|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Title:  Revision of Bulk Milk Tank Sampling/Testing Arrangements for *Brucella abortus*  IA No: DEFRA 1318  Lead department or agency:  Defra  Other departments or agencies:  Welsh Government  Animal Health and Veterinary Laboratories Agency (AHVLA) | | | |  | | --- | | Impact Assessment (IA) | | Date: May 2014 | | Stage: Consultation | | Source of intervention: | | Type of measure: | | Contact for enquiries:  Gemma Daniels  Tel: 020 7238 4443  gemma.daniels@defra.gsi.gov.uk | |  | |  | |  | |  | |  | |  | | | |
| Summary: Intervention and Options | | | **RPC Opinion:** | | |
|  | | | | | |
| Cost of Preferred (or more likely) Option | | | | |
| Total Net Present Value | Business Net Present Value | Net cost to business per year (EANCB on 2009 prices) | In scope of One-In, Two-Out? | Measure qualifies as |
| £4.424m | £0.740m | -£0.086m | Yes | Out |
| What is the problem under consideration? Why is government intervention necessary?  *Brucella abortus* is a notifiable zoonotic disease that causes abortion or premature calving in cattle and the ‘flu’ like disease ‘undulant fever’ in humans. Great Britain has been officially brucellosis free since the 1980’s. Disease freedom is a public good and the spread of infectious disease is a negative externality that can impose costs on unwitting third parties. To check that the disease has not been re-introduced there is a national surveillance programme which seeks to discover if there is any disease present in the national herd. A review of this surveillance programme identified some costs to industry and government associated with the current regime that could be reduced without unduly jeopardising disease free status. | | | | |

|  |
| --- |
| What are the policy objectives and the intended effects?  This de-regulatory proposal will result in a more cost-effective and proportionate surveillance programme that remains robust enough to detect and control any re-emergence of the disease. This will result in cost reductions and other benefits to affected businesses and government. Alongside bulk milk tank testing, surveillance for brucellosis will continue to include post import inspections and investigations of reported abortions in target categories of cattle. |

|  |
| --- |
| What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)  Option 1: Reduce the frequency of sampling bulk milk tanks from monthly to quarterly for the whole industry (milk purchasers and producer retailers) and require producer retailers to submit three bulk tank milk samples a year by post. AHVLA continue to collect a fourth sample from producer retailers for audit purposes, in light of higher risk to public health from raw milk/milk products.  Option 2: Cease bulk milk tank testing for Brucella entirely.  Option 1 is the preferred option. Reducing the frequency of bulk milk tank testing results in significant cost savings to government and industry, whilst maintaining an appropriate and proportionate surveillance programme. Requiring producer retailers to submit bulk tank milk samples represents a more cost-effective option than AHVLA collecting the samples. It also levels the playing field with milk purchasers who are already required to submit samples and meet the associated costs of this. |

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| --- | --- | --- | --- | --- | --- | --- |
| Will the policy be reviewed? It  be reviewed. If applicable, set review date: 07/2024 | | | | | | |
| Does implementation go beyond minimum EU requirements? | | | Yes | | | |
| Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base. | **Micro** | **< 20** | **Small** | **Medium** | | **Large** |
| What is the CO2 equivalent change in greenhouse gas emissions?  (Million tonnes CO2 equivalent) | | | Traded:  n/a | | Non-traded:  n/a | |

I have read the 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.

|  |  |  |  |
| --- | --- | --- | --- |
| Signed by the responsible : |  | Date: |  |

# Summary: Analysis & Evidence Policy Option 1

Description: Reduce the frequency of bulk milk tank testing to quarterly and require producer retailers to supply three bulk tank milk samples a year themselves.

