vaccinated against BVD by a vet.

**Question 6:** Do you think that all virus positive cattle should be housed separately from animals with an unknown or negative BVD status?

**Question 7:** If virus positive animals must be housed, would inspection of these premises improve compliance?

**Question 8:** If virus positive animals must be housed, how could we prevent inadvertent spread of BVD virus to other cattle via clothing/footwear/equipment?

### **Proposal 3 – Use of primary/secondary tags for tissue tag sampling**

Where cattle keepers choose to use tissue tagging to obtain an animal's individual BVD status, the use of the primary/secondary cattle identification tag for sampling is considered to be best practice. Use of the primary/secondary tag ensures that calves are sampled early in life, thus allowing early PI identification and removal. Cattle would also benefit from better welfare due to fewer tags in ears. Use of primary/secondary tags, or management tags carrying the official identification number, also reduces transcription errors on the submission form and at the testing laboratories.

For all tissue sampling, including animals born on a non breeding holding, we are proposing to make it a requirement to use only primary/secondary tags for sampling. This would mean that tissue tagging would be restricted to calves of up to 28 days old. Older animals would have to be individually tested by blood sample. A provision would need to be made for samples that have provided insufficient material for testing or given inconclusive results, or other failures due to factors beyond the keeper's control.

**Question 9(a):** Do you think that all tissue tag sampling should be carried out using only a primary/secondary tag?

**Question 9(b):** If not, do you agree that "not negative" herds are restricted to only using primary/secondary tags?

**Question 10:** The proposed restrictions to tissue tag sampling would limit tag testing to calves in the first 28 days of life. If keepers wish to test older animals, should they be permitted to use management tags for this purpose?

**Question 11:** An alternative to limiting tissue tag sampling to primary/secondary tags would be to require all tissue sampling tags to carry the animal's official identification number. This approach would allow cattle keepers to continue to use



management tags for tissue sampling, provided that the tags were printed with the official identification number. Would you agree that management tags used for BVD tissue sampling must be printed with the animal's official identification number?

**Question 12:** Where the tissue tag has failed to produce a sample that is suitable for BVD testing, should management tags be allowed for retesting or should the animal be re-sampled by a private veterinarian i.e. blood tested?

**Question 13:** Where a virus positive animal is retested to establish whether it is a PI or only transiently infected, should the retest sample be limited to a blood sample taken by the vet or is it acceptable for the keeper to re-sample using a management tag?

#### **Proposal 4 – Amendment to improve effectiveness of the check test**

Effective check testing relies on the selection of representative cattle for antibody testing.

In the current BVD Order, the standard check test requires sampling of 5 animals per management group. A "management group" is defined as animals that have been housed or grazed together for at least the past two months. Thus larger herds would be expected to have several different "management groups" and therefore a check test of multiple sets of 5 animals. However, many larger herds are check tested using 5 animals only. This approach runs the risk of missing BVD exposure and therefore giving a herd a BVD negative status when, in fact, there is a disease risk.

To improve the effectiveness of the check test we propose to amend the BVD Order so that the number of animals included in the standard check test must be 5 animals per "management group", with the total number tested being equivalent to at least 10% of calves born in the herd in the last 12 months. There could also be similar changes to the dairy check test where 10 animals per "management group" are tested with the total number tested being equivalent to at least 10% of calves born in the last 6 months.

**Question 14(a):** Do you think that the check test should be amended to make it more effective? One possibility is to increase the number of samples submitted for a breeding herd check test to a number equivalent to at least 10% of the number of calves born on that holding in the past 12 months, in addition to meeting the requirement for sampling 5 animals from each management group (10 animals in the case of the dairy check test).

**Question 14(b):** Do you agree that increasing the minimum number of samples taken at a check test would result in a more robust test?

## **Proposal 5 – Faster reporting of test results to the ScotEID database**

The current BVD Order allows 40 days from date of testing for BVD results to be reported on the ScotEID database. The approved BVD laboratories have become more efficient at processing samples and uploading results since the start of the scheme. The laboratories have stated that 40 days for reporting results is now recognised as excessive; test reporting can be done in a much shorter time.

