



BOVINE VIRAL DIARRHOEA (BVD):

AN ERADICATION SCHEME FOR SCOTLAND

CONSULTATION PAPER

Rural and Environment Directorate
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CLOSING DATE FOR RESPONSES: FRIDAY 16 JULY 2010

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FOREWORD BY THE CABINET SECRETARY FOR RURAL AFFAIRS AND THE ENVIRONMENT

Scotland has a reputation for cattle production that is among the best in the world, and rightly so. Farming is an integral part of Scotland, and it is something we do well. This is not a matter of luck, it is the product of decades of hard work and far-sightedness from farmers, with help from vets, scientists and government.

This places a duty on all of us not to be complacent, but to continually strive for ever-higher standards. The health status of our livestock is the foundation of this success. It underpins everything else we do in livestock farming.

In recent years, by working together we have kept out foot and mouth and bluetongue. In 2009 we achieved official TB-free status, and, for the first time in over two decades, had no cases of BSE.

BVD is our next target.

Bovine viral diarrhoea (BVD) has been identified through surveys of farmers as among the most significant animal diseases in terms of both economics and welfare, and is the logical next target for our efforts. Other countries have eradicated it and we have to do likewise if we are to stay ahead of the game. I pay tribute to the many farmers in Scotland who have worked hard through health schemes to get BVD out of their herds, but so long as it still circulates in Scotland, BVD remains a threat to all.

There is a degree of uncertainty for Scottish farming. We are negotiating to get the best deal for Scotland from CAP reform. Growing populations and increasing wealth around the world fuel rising demand for food, and particularly meat. Investing in the quality of our product is the best insurance in a changing world. And eradicating BVD is the single greatest investment we can make in the health status of our livestock.

Before we can launch a compulsory eradication scheme we need to ensure that the livestock industry is behind it. We need you to tell us that this is something you think is worthwhile. We also need to ensure that the scheme is one that is practical, effective and efficient, and for that we need advice from all corners of industry, science and veterinary medicine.

This scheme can only succeed through widespread support. I believe it would be a great boost to national competitiveness and for animal welfare, but it is for you to decide if it goes ahead.

RICHARD LOCHHEAD

CHAPTER ONE

1. INTRODUCTION

1.1 Bovine Viral Diarrhoea (BVD) is a contagious disease of cattle. It is prevalent in Scotland, reducing the productivity of affected cattle and compromising their welfare.

1.2 This consultation paper seeks your views on whether the Scottish Government should introduce a compulsory eradication scheme for BVD.

1.3 Eradication of BVD would be a long term investment in the sustainability of Scottish beef and milk production and would reduce the intensity of greenhouse gas emissions in cattle systems. Scottish Government estimates suggest that eradication would be worth £50 million to £80 million in increased output and reduced business costs over the next 10 years, or some £15,800 per year in additional output for dairy farm businesses and around £2,000 per year for other cattle farm types. A survey of farmers showed that it is among their highest economic and welfare disease concerns.

1.4 BVD is spread through contact with infected animals at markets and shows, and between neighbouring farms. Its negative economic impacts can extend beyond businesses that do not act to prevent or eradicate it from their herds. The result is that farm businesses will on average under-invest in eradicating it which prevents the agricultural industry from achieving economic efficiency. Against this background, there is some economic rationale for Government to intervene to eradicate BVD if the economic benefits are worthwhile, specifically by providing a framework that allows industry to coordinate efforts to eradicate the disease.

1.5 A compulsory eradication scheme would require legislation, which can obviously only be made by government and is thus a further rationale for government intervention. In addition, if a small amount of finance were required to advance the scheme then the Scottish Government would be prepared to consider contributing some funding.

1.6 BVD is not currently regulated in Scotland and we are not required to control it by European Union law. A compulsory scheme would place a regulatory burden on industry, and as a result the Scottish Government, in considering whether a scheme is justified, must assess the extent to which the proposal has the support of the dairy and beef sectors. The Scottish Government considers such support to be of critical importance to the proposals. Responses to this consultation will determine whether or not the scheme is implemented.

1.7 Information on how to respond to this consultation is included at the end, and throughout the paper there are questions on which we would welcome your views. The closing date for response is Friday 16th July.

What is Bovine Viral Diarrhoea?

1.8 BVD causes a complex of diseases in cattle, the most important of which interfere with reproduction, affect the unborn calf and lead to mucosal disease. BVD virus can also cause enteritis during acute or transient infection which is usually mild but occasionally severe enough to cause mortality, even in adult cattle. Transient BVD virus infection is also associated with significant suppression of disease resistance and may contribute to the pneumonia complex in calves.

1.9 Infection immediately before or during the breeding season will reduce conception rates and cause early death of the embryo. Infection at any stage of pregnancy can result in abortion. The virus can also cause deformities in the calf. However of particular importance is infection in the first third of pregnancy when developing calves that survive may remain Persistently Infected with the virus ("PI" calves) and it is these calves, once born, that provide the major route of spread for this virus. They often appear normal but shed large quantities of virus throughout their lives, spreading infection. Most PI cattle eventually die of mucosal disease or secondary infections.

1.10 Cattle which are not PI and which are not immune due to vaccination or exposure to disease may be transiently infected through direct or indirect contact with a PI or another infected animal. They may recover but their immune system may be depressed so they are more susceptible to other infectious diseases. Pregnant heifers or cows may abort or give birth to a PI animal, continuing the cycle of infection within the herd.

How prevalent is it in Scotland?

