

AN ANALYSIS OF THE EFFECTS OF BVD ERADICATION IN SCOTLAND: A FARM BUSINESS LEVEL IMPACT ASSESSMENT

I. BACKGROUND

1. The eradication of bovine viral diarrhoea (BVD) in Scottish beef and dairy cattle herds has the potential to impact on productive efficiency of Scottish farm businesses in a way that should improve their financial performance. By increasing the amount of output per unit of resource (e.g. fertiliser, energy, etc) associated with greenhouse gas emissions, eradicating BVD also has the potential to reduce the “carbon-intensity” of output from the Scottish cattle herd.

2. At the same time eradicating BVD will come with some costs to farm businesses, and the distribution of these costs across businesses will vary depending on the incidence of BVD in cattle herds. However, these costs could be seen as a one-off investment in farm business efficiency given the benefits to farm businesses of eradicating BVD. Given the costs and benefits associated with the process, there are therefore two aspects of disease eradication that merit economic analysis; firstly, whether the overall scheme is an economically worthwhile activity for government to carry out, and secondly what impact such a scheme might have on Scotland’s farm businesses.

3. Analysis has been carried out at a macro level to examine the case for eradication in Scotland, which found that there were clear economic benefits to eradication, and that these were significantly larger than the costs of eradication.

4. Against this background, this paper looks to examine the second economic aspect of disease eradication, presenting results from a farm-level assessment of costs and benefits of eradicating BVD for four Scottish farm-types operating significant cattle enterprises (beef and dairy).

5. The remainder of the paper proceeds as follows: Section II describes the impacts of BVD eradication on the profitability of cattle herds and Section III explains the process by which BVD could be eradicated. Section IV sets out the methodology and assumptions that are made to assess the farm-level impacts of BVD eradication. Section V presents results, and Section VI provides a brief discussion to aid interpretation of the results.

II. IMPACTS OF BVD ON HERD PROFITABILITY

6. BVD has a number of negative effects on the productivity of cattle herds, particularly those that have persistently infected animals. Broadly, these negative effects include slow growth rates and susceptibility to other diseases as a result of immuno-suppression in cattle, increased mortality rates (as some affected animals will die) and decreased calving rates (by increasing the chance of miscarriage in pregnant animals).

7. These effects all have direct impacts on a herd’s profitability, as they reduce the value of output and yet businesses may still incur costs rearing the affected animals. Evidence from economic assessments of BVD suggests that BVD significantly affects the profitability of cattle enterprises. Notably

Gunn et. al (2004)¹ find that herd profitability drops by around £38 per cow annually as a result of BVD.

III. ERADICATING BVD

8. The BVD eradication programme assessed for this paper would work by systematically testing cattle and destroying animals that test positive for the BVD virus. For all beef cattle farms, the process would start by screening a group of 20 adult cows (regardless of herd size) from each herd using a BVD antibody test. If any of the 20 antibody tests were positive, all of the animals in a herd would be tested for the presence of the BVD virus through blood testing. Animals which test positive would need a confirmation test, which, if positive, would lead to the animals being culled.

9. Animals that test negative for either the virus or antibodies would not require any further testing that year, but would have their calves tested for the BVD virus using ear-tag tissue sampling, i.e. – using tags that take tissue samples when calves are tagged. If these tissue samples test positive then a confirmation blood test is carried out, which, if positive, would lead to calves being culled. A negative ear-tag test would result in calves being added to the herd.

10. In dairy herds, the testing regime is similar to that used for beef herds, although two other tests are carried out prior to physically testing animals. The first is a test for antibodies on milk samples drawn from the bulk milk tank. If this milk antibody test is negative then all adult dairy cattle would be considered BVD free, and only the calves would be tested in the same way as beef calves (through ear-tag tissue sampling).

11. If the milk antibody test is positive then the milk is tested for the BVD virus. If the milk virus test is negative 20 adult dairy cows will be screened for BVD antibodies (and would progress from there as in the beef cattle case). Where the milk virus test is positive, the herd undergoes individual animal virus testing (again the same as with beef herds). Schematic diagrams showing the different testing regimes for beef and dairy cattle are shown in Annex D.