We are proposing to reduce the BVD test result reporting time to 5 working days.

**Question 15:** Do you think that the timescale for a BVD approved laboratory to report the result of sample be reduced to 5 working days?

## **Proposal 6 – Notification of herds from which PIs originate**

PIs are born infected with BVD, as the calf of a PI dam or a dam that was transiently infected with BVD during pregnancy. Studies show that PIs are born when their mothers are infected in the interval between 18 and 120 days of pregnancy. Thus, a PI can only be born if there was a PI in the herd or the herd was otherwise exposed to BVD during the risk period of the pregnancy.

Where a PI is identified on a holding other than the holding of birth or the holding(s) where the risk period of pregnancy took place, restrictions are currently only placed on the holding of residence, even though the holding(s) of pregnancy risk period must have had a BVD risk at the time the PI was developing *in utero*, and the holding of birth (if different) will have experienced BVD exposure when the PI calf was born. Depending on the testing being carried out, BVD infection on the holding(s) of pregnancy risk period and birth may not have been recognised, posing an on-going risk to those herd(s) and potentially to cattle on neighbouring farms.

We are proposing to add a new requirement that will track PIs back to their herd(s) of pregnancy risk period and birth. Regardless of where and when a confirmed PI is identified, the holding(s) where the dam was resident during days 18-120 of pregnancy should be recognised as BVD “not negative”, as should the holding of birth (if different).

Where full BVD investigation has already been carried out in the identified herd(s) since the removal of the PI restrictions would be unnecessary. No action could be taken on herds outside Scotland.

**Question 16:** Should the holding where the dam was resident on days 18-120 of pregnancy and the holding of birth be automatically given a “not negative” status as soon as the PI is identified? If so, what would we need to consider in order to avoid penalising holdings that have already carried out BVD investigations?

**Question 17(a):** When tracking a PI back to their herd of birth, should this be restricted to confirmed PIs (i.e. those that have had a second positive antigen result at least 3 weeks after the first sample)?

**Question 17(b):** If so, it may result in less confirmatory testing: are you concerned about this?

**Question 18:** When tracking a PI back to their herd of birth, would this be better handled as an advisory matter, e.g. by sending a letter to the holding(s) concerned, possibly copied to their vet?

### **Proposal 7 – Post-sample movement restrictions**

Cattle keepers can find themselves in the position of having inadvertently moved their animals illegally when they have not realised that the herd status has changed from BVD “negative” to “not negative”.

Ideally cattle keepers should check their herd status on the ScotEID BVD database before they move cattle without individual status to another holding or the market.

To prevent the dispersal of animals immediately after a change of herd status, we are proposing to put a movement restriction in place where a cattle keeper has submitted samples and is waiting for the results of the annual (beef) check test, the movement of any animals off the holding that do not have an individual BVD status must be delayed until the result of the annual check test is uploaded to ScotEID.

**Question 19:** Do you think with the proposal to restrict the movement of untested animals off a holding until the results of the annual beef check test have been received?

**Question 20:** Could imposition of movement restrictions encourage cattle keepers to delay their annual check test until after young stock sales, with possible loss of eligible age animals?

**Question 21:** Should more use of ScotEID be encouraged, e.g. through guidance or at road shows rather than via legislation?

**Question 22:** Does this proposal unfairly penalise beef breeding herds that have had a BVD negative status for several years?

### **Proposal 8 – Increased pressure on BVD “positive” herds and protection of neighbours**

Retaining PIs keeps the source of BVD virus on the farm and risks infecting the herd and creating new generations of PIs. In addition, PIs may put neighbours at risk of infection through direct or indirect contact. We propose publishing the location details of farms where one or more virus positive animals are retained. Pending detailed consideration, location details could be any or all of: CPH, keeper’s name, farm address. The details could potentially be provided as a list or a map.

In order to ensure correct information, publication would need to be delayed for a period after disclosure of a virus positive animal to give the keeper opportunity to re-test the animal and confirm it either as transiently-infected or a PI.