1.11 The results of a Scottish Government-commissioned prevalence study completed by SAC (the Scottish Agricultural College) in 2007 show that:

1.12 From a bulk milk sample survey of 400 dairy herds:

- 22% of study farms showed no evidence of recent BVD exposure;
- 42% of study farms showed high antibody titre, indicating recent BVD exposure or vaccination; and,
- 36% of study farms showed intermediate antibody levels.

1.13 From a blood sample survey of 300 suckler cow herds collected:

- 62% of study farms showed no evidence of recent BVD exposure; and,
- 17% of study farms had Persistently Infected animals.

How is it being tackled at present in Scotland?

1.14 Over the past fifteen years the application of control and eradication programmes, based initially on the Scandinavian model and increasingly influenced

by the experiences gained in other European countries, have shown BVD eradication at the herd level is possible.

1.15 A number of regional initiatives are currently in place:

- Shetland – BVD was eradicated from the islands in the early 1990s and the Shetland Islands Council operates an import screening system to maintain free status.
- Orkney – almost all farms are members of a recognised control scheme. This uniform approach has brought the number of infected farms down to fewer than 10.
- Uist and Barra – a control scheme supported by Western Isles Enterprise using the SAC Premium Cattle Health Scheme is in place covering 2,000 calves per year.
- Oban, West Argyll and Mull – all operating schemes which have helped farmers to identify persistently infected animals. Support is being provided by vaccine manufacturers.

1.16 Regional control programmes have achieved some success, particularly where a strong regional identity has been allied to the biosecurity advantages of an island location, such as Shetland and Orkney.

1.17 A cattle health initiative was launched in February 2009 at Thainstone, Inverurie, with an initial target of combating the growing problem of BVD. The Cattle Health Improvement Plan (Scotland) (CHIPS) established a partnership between farmers and vets to tackle the disease. CHIPS is managed by a steering group of farmers, NFU Scotland and the health schemes run by Hi-Health and Scottish Agricultural College. It has the backing of auctioneers as well as Quality Meat Scotland, Scottish Beef Cattle Association and National Beef Association (Scotland).

1.18 There are also a number of schemes in place being led by auctioneers around Scotland, which are holding BVD free sales or which are helping farmers to bring virus free and vaccinated animals to sales. The NFU Scotland-led working group, the Scottish Cattle Industry Group, issued a standardised health declaration sheet for use at the annual bull sales. This included, among other things, reference to the BVD status of bulls on sale. This approach has been assisted by similar initiatives supported by the breed societies.

1.19 In January 2008 the Luing Cattle Society reported that Luing breeders heading to the annual sale in Castle Douglas in February had succeeded in testing and entering into a vaccination programme all bulls and heifers going to the sale. This policy has continued for the following two Premier Sales in 2009 and 2010, and was subsequently developed further to the level that all herds consigning stock to the Premier sale must be members of a CHeCS accredited health scheme. This additional policy will be rolled out to all other official Luing Cattle Society sales from 2011 which means that all stock put forward for sale will have been tested and vaccinated for BVD.

1.20 The BVD vaccines licensed for use in the UK form a useful element of some control programmes. However, experience shows that vaccination without improving biosecurity and elimination of PIs does not produce effective control of this disease.

How prevalent is it in other countries?

1.21 SAC's experience with the Norfolk and Suffolk BVD control programme similarly found that infection was active in 25% of the herds. In the Netherlands, where there has been a similar level of interest in BVD control, active infection has also been found in 25% of dairy herds in any one year.

How has it been tackled in other countries?

1.22 Infection with bovine virus diarrhoea virus is endemic, with high seroprevalence, in many countries of the European Union and elsewhere, although few recent surveys have been published. Surveys from countries as far apart as Uruguay, Iran, Jordan, France and New Zealand have reported that up to 100% of herds may be infected. National and regional approaches to BVD eradication are at various stages in mainland Europe. The Scandinavian countries have controlled the virus using programmes that were initially voluntary, but progressed to compulsory as they approached eradication. These programmes frequently took in the region of 10 years to achieve success and in most cases have still not achieved total eradication. They also have few imports of live cattle from infected regions.

1.23 The advent of new testing options that are commercially available, e.g. rt-PCR on bulk milk and pooled serum samples or tissue samples such as ear notches has opened opportunities for an eradication programme to be effective over a much shorter period, possibly as little as two years, with completion within a further few years. This option is currently being pursued in Switzerland, Austria and in some regions of Germany and Italy.

What research has been done?

1.24 To gather information on BVD in Scotland the Scottish Government commissioned a research project to establish the prevalence of BVD in Scottish beef and dairy cattle herds, its geographic distribution and farm management risk factors. It was completed in October 2007, and the prevalence figures are noted above at 1.10 to 1.12, forming a baseline against which progress could be measured. The main findings of the research are that more than half of Scottish beef suckler herds have no recent history of exposure to BVD virus. However, at the same time the data suggest that PI animals might be found on up to 17 % of study farms. The study did not test for PI animals in dairy herds. This research attracted wide interest and support from beef farmers and their veterinary advisers. The report recommended that Scotland should consider eradication as a viable goal. The report also highlights that the promotion of improved effective biosecurity measures should be a priority.

What is the cost of BVD?

1.25 Bovine viral diarrhoea is a common, persistent, and costly disease in dairy and beef herds in Scotland. It is probable that it also results in major losses in many beef fattening units. In addition to the direct effect on production, loss of condition and increased veterinary costs BVD virus infection is known to predispose animals to infection with other pathogens causing respiratory and enteric diseases. A recent estimate put the costs of a BVD outbreak in a typical Scottish beef herd at £38 mean loss per cow per annum in affected herds (Gunn *et al* 2004).