IV. METHODOLOGY

12. The analysis for this paper draws on the Farm Account Survey (FAS) to provide a baseline for farm business financial performance for four different farm types with significant cattle enterprises, viz.: 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 above 0.5 standard labour requirements. Because of the size thresholds, the FAS does not cover small businesses and crofts².

¹ Available at: <http://linkinghub.elsevier.com/retrieve/pii/S1090023303001126>

² It should also be noted that the results reported for individual farm types can be based on relatively small sample sizes, and therefore should be treated with caution. For example, results for lowground cattle and sheep farms are based on average values from 16 farm businesses.

13. The baseline indicators for farm business financial performance are shown below in Table 1, together with the profitability of average farm businesses as captured by Farm Business Income (less diversification income).

Table 1 – Baseline Farm business income (FBI) for the average farm in the FAS sample by farm type

	Dairy	LFA Cattle	LFA Cattle & Sheep	Lowground Cattle & Sheep
Total Output	£344,918	£124,130	£140,280	£123,788
Total Variable Costs	£149,727	£43,724	£46,876	£47,420
Total Fixed Costs	£118,164	£55,761	£68,494	£53,728
Farm Business Income	£78,420	£27,105	£26,911	£23,338
<i>Of which is Diversification income</i>	<i>£1,393</i>	<i>£2,459</i>	<i>£2,001</i>	<i>£698</i>

14. Table 1 shows significant variation in farm business income amongst the four farm types, reflecting their financial and physical performance - both of which can be affected by the disease status of cattle herds and would therefore change with the eradication of BVD. A detailed breakdown of the figures in Table 1 is presented in Annex A, to show the makeup of output, variable and fixed costs. Information about typical physical performance of cattle enterprises that are assumed to be associated with the farm-types identified for analysis for this paper are shown below in Table 2.

Table 2 – Assumptions of physical performance and descriptive information by farm type

	Dairy	LFA Cattle	LFA Cattle & Sheep	Lowground Cattle & Sheep
Assumed enterprise	Dairy- 8,000 litres/cow/yr	Upland Suckler	Hill Suckler	Lowground Suckler
Fertility Rate	98%	92%	90%	92%
Mortality Rate (adults)	2%	1%	1%	1%
Mortality Rate (calves)	8%	4.5%	4.5%	4.5%
No. of Suckler Cows (or dairy cows for dairy farms)	131	85	63	66
Average Farm size (ha)	125	192	578	135
BVD prevalence (adults)	1%			
BVD prevalence (calves)	2.5%			

15. To assess the impact of eradicating BVD on farm profitability this analysis makes further assumptions about the cost to farm businesses that eradicating BVD in Scotland would entail (Table 3) and impacts on farm performance to determine the benefits to the farm business (see Table 4). Based on these assumptions estimates of the costs of eradicating BVD for the average business in the first year of the eradication programme are derived to illustrate the immediate costs. The longer-term impacts of eradicating BVD are represented by the benefits to the farm business which are fully realised at the beginning of the fifth year, increasing from zero at the start of the eradication programme (Table 6).

Table 3- Assumptions on the costs³ of BVD eradication

Assumption	Description (beef cattle)	Description (dairy cattle)
Vet testing	<p>Vet testing has 4 stages (4 individual vet visits per herd)</p> <ul style="list-style-type: none"> • 20 antibody screening test (20 cows from all herds) – costed at £79.60⁴ • Individual virus testing, level of costs determined by number of animals in each year (all adults in herd)⁵ • Confirmation of adults to be destroyed (estimated based on size of herd and assumed BVD prevalence in adults)⁶ • Confirmation of calves to be destroyed (estimated based on size of herd and assumed BVD prevalence in calves)⁷ <p>Dairy veterinary testing is the same as for beef cattle herds, testing of milk in bulk tanks does not require vet call out</p>	
Lab testing costs	<p>The cost of lab tests on the blood and milk samples is assumed to be £3.50 per antibody test and £3 per virus test.</p> <p>For all blood/milk/tissue samples, the cost of courier/postage to a lab is £3 per sample. This is based on an assumption of 5 samples per package and a cost of £15 per package that will go to the lab.</p>	
Tagging costs for calves	<p>The extra cost of tissue-sampling ear tags is £1 per tag. This is applied to all calves in a herd.</p>	
Disposal costs	<p>Disposal costs are based on estimates from the national fallen stock company</p> <ul style="list-style-type: none"> • £90 per adult beef cattle • £25 per beef calf <p>Government compensation payments assumed - £100 per animal</p> <p>NB: These costs are likely to be an overestimate, as some animals would be healthy enough to go to slaughter, so avoiding the disposal costs.</p>	
Adult replacement costs	<p>Replacement costs have come from SAC Farm Management Handbook 2009/10 (Edition 30) .</p> <ul style="list-style-type: none"> • £700 per head (hill suckler enterprises) • £800 per head (Upland/Lowground enterprises) 	<p>Replacement costs have come from SAC Farm Management Handbook 2009/10 (Edition 30).</p> <ul style="list-style-type: none"> • £1,058 per head
Calf replacement costs	<p>It is assumed that any destroyed calves are not replaced. The loss of output that this entails is likely to be negligible as infected calves are unlikely to provide any value to the farmer at slaughter.</p>	