**Question 23:** Do you think that the Scottish Government should publish location details of virus-positive cattle?

**Question 23(a):** If you answered yes to question 21, how long should cattle keepers be given between first disclosure of a virus positive animal and publication of its location?

**Question 23(b):** If you answered yes to question 21, what format would you like to see for publication of PI location? Examples could include: a list of CPHs published on ScotEID; an interactive map; written notification to neighbours.

## **Responding to this Consultation**

We are inviting responses to this consultation by 6 November 2017

Please respond to this consultation using the Scottish Government's consultation platform, Citizen Space. You view and respond to this consultation online at <https://consult.scotland.gov.uk/animal-health-and-welfare/the-bovine-viral-diarrhoea-scotland-order-2018>. You can save and return to your responses while the consultation is still open. Please ensure that consultation responses are submitted before the closing date of 6 November 2017.

If you are unable to respond online, please complete the Respondent Information Form (see "Handling your Response" below) to:

BVD Consultation  
P Spur  
Saughton House  
Broomhouse Drive  
Edinburgh  
EH11 3XD

### **Handling your response**

If you respond using Citizen Space (<http://consult.scotland.gov.uk>), you will be directed to the Respondent Information Form. Please indicate how you wish your response to be handled and, in particular, whether you are happy for your response to be published.

If you are unable to respond via Citizen Space, please complete and return the Respondent Information Form attached included in this document. If you ask for your response not to be published, we will regard it as confidential, and we will treat it accordingly.

All respondents should be aware that the Scottish Government is subject to the provisions of the Freedom of Information (Scotland) Act 2002 and would therefore have to consider any request made to it under the Act for information relating to responses made to this consultation exercise.

### **Next steps in the process**

Where respondents have given permission for their response to be made public, and after we have checked that they contain no potentially defamatory material, responses will be made available to the public at <http://consult.scotland.gov.uk>. If you use Citizen Space to respond, you will receive a copy of your response via email.

Following the closing date, all responses will be analysed and considered along with any other available evidence to help us. Responses will be published where we have been given permission to do so.

## **Comments and complaints**

If you have any comments about how this consultation exercise has been conducted, please send them to [bvd@scotland.gsi.gov.uk](mailto:bvd@scotland.gsi.gov.uk)

## **Scottish Government consultation process**

Consultation is an essential part of the policy-making process. It gives us the opportunity to consider your opinion and expertise on a proposed area of work.

You can find all our consultations online: <http://consult.scotland.gov.uk>. Each consultation details the issues under consideration, as well as a way for you to give us your views, either online, by email or by post.

Consultations may involve seeking views in a number of different ways, such as public meetings, focus groups, or other online methods such as Dialogue (<https://www.ideas.gov.scot>)

Responses will be analysed and used as part of the decision making process, along with a range of other available information and evidence. We will publish a report of this analysis for every consultation. Depending on the nature of the consultation exercise the responses received may:

- indicate the need for policy development or review
- inform the development of a particular policy
- help decisions to be made between alternative policy proposals
- be used to finalise legislation before it is implemented

While details of particular circumstances described in a response to a consultation exercise may usefully inform the policy process, consultation exercises cannot address individual concerns and comments, which should be directed to the relevant public body.

## Annex A

### BOVINE VIRAL DIARRHOEA (BVD): CONSULTATION ON PHASE 5 OF THE ERADICATION SCHEME

#### RESPONDENT INFORMATION FORM

**Please Note** this form **must** be completed and returned with your response.

Are you responding as an individual or an organisation?

- Individual  
 Organisation

Full name or organisation's name

Phone number

Address

Postcode

Email

The Scottish Government would like your permission to publish your consultation response. Please indicate your publishing preference:

- Publish response with name  
 Publish response only (without name)  
 Do not publish response

#### Information for organisations:

The option 'Publish response only (without name)' is available for individual respondents only. If this option is selected, the organisation name will still be published.

If you choose the option 'Do not publish response', your organisation name may still be listed as having responded to the consultation in, for example, the analysis report.

We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for Scottish Government to contact you again in relation to this consultation exercise?