1.26 Scottish Government economic analysis puts the annual cost of BVD at around £10,000 for a dairy business and £2,000 a year for other cattle businesses. Animals with BVD, both PIs and transiently infected, require more feeding than would be the case were they free of disease, their milk yields are lower and their veterinary costs are higher.

1.27 The loss of productivity means that the Scottish cattle herd emits more greenhouse gas than is necessary per kilogramme of meat or milk produced. Eradication of BVD could therefore contribute to reducing the intensity of greenhouse gas emissions from the Scottish dairy and beef herds.

Acknowledgements

1.28 The proposal outlined in this paper is drawn from a paper by George Caldow of SAC. It was taken up by Nigel Miller, vice president of NFUS, who chaired a series of meetings of stakeholders' organisations to refine the proposal. Further significant input came from Peter Nettleton of Moredun Research Institute.

1.29 George Caldow's paper can be found on the Scottish Government website at <http://www.scotland.gov.uk/Topics/farmingrural/Agriculture/animal-welfare>.

CHAPTER 2

2. A NATIONAL ERADICATION SCHEME

Rationale for a national scheme

2.1 The Scottish Government believes that the best way to tackle BVD is to eradicate it entirely. Individual cattle keepers or regional groups are able to make progress on a voluntary basis but are at constant risk of re-introduction of disease due to unknowingly moving PI animals, infection from neighbouring farms or contact with infected animals at markets and shows.

2.2 Some measures are already in place to encourage voluntary control. The Scottish Government funds publicity and supports industry initiatives to inform farmers and vets of the benefits of BVD control using the best available methods. We fund farm health planning and BVD control through the Land Management Options of the Scottish Rural Development Programme. Schemes have been developed to facilitate the trading of BVD free breeding and store cattle.

2.3 The Scottish Government considers that national, co-ordinated and in some regards compulsory measures are necessary to eradicate the disease and that these measures are likely to be justified by the potential benefits in economic, welfare and environmental terms.

2.4 BVD can be eradicated through strong partnership working with government and industry each doing their part. The Scottish Government is best placed to lead national co-ordination, provide well considered regulation and to deal with international aspects. Individual cattle keepers should be able to take decisions on how to deal most efficiently with BVD in their own herd within a flexible framework based on the best science.

2.5 There should be a considerable economic benefit to most cattle keepers so we consider that is reasonable for them to share the cost of eradication.

2.6 Cattle Health Certification Standards (UK), abbreviated CHeCS, is a self-regulatory body for Cattle Health Schemes in the UK. It has published standards which are applied by a number of health schemes. Many herds in Scotland have their BVD status accredited through a health scheme and we would aim to recognise and encourage health scheme membership. See <http://www.checs.co.uk/>

Question 1(a): Do you agree that action to tackle BVD is necessary? (Yes, No, Don't Know)

Question 1(b): If so, do you agree that eradication should be the aim? (Yes, No, Don't Know, expand as necessary)

Question 1(c): If you agree that eradication is desirable, should there be a compulsory scheme?

Question 1(d): If not, do you have an alternative suggestion for controlling BVD?

Outline of a national eradication scheme

2.7 The scheme proposed below is based on a plan created by the Scottish Cattle Industry Group, which in turn was based on a proposal by George Caldow of SAC. The scheme proposed in this consultation paper differs from the industry plan in order to ensure legal, financial and regulatory requirements are met.

2.8 The Scottish Government has not committed to this plan, or to any aspect of it. Responses to this consultation will determine whether we have a national scheme, and how such a scheme would work.

2.9 The proposed national eradication plan is in two phases.

2.10 Phase one is about encouraging further voluntary action by motivating farmers to remove PI cattle from their herds. The objective of this phase is to reduce the prevalence of persistently infected animals in order to make eventual eradication easier, in particular reducing the costs of biosecurity at herd level. It should also increase the number of accredited free herds to ensure a good supply of BVD free cattle.

2.11 Phase two is the compulsory phase which aims to eradicate BVD from every herd in Scotland and to keep it out. In doing this we aim to allow traditional trading patterns to continue without disproportionate additional cost, in particular the purchase of breeding and store cattle from outside Scotland. Keepers of infected cattle or those of unknown status would become responsible for protecting the health of their neighbours' herds.

2.12 We have considered setting up a prescriptive scheme organised and fully funded by government. However, this would almost certainly be costly and not justified on cost benefit grounds. We believe it would be fairer to allow each producer to deal with BVD in their own herd, taking veterinary advice on the best strategy using the range of tests currently available. The principal obligation would therefore be to carry out a periodic screening test to confirm the free status of the herd or to trigger action to eliminate infection.

2.13 Experience shows that even carefully planned and executed strategies can fail due to the biology of BVD and accidental infections. It would therefore be unfair to make it unlawful simply to possess infected cattle.

2.14 An important task during phase one would be to inform keepers of the intention to move to a compulsory scheme on a specified date, and provide reasons why they would be well advised to act voluntarily in advance of that date.

Question 2: What are your views on this two -stage approach to disease eradication?

Question 3: Are there aspects of the scheme that you feel are currently allocated to the wrong phase?