³ It is important to note that the assumptions for costs detailed in table 3 all relate to costs that are incurred by farmers.

⁴ See Annex E – Ready reckoner for Brucellosis blood sampling veterinary costs. As brucellosis sampling is the same as the sampling required for this eradication process, the costs are equally applicable here. Farms with less than 20 animals will face lower costs for this test than illustrated.

⁵ See above footnote 2 – Number of individual tests will depend on herd size in herds where BVD is found

⁶ See above footnote 2 – Number of confirmation tests will depend on number of positive individual tests (above)

⁷ See above footnote 2 – Number of confirmation tests will depend on number of positive ear tag tests

Table 4- Assumptions on the benefits (efficacy) of BVD eradication⁸

Assumption	Description
Mortality benefits	<ul style="list-style-type: none"> Eradication reduces cattle mortality by 50%
Fertility benefits	<ul style="list-style-type: none"> Eradication increases calving rates by 1%
Productivity benefits	<ul style="list-style-type: none"> Eradication increases output by 1% due to improved growth rates.

16. The assessment of costs and benefits at farm-level uses a static framework in that it only focuses on impacts on the business in Year 1 (beginning of eradication programme) and Year 5 (end of eradication programme), and it does not take into account the indirect effects on industry that may come about as businesses change their production decisions with changes in economic performance. Particularly, increased productivity would generally be anticipated to provide an incentive for farmers to increase production, which would generate “second order” effects in the form of increased production. These effects will not be captured in this analysis, but are discussed later.

V. RESULTS

Farm-level impacts in Year 1

17. Table 5 shows estimates of increased costs to Scottish farm businesses as a result of the implementation of the BVD eradication process (based on the assumptions included in Tables 2 and Table 3). It provides a breakdown of the increases in variable costs for the first year of the eradication programme, and shows the percentage impacts on both total farm variable costs and on Farm Business Income (FBI). A full breakdown of Table 5 is available in Annex B.

Table 5 – Farm-Level impacts of BVD eradication (Year 1 of eradication process)

	Dairy	LFA Specialist Beef	LFA Cattle & Sheep	Lowground Cattle & Sheep
Total Output	£344,918	£124,130	£140,280	£123,788
Total Variable Cost	£153,335	£45,915	£48,505	£49,190
New Farm Business Income	£74,812	£24,913	£25,282	£21,569
<i>Of which is Diversification income</i>	<i>£1,393</i>	<i>£2,459</i>	<i>£2,001</i>	<i>£698</i>
<i>Increased Variable costs from BVD eradication (in Year 1)</i>				
Vet testing costs	£617	£459	£384	£394
Tagging costs	£129	£78	£57	£61
Adult Disposal costs	-£13	-£9	-£6	-£7
Adult replacement costs	£1,388	£682	£441	£530
Calf Disposal costs	-£241	-£147	-£106	-£114
Lab testing and Lab Courier Costs	£1,728	£1,128	£860	£906
Total increase in Variable Costs	£3,608	£2,192	£1,629	£1,769

⁸ Absence of reliable data on the effects of BVD have led to the use of these assumptions on the productive effects of BVD eradication. Actual productivity gains are likely to vary between businesses, and may be larger or smaller than what is detailed in table 4.