- Yes  
 No

## CONSULTATION QUESTIONS

**Question 1:** Do you think that keepers of cattle breeding herds that have recurring annual “not negative” BVD statuses should investigate the cause of BVD virus exposure in their herd?

Yes  No

Comments:

**Question 2:** Should there be exemptions to the “sweeper test” where farms have a breeding herd but also buy stores for further fattening or finishing? If so, how would this work in practice?

Yes  No

Comments:

**Question 3:** How long should affected herds be given to complete the “sweeper test”? Should it be completed relatively quickly, e.g. between 1 and 3 months?

Comments:



**Question 4:** To take account of “Trojan cows” (which appear healthy but are carrying a PI calf) should the “sweeper test” include calf screening for 12 months following completion of the individual testing?

Yes  No

Comments:

**Question 5:** Do you think that holdings that contain one or more live PIs should not be allowed to move cattle on to that holding? If so, please comment on what would you consider to be a reasonable time frame to allow the keeper to resample or remove the suspect PI/PI animal(s) from their holding? Should moves on to the holding be permitted but limited to animals with an individual BVD negative status that have been vaccinated against BVD by a vet?

Yes  No

Comments:

**Question 6:** Do you think that all virus positive cattle should be housed separately from animals with an unknown or negative BVD status?

Yes  No

Comments:

**Question 7:** If virus positive animals must be housed, would inspection of these premises improve compliance?

Yes  No

Comments:

**Question 8:** If virus positive animals must be housed, how could we prevent inadvertent spread of BVD virus to other cattle via clothing/footwear/equipment?

Comments:

**Question 9(a):** Do you think that all tissue tag sampling should be carried out using a primary/secondary tag?

Yes  No

Comments:

**Question 9(b):** If not, do you agree that “not negative” herds are restricted to only using official tags?

Yes  No

Comments:

**Question 10:** The proposed restrictions to tissue tag sampling would limit tag testing to calves in the first 28 days of life. If keepers wish to test older animals, should they be permitted to use management tags for this purpose?

Yes  No

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Yes  No

Comments:

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Comments:

**Question 13:** Where a virus positive animal is retested to establish whether it is a PI or only transiently infected, should the retest sample be limited to a blood sample taken by the vet or is it acceptable for the keeper to re-sample using a management tag?

Yes  No

Comments:

**Question 14(a):** Do you think that the check test should be amended to make it more effective?

Yes  No

Comments:

**Question 14(b):** Do you agree that increasing the minimum number of samples taken at a check test would result in a more robust test?

Yes  No

Comments:

**Question 15:** Do you think that the timescale for a BVD approved laboratory to report the result of sample be reduced to 5 working days?

Yes  No

Comments:

**Question 16:** Should the holding where the dam was resident on days 18-120 of pregnancy and the holding of birth be automatically given a “not negative” status as soon as the PI is identified? If so, please comment on what we would need to consider in order to avoid penalising holdings that have already carried out BVD investigations?

Yes  No

Comments:

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Yes  No

Comments:

**Question 17(b):** If so, it may result in less confirmatory testing: are you concerned about this?

Yes  No

Comments:

**Question 18:** When tracking a PI back to their herd of birth, would this be better handled as an advisory matter, e.g. by sending a letter to the holding(s) concerned, possibly copied to their vet?

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Yes  No

Comments:

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Yes  No

Comments:

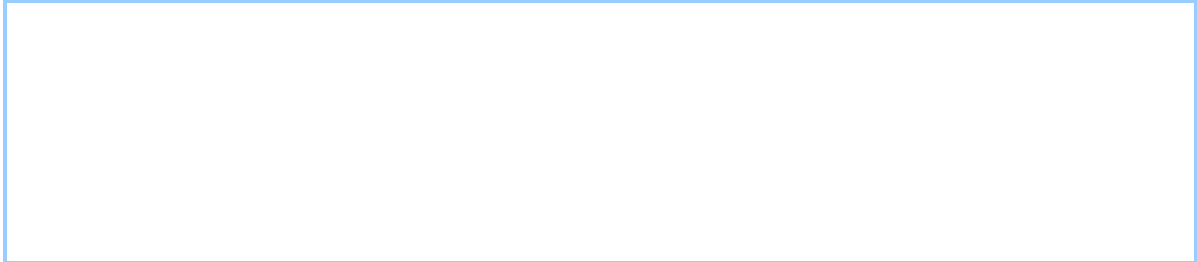
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Comments:



**Question 23(b):** If you answered yes to question 23, what format would you like to see for publication of PI location? Examples could include: a list of CPHs published on ScotEID; an interactive map; written notification to neighbours.