Question 4: When should the compulsory phase start:

- (a) Immediately**
- (b) After one year**
- (c) After two years**
- (d) Longer (please state)**

Dealing with Persistently Infected animals

2.15 The removal of PI animals from the national herd is critical to the success of any attempt to control and eradicate BVD. So long as these animals remain, and are able to move around, it will be impossible to prevent re-infection.

2.16 During the initial voluntary phase we would consider providing a financial incentive for the prompt culling and disposal of PIs.

2.17 During the compulsory phase, any financial incentive would be phased out and one of the two following options could be taken:

- Require PIs to be isolated from the rest of the herd under strict biosecurity conditions which should include veterinary supervision but with no time limit for their culling.
- Compulsory culling of PIs within a time limit (for example 90 days).

2.18 The keeper would be responsible for arranging culling and disposal in all cases. The animals would not be allowed to move off the holding other than direct to an abattoir. PIs may enter the food chain so long as they are clinically healthy when presented for slaughter and pass ante and post mortem inspection at the slaughterhouse. This means that farmers may be able to get some payment for them if they are well enough grown to be worth salvaging. However, in many if not most cases PI animals will have little or no commercial value.

2.19 In order to ensure payments are being claimed correctly, the Scottish Government would have to have a process and powers to investigate any claim.

Question 5: Do you agree that there should be an initial financial incentive for the prompt culling of PIs? (Yes, No, Don't Know, expand if you wish.)

Question 6: Do you agree that the payment should be phased out when eradication becomes compulsory? (Yes, No, Don't Know)

Designation of laboratories

2.20 In order that the Scottish Government can monitor the progress of the scheme and audit any payments made for the culling of PI animals, BVD would be

made „reportable’. This means that official testing of samples from Scottish cattle for the presence of BVD virus or antibody could only be carried out at a designated laboratory. BVD would not become „notifiable’ in the sense that suspected clinical disease would be subject to an official investigation.

2.21 In order to become designated a laboratory would have to:

- Carry out BVD testing accredited to ISO17025 and provide evidence of independent audit. This is a normal standard for well managed laboratories and should incur no additional cost.
- Supply the Scottish Government with the individual identities of animals which test positive for BVD virus and with aggregated results for negative virus tests and antibody tests. This could be done by electronic data transfer once per month, incurring an administrative cost which might be absorbed by the laboratory or passed on to the customer

2.22 Cattle keepers would be free to use pen side tests to screen cattle for the presence of persistent infection and to act on the results. However, the results would not be acceptable as a basis for payment unless conducted and certified by a vet.

2.23 Any serological or virological tests required by law to demonstrate herd freedom would have to be done in a designated laboratory. Other tests carried out on the advice of a veterinarian to help tackle BVD in a herd could be done in a laboratory of their choice. However, we would not expect there to be much advantage in using different laboratories for different tests.

Question 7: Should the Scottish Government designate laboratories, and should only designated laboratories be allowed under the scheme? (Yes, No, Don't know)

Question 8: What are your views on aggregated test results for negative BVD infection being reported to the Scottish Government?

Question 9: Do you consider that laboratories or the customers would incur any significant additional costs as a consequence of the proposed approval system?

Screening tests

2.24 To eradicate the disease it must first be identified. Screening and monitoring are essential parts of the existing health schemes and would be integral to any eradication plan.

2.25 From the start of the compulsory phase, cattle keepers would be required to screen their herds annually in line with existing CHECS protocols and on the advice of their private veterinary surgeon. The nature of the testing they would be required to undertake would depend on the type of holding. For example, dairy farms could initially do a bulk milk test while beef breeders may blood test a sample of unvaccinated cattle.

2.26 Costs of sampling and testing would be borne by the farmer who would have a choice of suppliers with different levels of price and service. It would not be obligatory to join a health scheme but the advantages should outweigh the modest subscription cost for most producers. Health scheme providers carry out laboratory testing but also provide useful advice and administration.

2.27 Herds which have signed up to a CHECS health scheme using a designated laboratory would only need to reconfirm their status periodically. We would set up agreements whereby this could be done through direct exchange of data from the health scheme provider.

2.28 Keepers who choose not to join a health scheme would have to provide a veterinary certificate at their own expense to show that appropriate screening had been carried out and report the results.

Question 10: Do you agree that an annual screening test for BVD should become mandatory for all cattle herds in Scotland?

Vaccination

2.29 All health scheme options have vaccination as either an optional or integral element. A decision on whether to vaccinate is best made at herd level on the basis of veterinary advice.

2.30 Vaccination would be permitted as a voluntary measure where needed to augment biosecurity. It would be applied on the advice of the private vet and paid for by the farmer. The need for vaccination should reduce as BVD is eradicated although some herds may remain at risk due to trading practices and certain types of holding would be well advised to vaccinate in perpetuity.

Question 11: Do you agree that vaccination should be voluntary?

Movement of animals into herds

2.31 In order to prevent the continued re-infection of herds, a prohibition on the sale of PI animals would be required.

2.32 Ideally all cattle traded would be certified BVD free. Animals could be individually certified BVD free and vaccinated or from a health scheme accredited free herd. In phase two, when presenting animals for sale farmers would be required to declare the BVD health status of the animals.

2.33 In order to avoid adverse effects on trade it should be possible to move animals of unknown status onto a holding but they would have to be quarantined and tested before coming into contact with the rest of the herd. Health schemes include suitable procedures for doing this.