% impact on farm variable costs	2.4%	5.0%	3.5%	3.7%
% impact on FBI	-4.6%	-8.1%	-6.1%	-7.6%

18. The cost increases in Table 5 arise from farm businesses paying for the vet charges, the lab testing process (including the cost of getting samples to labs) the extra costs of tagging calves, and the disposal and replacement of culled animals. The largest proportion of costs arise from lab testing and replacement of adult cattle which are culled. 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 in the average herd falls, and at the same time benefits would be increasing gradually. It is also worth noting that the negative values for both adult disposal costs and calf disposal costs represent gains to farmers because government payments to businesses are larger than the disposal costs associated with culled animals.

19. Table 5 shows that the costs of BVD eradication will vary by farm type. Dairy businesses face the largest absolute increase in variable costs (at around £3,600), largely as a result of large average herd sizes, and relatively high replacement costs for adult dairy cattle. However, as these additional costs represent a relatively small proportion of total variable costs and FBI in the baseline, the overall financial impact is smallest for dairy farms. The total variable costs increase by only 2.4% and FBI decreases by 4.6%, relative to the baseline.

20. The results suggest that LFA specialist beef farms will face the largest negative impact on their FBI and variable costs in Year 1, with BVD eradication costs representing a 5% increase in total variable costs (an increase of around £2,200) – mostly due to replacement of destroyed animals and lab testing costs. The increase in costs in Year 1 could result in a 8.1% decline in the average farm business income for farms of this type. The significant impacts on FBI and variable costs are due to a combination the size of LFA specialist beef cattle herds and their relatively low FBI and variable costs in the baseline.

21. Table 5 shows that LFA cattle and sheep farms are expected to see the smallest absolute increase in total variable costs from the BVD eradication programme (of around £1,630). The majority of these costs would arise from the replacement of destroyed animals and lab testing, although the relatively small herds for LFA cattle and sheep farms means that the costs are kept low compared to other farm types. Average total variable costs could increase by 3.5%, causing FBI to decline by 6.1%. The impact on FBI is small when compared to the other two farm types (LFA Beef and Lowground Cattle and Sheep) as the LFA cattle and sheep farms are relatively less reliant on the value of cattle output.

22. The lowground cattle and sheep farm businesses are likely to be more affected by the cost of eradication when compared to LFA cattle and sheep businesses, but less affected than LFA cattle farms. The average increase in costs in Year 1 of the eradication scheme is around £1,770, which is equivalent to a 3.7% increase in costs relative to the baseline. Again, replacements for destroyed adult animals and lab testing costs account for the greater part of these costs. These costs would cause FBI to decline by 7.6%.

The small average herd size relative to the other farm types partly explains why costs are low .

Farm-level Impacts in Year 5

23. The impacts of the eradication programme in Year 5, when it is assumed BVD can be completely eradicated from cattle herds, is shown in Table 6. Since at this stage BVD will have been eradicated from herds, there are no further costs incurred by farm businesses. Instead the businesses will be realising the full benefits of eradicating the disease. These total benefits derive from the increases in output that the assumptions in table 4 will have on farm business income, which are as follows:

- The impact of the productivity increase is likely to be an increase in the average output per cow (i.e. increased milk yields, and larger, better quality or faster growing beef cattle).
- The impacts of higher fertility rates is likely to be that the herd will have more animals in it in future, as more calves are born (thus increasing herd output)
- The impact of the lower mortality rates is likely to be that animals live longer (in the case of dairy cattle), or that more animals survive to be slaughtered (in the case of beef cattle).