Comments:



## Partial Business and Regulatory Impact Assessment

### Title of Proposal

The Bovine Viral Diarrhoea (Scotland) Order 2018

### Purpose and intended effect

- **Background**

Bovine viral diarrhoea (BVD) virus causes a complex of diseases in cattle, the most important of which can interfere with reproduction, affect the unborn calf and ultimately lead to fatal mucosal disease. BVD virus can also cause enteritis during acute or transient infection which is usually mild but occasionally severe enough to cause death, even in adult cattle. Transient BVD virus infection is also associated with significant suppression of disease resistance, leading to outbreaks of other diseases including pneumonia and scours.

BVD is mainly spread by persistently infected (PI) cattle which are born with the disease due to exposure in the womb. These animals will have the disease all their lives and shed the virus continuously, infecting unprotected animals through direct and indirect contact.

The Scottish Government, together with industry, veterinary practitioners and scientific partners, is committed to eradicating BVD from Scotland. We have been working together through the BVD Advisory Group to ensure we achieve the ambition of eradicating BVD in a way that suits the distinctive nature of Scottish farming.

- **Objective**

BVD eradication will make Scotland's cattle businesses more profitable and sustainable. In 2010 Scottish Government economists' analysis showed that, once BVD was eradicated from the herd, the average dairy herd could save £15,800 per year, the average beef herd £4,800<sup>2</sup>. BVD eradication also has a role to play in the global effort against antimicrobial resistance: avoiding the need to treat PIs and transiently affected animals will reduce the use of antibiotics, thereby reducing the risk of developing antimicrobial resistance.

To progress the scheme to a satisfactory conclusion, the BVD Advisory Group have agreed that there should be further restrictions on "not negative" herds to prevent disease spread in the Scottish herd. These further restrictions will particularly focus on keepers who choose to retain PI animals or do not investigate the cause of their "not negative" status.

<sup>2</sup> <http://www.gov.scot/Resource/Doc/915/0099584.doc>

- **Rationale for Government intervention**

The aim of eradicating BVD from Scotland fits in with the wealthier, fairer and greener strategic objectives of the National Performance Framework. The eradication of BVD will increase the productivity and profitability of Scottish cattle enterprises by reducing costs associated with the disease such as increased mortality and reduced fertility. This would have positive environmental benefit for Scotland due to reduced greenhouse gas emissions per unit output from cattle, plus a reduction in the use of antibiotics and improved animal welfare.

## **Consultation**

- **Within Government**

The Scottish BVD eradication scheme is an industry-led scheme that is supported by the Scottish Government. The Animal Health Disease Prevention Team has developed these proposals with the agreement of the BVD Advisory Group which includes representatives from Local Authorities and the Animal and Plant Health Agency.

- **Public Consultation**

Through the BVD Advisory Group, these proposals have been developed in partnership with representatives from the livestock industry, veterinary profession and science sector.

A public consultation on the proposals will run for 12 weeks from 21 August to 6 November 2017.

- **Business**

We have engaged with 14 beef and dairy farms across Scotland ranging from small to large businesses prior to the publication of the public consultation. Consultation took the form of a face-to-face interview or telephone conversation based on their experience of how the eradication scheme is working and how they would like to see it improved. Respondents who chose to have their interview made public will be published on the BVD section of the Scottish Government website.

We will also ensure that a number of representative industry groups who may have an interest in the proposals are sent a link to the consultation.