2.34 The quarantine concept could be extended to specialist finishers buying store cattle of unknown status, including those sourced from outside Scotland. If they are able to maintain strict isolation with no access to grazing throughout the finishing period then they may elect not to test them. Such an arrangement should be exceptional and would be carried out under frequent veterinary supervision at the keeper's expense. Any other cattle on the holding would almost certainly need to be vaccinated. Movements off would only be direct to slaughter and not through a market.

2.35 We do not propose any explicit 'border controls' on the movement of cattle into Scotland from holdings, countries or regions which are not BVD free. However, suppliers of BVD free cattle may find themselves at an advantage when selling into Scotland as it would place lesser obligations on the purchasing farmer.

2.36 These measures would enhance the value of BVD free cattle and could place an additional cost on buyers of cattle of unknown status.

Question 12: What are your views on the restriction on the sale of PI animals other than direct to slaughter?

Question 13: Do you agree that farmers should be required to make declarations on health status when presenting animals for sale during phase two? (Yes, No, Don't Know, expand if you wish)

Question 14: Do you agree that we should require quarantine and testing? (Yes, No, Don't Know, expand if you wish)

Question 15: Do you agree that we should allow extended quarantine under strict veterinary control for finishing units? (Yes, No, Don't Know, expand if you wish)

Farm-level Biosecurity

2.37 BVD can be spread by nose to nose contact, which can occur between neighbouring farms and to a lesser extent through indirect contact. This is already recognised in CHeCS health scheme rules.

2.38 During phase two, keepers of herds which were not free from BVD could be required to take reasonable precautions to protect their neighbours. This would be backed up by a legal power to allow a veterinary inspector to place herds with persistent problems under movement restrictions and to serve notices requiring them to prevent contact between their cattle and those of their neighbours. Such a measure would not be invoked automatically during the early compulsory phase but applied where necessary to protect the wider industry, especially as we approach national freedom.

2.39 If the Scottish Government were to decide to introduce legislation, it would do so under the Animal Health Act 1981 and the penalties provided for in the Act would apply for enforcement purposes.

Question 16: Do you agree that, in phase two, there should be a general obligation to protect neighbouring farms? (Yes, No, Don't Know, expand if you wish)

Question 17: What are your views on requiring action from farms which persistently have BVD in their herds?

Financing an eradication scheme

2.40 The Scottish Government does not intend to finance the full costs of a BVD eradication scheme. The economic benefits of BVD eradication will accrue to the beef and dairy sectors for years to come. All herds would have some cost to bear, but this would vary greatly. For instance, a dairy herd may carry out a single bulk milk test and establish that it is BVD free at the time of the test. A heavily infected beef herd may have to sample every animal to find the PIs. The cost of testing and vaccination can be offset by selecting the relevant option from the Land Managers' Options under SRDP. Fuller economic consideration can be found in the farm level impact studies below.

2.41 Herds which are either infected or at risk of becoming infected should see a good return on the investment required to eliminate BVD. Herds which are free and stable may incur small additional cost associated with testing requirements, but their herds will benefit from reduced risk of infection as the national prevalence of the disease decreases. In most cases there is a choice of strategy for dealing with BVD and herd owners can take action to minimise their costs by combining veterinary work with other tasks, shopping around for competitive laboratory fees or by maintaining biosecurity for example. We therefore consider that the most efficient way of funding BVD eradication is for individual cattle keepers to meet their own costs.

2.42 However, we recognise that for some herds there may be some costs in the initial stages of the scheme. In particular, the removal of PI animals could lead in the short term to financial losses, though removal ought to give a positive cost benefit over leaving them in the herd until the end of their production cycle.

2.43 As a result the Scottish Government is prepared to consider financial recompense for PI animals. This could not be at or near full market value, because this would be prohibitively expensive, it may create a perverse incentive not to tackle BVD and most PI animals do not survive very long anyway. In addition, a scheme based on individual valuations of animals would be costly to administer, and the market value of animal known to be a PI would be lower.

2.44 The proposal is that the Scottish Government make a payment for each PI animal that is slaughtered during phase one of the scheme. This would be at a flat rate of the order of £100. During phase two, it is proposed that any compensation would be nominal or nil.

2.45 We have considered whether to find funding from an EU Common Agricultural Policy (CAP) scheme but this would be unattractive because the resource implications of carrying out the necessary negotiations in Brussels and then

administering the payments could be greater than the funds distributed to industry. This would take at least a year to set up. In addition, there would be cross-compliance risks. It is therefore not viable at present but may be considered as an option for negotiations on future CAP reform.

2.46 The raising of a levy from the cattle industry, possibly at the point of slaughter, would involve some delay and administrative costs. Money collected from farmers would then be returned to them in a way which is arguably less fair than simply asking them to meet their own costs. A levy for this purpose would be inefficient and more bureaucratic.

2.47 The Scottish Government does not currently have a budget for BVD eradication. However, if funds can be found and paid out using a simple administrative procedure then this would be relatively efficient. Such funding is likely to be limited and may only be available for the first year. It would be subject to EU State Aids rules which cap total payments to any business at £6000 in any three year period.

2.48 Farmers would be eligible for payment during phase one provided that the animal;

- a) was resident in Scotland at the time of culling;
- b) was resident in Scotland at the time of the test which disclosed it as a PI
- c) was killed within 90 days of the first test identifying it as a PI and
- d) at the time of culling it would have been fit for human consumption in that it was not clinically affected with disease and was not within the withdrawal period of any veterinary medicines.

2.49 Payment would be made on the basis of a simple application form with an owner's declaration that the above conditions had been met, supported by a copy of the laboratory report from a designated laboratory which must include the animal's official identification number. Audit checks would be carried out using BCMS, farm records may be checked and samples may be re-tested if there was suspicion of fraud.