A full breakdown of the results in Table 6 are presented in Annex C

Table 6 – Farm-Level impacts of BVD eradication (year 5 of eradication process)

	Dairy	LFA Cattle	LFA Cattle & Sheep	Lowground Cattle & Sheep
Total Output	£360,736	£126,526	£142,027	£126,166
Total Variable Cost	£149,727	£43,724	£46,876	£47,420
New Farm business income	£94,238	£29,501	£28,658	£25,716
<i>Of which is Diversification income</i>	£1,393	£2,459	£2,001	£698
<i>Benefits from BVD eradication</i>				
Productivity Benefit <i>(increased output value)</i>	£2,349	£536	£395	£532
Mortality Benefit <i>(increased output value)</i>	£11,119	£1,325	£956	£1,314
Fertility Benefit <i>(increased output value)</i>	£2,349	£536	£395	£532
Total benefits from BVD eradication	£15,818	£2,397	£1,746	£2,378
% impact on total farm output	6.7%	4.5%	4.4%	4.5%
% impact on FBI	20.2%	8.8%	6.5%	10.2%

24. Table 6 shows that eradicating BVD will have a positive impact on farm business relative to the baseline (shown in Table 1), and these impacts will vary by farm type. Dairy businesses are likely to see the largest total benefits from BVD eradication, of around £15,800 for the average farm business, which is equivalent to around a 20% increase in FBI.

25. For the average dairy business the majority of the benefit (around £11,100) is derived from the increased output due to decreased mortality rates. This is relatively large partly because the analysis has assumed mortality rates for both dairy cows and calves that are higher when compared to those assumed for beef cattle, in line with industry norms. The relatively high value of increased output for dairy farm types is also due to dairy businesses being on average large and having relatively high output in the baseline.

26. The positive effects of BVD eradication are broadly similar for LFA specialist beef, LFA cattle & sheep and lowground cattle & sheep farm types. These three farm-types could see total benefits from BVD eradication of around £2,000 each. This increase in output could result in FBI increasing by between 6.5% and 10.2% for these farm types. About half of the total benefits would derive from improved mortality. It is important to note that the improvement in productivity and hence increase in output and income will not be one-off improvement in the financial performance of the farm businesses, rather these would be permanent gains as long as cattle herds remain BVD free.

VI. DISCUSSION

27. While results presented in this paper show the impacts on FBI of eradicating BVD, it is important to note that they are based on assumptions about the prevalence of BVD in cattle herds and the efficacy of the BVD eradication programme. In reality these will vary from one farm business to the other, which implies the impacts of the eradication programme will also be variable – even among businesses of the same type or size. For example, businesses that are currently BVD free may incur only very small increases in costs and may not observe any increases in income due to the eradication programme. On the other hand, businesses that have high incidences of BVD in their herds will most likely incur high level of costs and will also derive the largest benefits due to the eradication programme.

28. It is also important to consider how farm businesses may react to the eradication of BVD. Broadly, economic theory would suggest that increased productivity in production systems will provide businesses an incentive to further increase supply as they change production choices. In cattle production systems, this may mean an increase in herd sizes in the long run, especially relative to the baseline with low levels of herd productivity due to, for instance, BVD prevalence. In reality, however, such additional impacts and their sizes will depend on many factors, including farmer attitude, the sizes of productivity increases relative to baseline, farm size, etc.

29. With regards to carbon emissions savings, it is the response of herd sizes to the eradication of BVD that will determine whether or not BVD eradication would lead to an increase or decrease in greenhouse gas emissions associated with Scottish cattle production systems. However, from a climate change perspective, it is most certain that the eradication of BVD will improve the greenhouse gas intensity of Scottish beef and milk output.

Annex A – Breakdown of Farm business income by Farm type – Baseline (from table 1)

	Dairy	LFA Cattle	LFA Cattle & Sheep	Lowground Cattle & Sheep
Average output £ per farm				
Total crop output	£8,642	£3,774	£7,210	£7,925
Livestock: Cattle	£56,265	£53,597	£39,537	£53,184
Sheep	£2,516	£12,288	£31,132	£15,464
Milk	£234,939	£0	£294	£8,023
Miscellaneous	£6,248	£5,541	£4,957	£2,914
Subsidy and Payments	£36,096	£48,937	£56,900	£36,306
Total Output	£344,918	£124,130	£140,280	£123,788
Average inputs - £ per farm				
Feed	£99,433	£21,298	£22,845	£24,416
Other livestock expenses	£25,815	£10,165	£11,929	£10,573
Seeds	£1,770	£1,161	£1,590	£1,012
Fertilisers	£19,071	£9,216	£8,632	£9,557
Other crop expenses	£3,638	£1,883	£1,881	£1,863
Labour	£19,260	£5,346	£7,913	£5,149
Machinery (excl. depreciation)	£34,782	£15,006	£16,864	£14,992
Machinery depreciation	£18,239	£10,951	£13,648	£9,882
Land and building costs	£25,542	£12,651	£16,786	£13,013
Miscellaneous	£20,340	£11,807	£13,283	£10,691
Total average inputs	£267,891	£99,484	£115,370	£101,148
Diversification Income	£1,393	£2,459	£2,001	£698
FARM BUSINESS INCOME	£78,420	£27,105	£26,911	£23,338