## **Options**

Two options were identified

### **Option 1 – No change - Remain in Phase 4 of the BVD Eradication**

This option would not see further legislation introduced and instead would rely on the current Bovine Viral Diarrhoea (Scotland) Order 2013 (BVD Order) and industry desire to eradicate the disease.

## **Option 2 – New legislation - Proceed to Phase 5 of the BVD Eradication Scheme**

This option would amend the current BVD Order and introduce additional controls that would:

- Increase pressure on “not negative” herds to investigate the cause of BVD exposure in their herd
- Increase pressure on “positive” herds to protect neighbouring holdings/herds
- Prevent delays in testing
- Require tissue sampling to be done via an official (primary/secondary) cattle identification tag
- Speed-up reporting of lab results to the BVD database
- Improve the effectiveness of the check test
- Prevent dispersal of animals immediately prior to a change of herd status
- Track PIs back to herd of origin

### **Sectors and groups affected**

This will mainly affect cattle businesses as it will require those with breeding herds to continue to test and declare the disease status of their herd. Those breeding herds with a “not negative” herd status will face additional testing requirements to investigate the cause of BVD exposure in their herd. There will also be impacts on testing laboratories and veterinary practices through greater demand for their services, and on tag companies due to a change in the type of tags marketed.

### **Benefits**

#### **Option 1**

Option 1 would see cattle farmers comply with the current phase of the BVD Eradication Scheme. It would continue to require all breeding herds in Scotland to have a BVD disease status, and to restrict animals that could spread disease, thus protecting the national herd.

The eradication of BVD supports the reputation of Scottish produce for high quality and excellent welfare standards.

This option also has environmental benefits as the increased efficiency of a national herd that was free of BVD would reduce the greenhouse gas emissions per unit of output.

#### **Option 2**

Option 2 gives the same benefits as Option 1 but to an increased extent due to elements of the eradication scheme being strengthened. Examples are promoting identification and prompt removal of PI animals, reducing risk of disease spread within and between herds, improving the effectiveness of check testing and faster reporting of test results.

A new testing requirement that would apply to all “not negative” herds on their second or subsequent annual report of a “not negative” BVD status. The cattle keeper would be required to determine an individual status for each animal in that herd, which would accelerate the detection of PI animals in the national herd.

The proposals to prohibit cattle movements into herds that have a virus positive animal in that herd along with a new requirement to house virus positive animals in a separate airspace from other cattle should reduce the number of on-going and new infections in Scotland.

Limiting tissue tag sampling to the primary/secondary tag only would ensure calves are BVD tested early in life, thus allowing early identification and removal of PIs. Cattle would also benefit from better welfare due to fewer tags. Test reporting would be more accurate due to fewer transcription errors.

A new requirement to track PIs back to their herd of birth, placing restrictions on that herd and any additional holdings where the dam was resident during days 18-120 of pregnancy could identify herds that pose a BVD risk that otherwise might be missed under the current BVD Order.

A new movement restriction preventing the dispersal of animals without an individual BVD status prior to the result of a herd’s annual status could prevent cattle keepers from inadvertently moving their animals illegally.

Publishing the location details of farms where one or more virus positive animals are retained would increase awareness allowing any neighbouring farms to take appropriate action to reduce the BVD risk to their own herd.

## **Costs**

### **Option 1**

Depending on a herd’s BVD status, the type of annual testing selected and other herd management decisions, farmers may only need to test a small number of cattle or all calves born into that holding to comply with current BVD screening requirements.

Farmers with a “not negative” herd status wishing to investigate their herd’s status have two testing options available to them, either to individually test all animals in their herd or test all calves born. Animals in a “not negative” herd can only move out of that herd if they have been individually tested and found negative for BVD virus.

Tissue tag testing individual animals costs approximately £3.50 to £5.50 plus the keeper’s time to organise and tag animals.

Blood testing individual animals costs approximately £4.50 to £7.00 plus vet call out fees. There can be a small reduction in cost per head when testing multiple animals.