FULL ECONOMIC ASSESSMENT

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Price Base Year 2012 | PV Base Year 2013 | Time Period Years 10 | Net Benefit (Present Value (PV)) (£m) | | |
| Low: **4.366** | High: 4.950 | Best Estimate: 4.471 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COSTS (£m) | Total Transition   (Constant Price) Years | | Average Annual  (excl. Transition) (Constant Price) | Total Cost  (Present Value) | |
| Low | - |  | - | - | |
| High | - | - | - | |
| Best Estimate | 0 | 0.006 | 0.047 | |
| Description and scale of key monetised costs by ‘main affected groups’  Producer retailers would incur a small new cost (approx. £1.6k total; £16.50 per business per annum) to submit three bulk milk tank samples a year. The fourth sample continues to be collected by AHVLA for audit purposes. Government would incur costs (approx. £4.1k per annum) to post sample pots and issue reminders to the 100 producer retailers (approx.) when their samples become due. | | | | | |
| Other key non-monetised costs by ‘main affected groups’  - | | | | | |
| BENEFITS (£m) | Total Transition   (Constant Price) Years | | Average Annual  (excl. Transition) (Constant Price) | Total Benefit  (Present Value) | |
| Low | - |  | 0.509 | 4.366 | |
| High | - | 0.578 | 4.950 | |
| Best Estimate | 0 | 0.522 | 4.471 | |
| Description and scale of key monetised benefits by ‘main affected groups’  Cost savings to government in the region of £445k per annum through a reduced number of bulk milk tank tests and AHVLA no longer having to collect as many samples from producer retailers. Industry cost savings in the region of £88k per annum, principally as a result of quarterly instead of monthly testing. | | | | | |
| Other key non-monetised benefits by ‘main affected groups’  The removal of a small biosecurity risk associated with farm visits to collect bulk milk tank samples. More flexibility for producer retailers over when they empty their bulk milk tanks on three occasions, which in turn should be of some benefit to business operations. | | | | | |
| Key assumptions/sensitivities/risks Discount rate (%) | | | | | 3.5 |
| All producer retailers will submit bulk milk tank samples direct to AHVLA (and not via a private laboratory). There are currently approximately 100 producer retailers in England and Wales. The risk of incursion of disease is low and we would detect it early. Trading patterns in cattle imported to GB remain largely the same. Key sensitivities include the number of milk vats/tanks eligible for testing and the cost of sample pots. The latter is dependent on savings that may be gained through high volume (bulk) purchasing. | | | | | |

BUSINESS ASSESSMENT (Option 1)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Direct impact on business (Equivalent Annual) £m: | | | In scope of OITO? | Measure qualifies as |
| Costs: 0.002 | Benefits: 0.087 | Net: 0.086 | Yes | Out |

# Summary: Analysis & Evidence Policy Option 2

Description: **Cease bulk milk tank testing for Brucellosis.**

FULL ECONOMIC ASSESSMENT

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Price Base Year 2012 | PV Base Year 2013 | Time Period Years 10 | Net Benefit (Present Value (PV)) (£m) | | |
| Low: 6.269 | High: 7.131 | Best Estimate: 6.424 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| COSTS (£m) | Total Transition   (Constant Price) Years | | Average Annual  (excl. Transition) (Constant Price) | Total Cost  (Present Value) | |
| Low | - |  | - | - | |
| High | - | - | - | |
| Best Estimate | 0 | 0.001 | 0.008 | |
| Description and scale of key monetised costs by ‘main affected groups’  The costs remaining are associated with the continuation of bulk milk tank testing for Enzootic Bovine Leukosis (EBL), which is a viral disease of cattle causing tumours in affected animals. It does not affect humans. A fifth of the dairy herd are selected each year for EBL testing in England and Wales; two milk samples from these selected cattle herds are tested a year, at 6 monthly intervals. | | | | | |
| Other key non-monetised costs by ‘main affected groups’ Loss of expertise and laboratory capacity to deal with an outbreak. Costs for eradication of disease and setting up a larger scale testing regime again in the event of disease incursion. Treatment of human infection. Production losses in the national herd. Loss of income through loss of trade. Increased spending on abortion awareness campaigns/enforcement activity, leading to increased costs for government (although may not exceed the savings to government from implementing this option) and dairy farmers, as involves farm visits and testing. | | | | | |
| BENEFITS (£m) | Total Transition   (Constant Price) Years | | Average Annual  (excl. Transition) (Constant Price) | Total Benefit  (Present Value) | |
| Low | - |  | 0.732 | 6.276 | |
| High | - | 0.833 | 7.138 | |
| Best Estimate | 0 | 0.750 | 6.431 | |
| Description and scale of key monetised benefits by ‘main affected groups’  Significant cost savings to industry and government by no longer having to submit bulk milk tank samples and test them on a monthly basis for *Brucella abortus*. | | | | | |
| Other key non-monetised benefits by ‘main affected groups’  - | | | | | |
| Key assumptions/sensitivities/risks Discount rate (%) | | | | | 3.5 |
| In addition to those detailed under Option 1, the assumption is that bulk milk tank testing for Enzootic Bovine Leukosis (EBL) would continue - this is currently done using the same milk sample collected for *Brucella abortus* testing. | | | | | |

BUSINESS ASSESSMENT (Option 2)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Direct impact on business (Equivalent Annual) £m: | | | In scope of OITO? | Measure qualifies as |
| Costs: 0 | Benefits: 0.125 | Net: 0.125 | Yes | Out |

# Evidence Base (for summary sheets)

**Problem under consideration**

1. There are disproportionate costs to industry and government associated with monthly bulk milk tank sampling/testing of the national dairy herd for brucellosis and the Animal Health and Veterinary Laboratories Agency (AHVLA) collecting bulk milk tank samples from producer retailers[[1]](#footnote-1), when compared to the current risks of disease incursion.