Annex B – Breakdown of Farm business income by Farm type – With costs of eradication (from table 5)

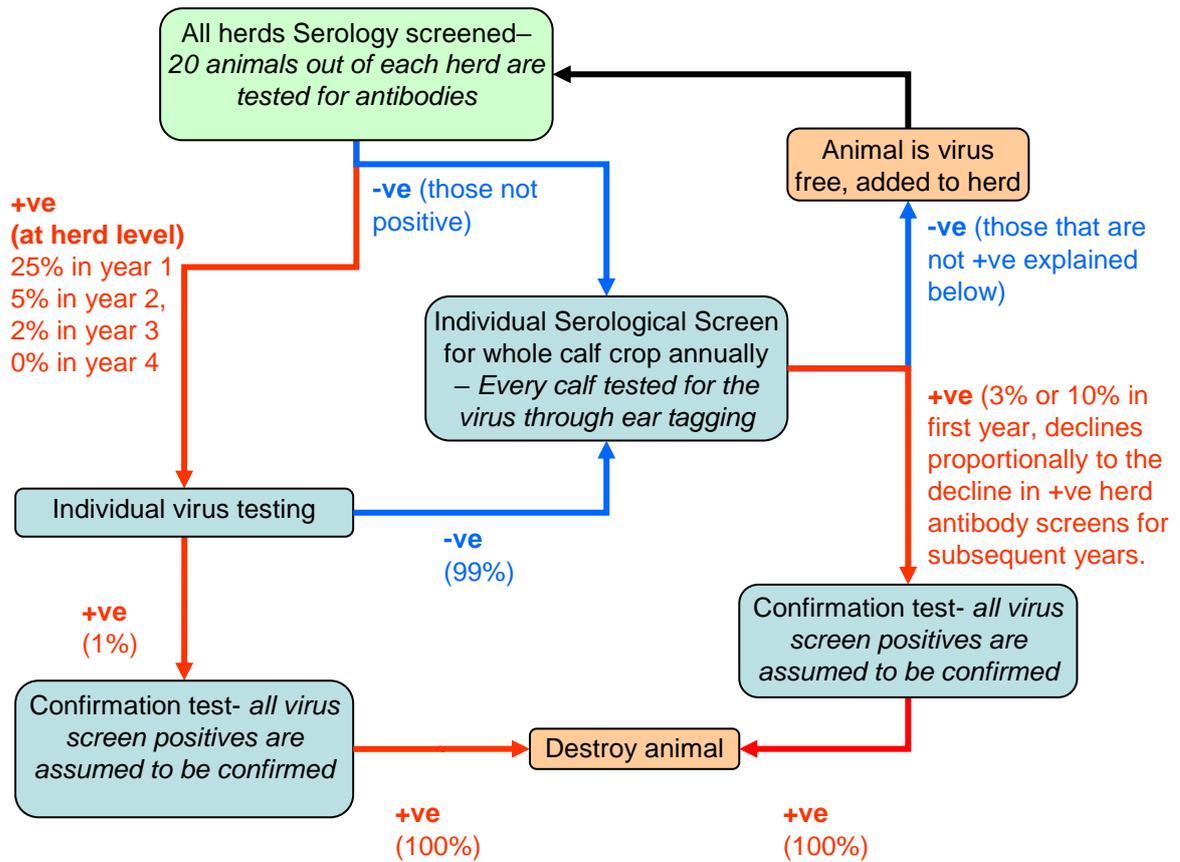
	Dairy	LFA Cattle	LFA Cattle & Sheep	Lowground Cattle & Sheep
Average output £ per farm				
Total crop output	£8,642	£3,774	£7,210	£7,925
Livestock: Cattle	£56,265	£53,597	£39,537	£53,184
Sheep	£2,516	£12,288	£31,132	£15,464
Milk	£234,939	£0	£294	£8,023
Miscellaneous	£6,248	£5,541	£4,957	£2,914
Subsidy and Payments	£36,096	£48,937	£56,900	£36,306
Total Output	£344,918	£124,130	£140,280	£123,788
Average inputs - £ per farm				
Feed	£99,433	£21,298	£22,845	£24,416
Other livestock expenses	£29,423	£12,357	£13,558	£12,342
Seeds	£1,770	£1,161	£1,590	£1,012
Fertilisers	£19,071	£9,216	£8,632	£9,557
Other crop expenses	£3,638	£1,883	£1,881	£1,863
Labour	£19,260	£5,346	£7,913	£5,149
Machinery (excl. depreciation)	£34,782	£15,006	£16,864	£14,992
Machinery depreciation	£18,239	£10,951	£13,648	£9,882
Land and building costs	£25,542	£12,651	£16,786	£13,013
Miscellaneous	£20,340	£11,807	£13,283	£10,691
Total average inputs	£271,499	£101,676	£116,999	£102,917
Diversification Income	£1,393	£2,459	£2,001	£698
FARM BUSINESS INCOME	£74,812	£24,913	£25,282	£21,569