## **Option 2**

Option 2 would incur the same baseline costs as Option 1. The proposals would also involve some additional costs for the new testing requirement that would apply to all “not negative” herds. On the second or subsequent annual report of a “not negative” BVD status, the cattle keeper would be required to determine an individual animal status for every animal in the herd. For many herds, this “sweeper test” would require only partial testing of the herd as some animals will already have an individual status due to previous testing in the herd.

Table 1 provides information from the 27 July 2017 that shows the individual BVD status of animals on “not negative” holdings.

**Table 1: BVD statuses of animals on “not negative” holdings as of 27 July 2017**

<b>Individual BVD status</b>	<b>Number of animals</b>
BVD Negative	187,908
BVD Assumed Negative	80,202
BVD positive	378
BVD Assumed PI	3
Untested	123,501
Total on “not negative” holdings	391,992

As shown in table 1, on 27 July 2017 approximately two thirds of animals on 1,666 “not negative” herds already had an individual status. There were 123,501 untested animals. It is difficult to provide an individual cost for each “not negative” herd as each herd will vary in size and we would also need to take account of the herd’s previous BVD testing history. Using the untested animals from table 1 as an example, the overall cost to industry for BVD testing these animals could range from approximately £400,000 to £850,000. We would expect to see the number of untested animals on “not negative” herds drop over time as cattle keepers anticipate the “sweeper test” coming into force late in 2018, arrange to tag test their calves and thus obtain individual BVD status for the calf and the dam (breeding females benefit from assumed status if their calf is negative).

Cattle keepers who persist in retaining virus positive animals on their holding may also incur additional management costs under the proposed requirement to house virus positive animals in a separate airspace from BVD negative and non-status cattle. The herd should benefit from increased efficiency and profitability through a decrease in mortality and increase in fertility once the PI(s) have been removed and isolated from the herd. We do not foresee a requirement for new housing to be built to accommodate virus positive animals as cattle keepers are already required to have suitable accommodation on farm to isolate sick or injured animals.

## **Scottish Firms Impact Test**

The consultation proposals have been agreed with the BVD Advisory Group. Consultations will be made with industry stakeholder organisations as explained in the consultation section and the views expressed will be reported in this section in the final BRIA.

## **Competition Assessment**

The current BVD Order places different obligations on farmers with breeding and non-breeding herds. This inequality is justified as the disease is overwhelmingly spread by animals that are infected in the womb, become Persistently Infected and shed large volumes of virus all their lives. Cutting off the production of these animals is critical to controlling the disease and therefore the heavier burden placed on breeding herds where calves are produced is justified.

“Not negative” herds face higher costs to eradicate the disease from their herd but these are the herds that will benefit most from BVD eradication. Dairy farms may be impacted disproportionately due to their high replacement rates, but enjoy greater potential benefits through increased fertility, reduced veterinary costs and improved production.

Scottish cattle farmers have higher production costs which may place them at a disadvantage to farmers not covered by the legislation such as cattle keepers in England and Wales. However, in the long term eradicating BVD will cut costs, making the Scottish industry more efficient and competitive. There is likely to be a competitive advantage in selling cattle with a BVD free status, such as increased market prices as seen with TB free cattle.

## **Test run of business forms**

No changes are proposed to the current requirement for businesses to report the following to the Scottish Government (reports are held on ScotEID).

- The county parish holding number (CPH);
- The date when the samples were taken;
- The date of the test;
- The testing laboratory;
- The method of screening used; and,
- The overall result for the herd.

## **Legal Aid Impact Test**

The proposal is unlikely to have an impact on the legal aid fund.

## **Enforcement, sanctions and monitoring**

Local Authorities are responsible for enforcing the BVD Order with co-ordination from the Animal and Plant Health Agency (APHA) who are responsible for issuing any breach letters.

Criminal offences are being created, although these are largely in line with the current BVD Order, which is made under the Animal Health Act 1981. The maximum penalty is a fine and two years' imprisonment.

A database operated by ScotEID lists the BVD status of all Scottish breeding herds and any individual animals that have been tested by an approved BVD testing laboratory, allowing the disease exposure, incidence and location to be monitored.

## Implementation and delivery plan

Phase 1 farmers volunteered to test the BVD status of their animals and report the results to the Scottish Government from 1 September 2011.