Question 18 (a): Do you agree that there should be some financial input from the Scottish Government into this scheme? (Yes, No, Don't Know, expand if you wish)

Question 18 (b): If so, do you agree that support should be focussed on the removal of PIs in the initial voluntary phase? (Yes, No, Don't Know, expand if you wish)

Question 18 (c): What level of payment would provide a reasonable incentive for the prompt removal of PIs?

Animals other than Cattle

2.50 Camelids (including llamas and alpacas) are also susceptible to BVD. At this stage the Scottish Government does not intend to include them in the scheme, due to their very low numbers in Scotland. If they were to be included then some

variation in the rules may be necessary. Tests for camelids are available, though are more expensive.

2.51 While other species have been shown to be susceptible to BVD, contact between domestic ruminants and wild ruminants has not compromised the effectiveness of control programmes, indicating that this theoretical risk is not of practical importance. We would, however, consider the possible role of other species if they appear to be causing problems during the later stages of the eradication programme.

Question 19: Should Camelids be included in this scheme? (Yes, No, Don't Know, expand if you wish)

Legislation

2.52 In order to give full effect to a compulsory scheme, the Scottish Government would be willing to consider introducing suitable secondary legislation made under the Animal Health Act 1981 .

2.53 The legislation would recognise the phased approach laid out above.

2.53.1 Initially legislation would make BVD „reportable’. This would require samples from Scottish cattle to be tested for BVD for official purposes only in a designated laboratory. Laboratories would be designated if they test for BVD to ISO 17025 and undertake to supply certain test results to the Scottish Government, as outlined above.

2.53.2 From the start of the compulsory phase:

- Every herd to be subjected to an annual screening test at the owner's expense
- Pls must be kept in isolation and only moved off the holding direct for slaughter
- Possibly require the prompt compulsory slaughter of Pls
- BVD status of all cattle sold in Scotland to be declared
- Any cattle moved onto a holding in Scotland which are of unknown status to be quarantined and tested before being added to the herd
- Finishing units to be approved for the extended quarantine of cattle of unknown status on the basis of frequent veterinary supervision at the owner's expense
- Keepers of herds with infected or unknown status required to take reasonable precautions to protect their neighbours
- A power for a veterinary inspector to serve a notice putting herds with persistent problems under movement restrictions and to require them to take additional biosecurity measures.

Question 20: Do you agree that there would be a need for legislation to make a BVD eradication scheme effective? (Yes, No, Don't Know, expand if you wish)
Question 21: Do you agree with the proposals to create legislation as outlined above? (Yes, No, Don't Know, expand if you wish)
Question 22: Do you agree that the requirements of the scheme, and of each phase, should apply across Scotland from the same dates? (Yes, No, Don't Know, expand if you wish)

Question 23: Do you have any other comments about eradicating BVD?

CHAPTER 3

3. FARM LEVEL IMPACTS

3.1 BVD carries a cost to Scottish farming. The benefits of eradicating the disease would be most strongly felt among those who have BVD, while those who do not would benefit from reduced risk of contracting it and its associated losses. This section presents a summary of analysis which considered the **average** impact on businesses, therefore some farm businesses are likely to be more or less affected by BVD eradication than the results suggest. A full analysis of farm level economic impacts can be found on the Scottish Government website at <http://www.scotland.gov.uk/Topics/farmingrural/Agriculture/animal-welfare>.

3.2 All farms would have a cost in a compulsory eradication scheme. The costs are a result of farm businesses paying for the vet testing costs, the extra costs of tagging calves, and the disposal and replacement costs that are involved in the BVD eradication scheme outlined here for all farm types. The largest proportion of costs are replacement costs, although the exact size of these costs will vary between farm type (as average herd sizes vary between farm types). It is worth noting that these costs would be expected to decline year on year throughout the lifetime of the eradication programme as BVD prevalence falls, and at the same time benefits would be increasing gradually.

3.3 The costs would be greatest among those with BVD in their herds, as they would have to eliminate it. However, their benefits would be the greatest too.

3.4 Below are four indicative estimates of impacts on average dairy, LFA specialist beef, LFA Cattle and sheep and lowground cattle and sheep farms. These are drawn from the Farm Account Survey (FAS) 2008/2009 to provide a baseline for farm business financial performance for four different farm types significant cattle enterprises: dairy, LFA specialist beef, LFA Cattle and sheep and lowground cattle and sheep. The Farm Accounts Survey is a sample survey of some 470 farm businesses. The data collected is used here to assess the impact of BVD eradication on the average Farm Business Income (FBI) for each of the different farm types above. FBI is a measure of the profitability of the farm business as a whole.¹

3.5 There is a size threshold, so the FAS unfortunately does not cover small holdings and crofts.

3.6 Certain assumptions have been made to calculate these farm level impacts in order to produce estimates for the costs associated with eradication. We have assumed an even spread of prevalence, with the national 1% rate for adults and 2.5% rate for calves through each herd. It is also assumed that all PI animals are destroyed, and therefore provide the farmer with no value at slaughter. Replacement costs for animals are taken from the SAC handbook, and it is assumed each lost adult animal is replaced. It is assumed that ear tag testing will be done on all calves, and milk and blood testing for adults. Finally, mortality and fertility rates are taken

¹ For more information please see: <http://www.scotland.gov.uk/Publications/2009/08/26130432/0>

from the SAC handbook, with higher fertility and mortality rates for dairy in line with industry norms.