Annex C – Table ii – Breakdown of Farm business income by Farm type – With benefits of eradication (from table 6)

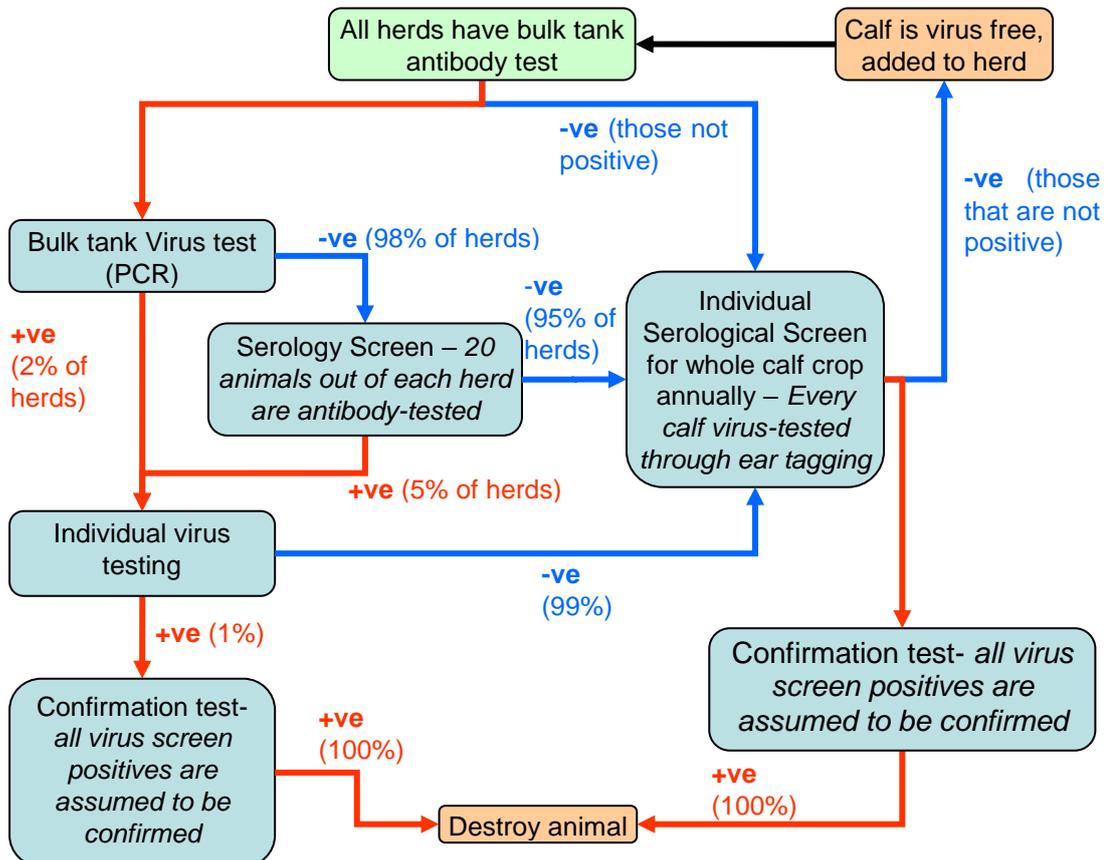
	Dairy	LFA Cattle	LFA Cattle & Sheep	Lowground Cattle & Sheep
Average output £ per farm				
Total crop output	£8,642	£3,774	£7,210	£7,925
Livestock: Cattle	£56,265	£55,994	£41,283	£55,562
Sheep	£2,516	£12,288	£31,132	£15,464
Milk	£250,757	£0	£294	£8,023
Miscellaneous	£6,248	£5,541	£4,957	£2,914
Subsidy and Payments	£36,096	£48,937	£56,900	£36,306
Total Output	£360,736	£126,526	£142,027	£126,166
Average inputs - £ per farm				
Feed	£99,433	£21,298	£22,845	£24,416
Other livestock expenses	£25,815	£10,165	£11,929	£10,573
Seeds	£1,770	£1,161	£1,590	£1,012
Fertilisers	£19,071	£9,216	£8,632	£9,557
Other crop expenses	£3,638	£1,883	£1,881	£1,863
Labour	£19,260	£5,346	£7,913	£5,149
Machinery (excl. depreciation)	£34,782	£15,006	£16,864	£14,992
Machinery depreciation	£18,239	£10,951	£13,648	£9,882
Land and building costs	£25,542	£12,651	£16,786	£13,013
Miscellaneous	£20,340	£11,807	£13,283	£10,691
Total average inputs	£267,891	£99,484	£115,370	£101,148
Diversification Income	£1,393	£2,459	£2,001	£698
FARM BUSINESS INCOME	£94,238	£29,501	£28,658	£25,716