Phase 2 required cattle breeding herds to be screened for BVD by 1 February 2013 and annually thereafter.

Phase 3 brought in control measures that placed restrictions on movement and sale of BVD positive animals, restrictions on untested herds/animals and required a herd's status to be declared before sale from 1 January 2014.

Phase 4 brought in further control measures on "not negative" herds, reduced testing options, a requirement to test replacement animals from untested herds and created an assumed negative status for dams of calves that have tested negative. Phase 4 was implemented on 1 June 2015.

Phase 5, the proposals we are consulting on, will increase further the pressure on "not negative" herds, especially those that do not remove PI animals from their herd. This phase will also introduce a number of procedures that aim to streamline and improve the eradication scheme. We expect this to come into force in the Autumn of 2018.

- **Post-implementation review**

A database operated by ScotEID contains the disease status of all the herds in Scotland. This is updated continually with the results of BVD tests. The data held on ScotEID allows BVD exposure and incidents to be monitored and therefore provides the necessary tools to determine whether the policy is having the desired effect.

## Summary and recommendation

Option 2 is the preferred option prior to consultation. The proposals should progress the scheme to a satisfactory conclusion. Without adding new restrictions and controls it is likely that the disease will continue to prevail at a low level, which carries the significant risk of disease increase over the next few years due to loss of confidence in the scheme by those cattle keepers who are currently engaged with the scheme.

- **Summary costs and benefits table**

Option	Total benefit per annum: - economic, environmental, social	Total cost per annum: - economic, environmental, social - policy and administrative
1	Eradication of BVD would enhance Scotland's reputation for good animal welfare and high quality products.  Increased efficiency of disease free herds will reduce the intensity of	Eradication of BVD is estimated to benefit farms by around £37/cow/year. After BVD eradication, average dairy and beef herds could benefit by £15,800 and £4, 800 per year respectively.



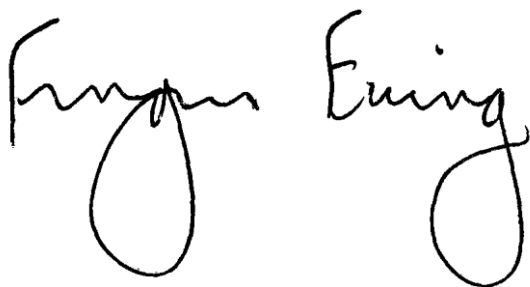
	<p>greenhouse gas emissions generated by beef and milk production.</p> <p>All breeding herds have a known disease status, updated annually: beneficial to potential buyers.</p>	<p>Cattle keepers face an annual testing cost, which can be as low as £3.50 per head.</p>
2	<p>Eradication of BVD would enhance Scotland's reputation for good animal welfare and high quality products.</p> <p>Increased efficiency of disease free herds should reduce the intensity of greenhouse gas emissions generated by beef and milk production.</p> <p>All breeding herds have a known disease status, updated annually: beneficial to potential buyers.</p> <p>Breeding herds that have been “not negative” for two or more years would need to investigate the cause of their “not negative” status, forcing the identification of PIs.</p> <p>Virus positive animals would be isolated from the rest of the herd, reducing the risk of spreading the disease.</p>	<p>Eradication of BVD is estimated to benefit farms by around £37/cow/year. After BVD eradication, average dairy and beef herds could benefit by £15,800 and £4,800 per year respectively.</p> <p>Cattle keepers face an annual testing cost, which can be as low as £3.50 per head.</p> <p>Potential for approximately £400,000 to £850,000 cost to industry to BVD test untested animals on “not negative” holdings.</p>

## Declaration and publication

- Sign-off for Partial BRIAs:

I have read the Business and Regulatory Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options. I am satisfied that business impact has been assessed with the support of businesses in Scotland.

**Signed:**

A handwritten signature in black ink, appearing to read 'Fergus Ewing'. The signature is written in a cursive style with a large loop at the end of the last name.

**Date:**

Fergus Ewing MSP  
Cabinet Secretary for the Rural Economy and Connectivity

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