Question x: Are the assumptions made above realistic?

Question x: If your cost of production fell as a result of eradicating BVD, would you keep (a) more, (b) the same or (c) fewer animals?

Dairy farms

3.7 The average dairy farm from the FAS sample has 131 dairy cows and a Farm Business Income of around £78,000 per year.

3.8 A farm of this type could expect an additional cost in eradicating the disease of around £3,600 in the first year. This amount is high relative to other farm types, as a result of larger herd sizes on average for dairy farms. This amount would decline in the subsequent years of the eradication scheme.

3.9 It should be noted that many dairy herds will have no BVD present, and for them the only cost is a single bulk milk test.

3.10 FBI from year five of an eradication scheme (after eradication) is estimated to be around £15,800 higher than before eradication. For the average dairy business the majority of the benefit (around £11,100) derives from the increased output due to lower mortality rates. It is important to note that this increase in FBI is derived from improved productivity of the business, and therefore any improvement in output or income would be a sustained increase in the financial performance of the farm businesses, for as long as cattle herds remain BVD free.

The average dairy farm can expect a maximum annual cost of around £3,600 in year 1 (declining thereafter), however after eradication the business can expect benefits equal to around £15,800 per year, as long as it remains BVD-free.

Specialist LFA Beef farms

3.11 The average LFA specialist beef farm from the FAS sample has 85 suckler cows on 200 hectares and a farm business income of around £27,100 per year.

3.12 A farm of this type could expect an additional cost in eradicating the disease of around £2,200 in the first year (declining thereafter). This is quite a significant cost in comparison with the farm business income, mostly coming from the cost of replacing animals, LFA beef farms have relatively large herds in the sample, and so face relatively high costs compared to other beef cattle farm types where herd sizes are generally smaller.

3.13 Farm business income from year five of an eradication scheme (after eradication) is estimated to be around £2,400 per year higher than before eradication. About half of this benefit derives from increased output due to lower

mortality rates. It is important to note that these benefits are derived from improved productivity of the business, and therefore any improvement in output or income would be a sustained increase in the financial performance of the farm businesses, for as long as cattle herds remain BVD free.

The average LFA beef farm can expect a maximum annual cost of around £2,200 in year 1 (declining thereafter), however after eradication the business can expect benefits equal to around £2,400 per year, as long as it remains BVD-free.

LFA Cattle and Sheep farms

3.14 The average LFA cattle and sheep farm in the FAS sample has 63 suckler cows on 578 hectares and a farm business income of around £26,900 per year.

3.15 A farm like this could expect an additional cost in eradicating the disease of around £1,630 in the first year, with most coming from the cost of replacing animals. However, this amount would decline in subsequent years. This figure is low largely as a result of the relatively small herd size from the herds in the FAS sample for farms of this type.

3.16 Farm business income from year five of an eradication scheme (after eradication) is estimated to be around £1,750 per year higher than before eradication. About half of this benefit derives from increased output due to lower mortality rates. It is important to note that these benefits are derived from improved productivity of the business, and therefore any improvement in output or income would be a sustained increase in the financial performance of the farm businesses, for as long as cattle herds remain BVD free.

The average LFA cattle & sheep farm can expect a maximum annual cost of around £1,630 in year 1 (declining thereafter), however after eradication the business can expect benefits equal to around £1,750 per year, as long as it remains BVD-free.

Lowground Cattle and Sheep farms

3.17 The average lowground cattle and sheep farm in the FAS sample has 66 suckler cows, with sheep, on 135 acres and a farm business income of around £23,300.

3.18 A farm like this could expect an additional cost in eradicating the disease of around £1,770 in the first year, with most coming from the cost of replacing animals. However, this amount would decline in subsequent years.

3.19 Farm business income from year five of an eradication scheme (after eradication) is estimated to be around £2,375 per year higher than before eradication. About half of this benefit derives from increased output due to lower mortality rates. It is important to note that these benefits are derived from improved

productivity of the business, and therefore any improvement in output or income would be a sustained increase in the financial performance of the farm businesses, for as long as cattle herds remain BVD free.

The average Lowground Cattle & Sheep farm can expect a maximum annual cost of around £1,770 in year 1 (declining thereafter), however after eradication the business can expect benefits equal to around £2,375 per year, as long as it remains BVD-free.

CHAPTER FOUR

LIST OF QUESTIONS

Rationale for a national scheme

Question 1(a): Do you agree that action to tackle BVD is necessary? (Yes, No, Don't Know)

Question 1(b): If so, do you agree that eradication should be the aim? (Yes, No, Don't Know, expand as necessary)

Question 1(c): If you agree that eradication is desirable, should there be a compulsory scheme?

Question 1(d): If not, do you have an alternative suggestion for controlling BVD?

Outline of a national eradication scheme

Question 2: What are your views on this two-stage approach to disease eradication?

Question 3: Are there aspects of the scheme that you feel are currently allocated to the wrong phase?

Question 4: When should the compulsory phase start:

- (e) Immediately
- (f) After one year
- (g) After two years
- (h) Longer (please state)

Dealing with Persistently Infected animals

Question 5: Do you agree that there should be an initial financial incentive for the prompt culling of PIs? (Yes, No, Don't Know, expand if you wish.)

Question 6: Do you agree that the payment should be phased out when eradication becomes compulsory? (Yes, No, Don't Know)

Designation of laboratories

Question 7: Should the Scottish Government designate laboratories, and should only designated laboratories be allowed under the scheme? (Yes, No, Don't know)

Question 8: What are your views on aggregated test results for negative BVD infection being reported to the Scottish Government?