Annex D – BVD ERADICATION PROCESS DIAGRAMS

BVD Eradication in beef herds



BVD Eradication in dairy herds



Annex E – Veterinary costs for Brucellosis blood sampling

BBS (blood sampling) or EBL	
No. of Animals	Cost per visit
1	£38.40
2	£38.40
3	£38.40
4	£38.40
5	£38.40
6	£38.40
7	£38.40
8	£38.40
9	£41.81
10	£45.29
11	£48.66
12	£52.12
13	£55.59
14	£58.99
15	£62.43
16	£65.87
17	£69.26
18	£72.68
19	£76.12
20	£79.60
21	£83.04
22	£86.48
23	£89.87
24	£93.28
25	£96.83
26	£100.22
27	£103.67
28	£107.07
29	£110.53
30	£113.91
31	£117.34
32	£120.83
33	£124.14
34	£127.67
35	£131.05
36	£134.49
37	£137.92
38	£141.41
39	£144.78
40	£148.22
41	£151.73
42	£155.11
43	£158.55
44	£163.17
45	£165.36
46	£168.91
47	£172.27
48	£175.71
49	£179.14
50	£182.56
51	£186.02
52	£189.43
53	£192.87
54	£196.29

55	£199.80
56	£203.15
57	£206.56
58	£210.05
59	£213.48
60	£216.85
61	£220.27
62	£223.76
63	£227.20
64	£230.61
65	£234.01
66	£237.50
67	£240.85
68	£244.36
69	£247.72
70	£251.16
71	£254.71
72	£258.03
73	£261.51
74	£264.97
75	£268.39
76	£271.79
77	£275.25
78	£278.67
79	£282.05
80	£285.59
81	£288.92
82	£292.36
83	£295.81
84	£299.26
85	£302.68
86	£306.12
87	£309.50
88	£313.01
89	£316.42
90	£319.88
91	£323.19
92	£326.66
93	£330.15
94	£333.51
95	£336.97
96	£340.45
97	£343.89
98	£347.37
99	£350.76
100	£354.19
110	£388.49
120	£422.82
130	£457.16
140	£491.40
150	£525.83
160	£560.14
170	£594.39
180	£628.73
190	£663.06
200	£697.39