Question 9: Do you consider that laboratories or the customers would incur any significant additional costs as a consequence of the proposed approval system?

Screening tests

Question 10: Do you agree that an annual screening test for BVD should become mandatory for all cattle herds in Scotland?

Vaccination

Question 11: Do you agree that vaccination should be voluntary?

Movement of animals into herds

Question 12: What are your views on the restriction on the sale of PI animals other than direct to slaughter?

Question 13: Do you agree that farmers should be required to make declarations on health status when presenting animals for sale during phase two? (Yes, No, Don't Know, expand if you wish)

Question 14: Do you agree that we should require quarantine and testing? (Yes, No, Don't Know, expand if you wish)

Question 15: Do you agree that we should allow extended quarantine under strict veterinary control for finishing units? (Yes, No, Don't Know, expand if you wish)

Farm-level Biosecurity

Question 16: Do you agree that, in phase two, there should be a general obligation to protect neighbouring farms? (Yes, No, Don't Know, expand if you wish)

Question 17: What are your views on requiring action from farms which persistently have BVD in their herds?

Financing an eradication scheme

Question 18 (a): Do you agree that there should be some financial input from the Scottish Government into this scheme? (Yes, No, Don't Know, expand if you wish)

Question 18 (b): If so, do you agree that support should be focussed on the removal of PIs in the initial voluntary phase? (Yes, No, Don't Know, expand if you wish)

Question 18 (c): What level of payment would provide a reasonable incentive for the prompt removal of Pls?

Animals other than Cattle

Question 19: Should Camelids be included in this scheme? (Yes, No, Don't Know, expand if you wish)

Legislation

Question 20: Do you agree with the need for legislation to enforce the scheme? (Yes, No, Don't Know, expand if you wish)

Question 21: Do you agree with the proposals to create legislation as outlined above? (Yes, No, Don't Know, expand if you wish)

Question 22: Do you agree that the requirements of the scheme, and of each phase, should apply across Scotland from the same dates? (Yes, No, Don't Know, expand if you wish)

General

Question 23: Do you have any other comments about eradicating BVD?

Farm Level Impacts

Question 24: Are the assumptions made above realistic?

Question 25: If your cost of production fell as a result of eradicating BVD, would you keep (a) more, (b) the same or (c) fewer animals?

CHAPTER FIVE

HOW TO RESPOND

It would be helpful to have your response by email. We are of course happy to receive written submissions too.

Email submissions: BVDconsultation2010@scotland.gsi.gov.uk

Written submissions:

Address until 4 June 2010:

BVD Consultation
Room 350
Pentland House
48 Robb's Loan
Edinburgh
EH14 1TY

Tel: 0131 244 6636
Fax: 0131 244 6564

Address from 7 June 2010:

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

Tel: 0300 244 9823
Fax: 0300 244 9797

We would be grateful if you would use the consultation questionnaire provided or would clearly indicate in your response which questions or parts of the consultation paper you are responding to, as this will aid our analysis of the responses received.

This consultation, and all other Scottish Government consultation exercises, can be viewed online on the consultation web pages of the Scottish Government website at: www.scotland.gov.uk/consultations.

You can telephone Freephone 0800 77 1234 to find out where your nearest public internet access point is.

The Scottish Government has an email alert system for consultations. This system, called SEconsult, allows individuals and organisations to register and receive a weekly email with details of all new consultations (including web links). SEconsult complements, but in no way replaces, Scottish Government distribution lists. It is designed to allow people with an interest to keep up to date with all Scottish Government consultation activity. You can register at SEconsult: <http://www.scotland.gov.uk/consultations/seconsult.aspx>.

Handling your response

We need to know how you wish your response to be handled and, in particular, whether you are happy for your response to be made public. Please complete and return the Respondent Information Form which forms part of the separate consultation questionnaire as this will ensure that we treat your response appropriately. 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.

RESPONDENT INFORMATION FORM

Please Note That This Form **Must** Be Returned With Your Response To Ensure That We Handle Your Response Appropriately

1. Name/Organisation

Organisation Name

Title Mr ☐ Ms ☐ Mrs ☐ Miss ☐ Dr ☐ Please tick as appropriate

Surname

Forename

2. Postal Address

<input type="text"/>		
<input type="text"/>		
<input type="text"/>		
<input type="text"/>		
Postcode	Phone	Email

3. Permissions

I am responding as...

Individual	/	Group/Organisation
<input type="checkbox"/>		<input type="checkbox"/>
Please tick as appropriate		

(a) Do you agree to your response being made available to the public (in Scottish Government library and/or on the Scottish Government web site)?

Please tick as appropriate ☐ Yes ☐ No

(b) Where confidentiality is not requested, we will make your responses available to the public on the following basis

Please tick **ONE** of the following boxes

Yes, make my response, name and address all available ☐

or

Yes, make my response available, but not my name and address ☐

or

Yes, make my response and name available, but not my address ☐

(c) The name and address of your organisation *will be* made available to the public (in the Scottish Government library and/or on the Scottish Government web site).

Are you content for your *response* to be made available?

Please tick as appropriate ☐ Yes ☐ No

(d) 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?

Please tick as appropriate ☐ Yes ☐ No

4. If you are a farmer responding as an individual, please tell us if you keep cattle, if you are involved in dairy and/or beef, and how many cattle you have.