**Rationale for intervention**

1. Bovine brucellosis is a notifiable zoonotic[[2]](#footnote-2) disease which causes abortion or premature calving and can lead to infertility in cattle and a ‘flu’ like disease known as ‘undulant fever’ in humans. The spread of infectious disease is a negative externality in that it can impose costs and physical suffering on unwitting third parties. For instance, the consumption of unpasteurised milk/dairy produce containing the Brucella bacteria or occupational exposure (farmers, vets etc.) can result in human illness, which can become chronic and in a small number of cases can result in death.
2. Great Britain has been officially brucellosis free since the 1980’s. Disease freedom is a public good (non-excludable and non-rival[[3]](#footnote-3)), which requires government intervention to maintain. To guard against the establishment of this disease after re-introduction there is a national surveillance programme, which seeks to detect disease early should it be introduced in the national beef and dairy herds. The main surveillance measures include a reporting requirement for, and investigation of, certain abortions in cattle, post import inspections and testing of live cattle, and bulk milk tank testing.
3. A review of the brucellosis surveillance programme in Great Britain concluded that there are disproportionate costs to industry and government associated with monthly bulk milk tank testing of the dairy herd. Quarterly testing would still enable effective and sufficiently early controls to be put in place to prevent wide scale spread of infection in the event of an incursion of disease. In the background, a substantial decline in brucellosis in Northern Ireland (NI) and the granting of “Officially Brucellosis Free” (OBF) status to the Republic of Ireland (RoI) in 2009 significantly reduces the risk of importing disease, as NI and RoI are the origin of the vast majority of cattle imported into GB. As such, a reduction in frequency of testing will improve the cost effectiveness of the surveillance programme and is considered to be a more proportionate measure for disease control.
4. The same review flagged the disproportionately high cost and resource associated with the AHVLA visiting farms to collect bulk milk tank samples from producer retailers. This also represents an inconsistency with the arrangements for the rest of industry, where sampling is undertaken by the primary milk purchasers and the costs associated with this are met by industry. There are potentially some benefits to producer retailers themselves in submitting their own samples.
5. This impact assessment looks at the options for implementing both recommendations, including the need to amend the related legislation in England and Wales[[4]](#footnote-4).

**Background**

1. EU Directive 64/432/EEC[[5]](#footnote-5) requires the operation of a monitoring and testing programme to achieve and maintain OBF status. The current national surveillance and control programme for bovine brucellosis originated in the 1980s – the main measures (from 2007) being required reporting of, and investigation of high risk reported abortions in cattle, post import inspections, and bulk milk tank testing. Whilst the latter measure is not required by the EU legislation to maintain OBF status, it has been maintained for the benefit of the cattle industry and to make allowance for the estimation that not all abortions in cattle that should be investigated, are reported and investigated. It has been assessed as a cost-effective measure that provides comprehensive coverage of the dairy herd for purposes of surveillance for disease. It will therefore mean that disease incursion will be detected in sufficient time to prevent wide scale spread, which would have significant cost implications for industry and government. In the absence of bulk milk tank testing there would need to be an increase in follow up investigation of abortion reports. This would likely be more onerous and costly to dairy farmers and government, as it would involve farm visits and testing.
2. The Brucellosis (England) Order 2000 (and equivalent legislation in Scotland and Wales) implements the provisions of Council Directive 64/432/EEC and details the requirements for the national surveillance programme.
3. Since 1991, brucellosis has been identified in cattle in GB on three occasions. *Brucella abortus* was confirmed in 1993 in a dairy herd in Anglesey; disease had been imported in cattle from France. The infection was detected by a positive bulk milk tank sample and subsequent abortion enquiry. In 2003, it was confirmed in four cattle herds in Scotland, each of which had been infected by heifers imported from the Republic of Ireland. The cost to government to control even this limited outbreak was estimated at £500,000. The last reported infection occurred in March 2004 in a beef breeding herd in Cornwall following an abortion investigation, although the origin of infection was never identified.
4. The UK Zoonoses Report 2012, a joint publication by the Health Protection Agency and Defra, reported that there were two cases of human brucellosis caused by *Brucella abortus* in the UK in 2011. Further information can be found at <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/236983/pb13987-zoonoses-report-2012.pdf.>

Competent Authority

1. UK policy relating to the control of brucellosis is devolved to UK government departments. For England, the policy lead is the Department for Environment Food and Rural Affairs (Defra); for Wales, the Welsh Government (WG); for Scotland, the Scottish Government (SG); and for Northern Ireland, the Department for Agriculture in Northern Ireland (DARDNI). Defra is the competent authority on behalf of the UK for all related EU matters.
2. The Animal Health and Veterinary Laboratories Agency (AHVLA) is an executive agency of Defra, formed on the 1 April 2011. It merged the existing Animal Health Agency (AH) and the Veterinary Laboratories Agency (VLA). AHVLA is responsible for inspections, testing and follow up examinations for reported or suspected cases of disease. Defra and the UK national Governments have surveillance contracts and Service Level Agreements with AHVLA, which includes activities related to testing for brucellosis and the collection of bulk milk tank samples from producer retailers.

Arrangements for bulk milk tank testing

1. Prior to 1 April 2011, Defra had contracts with two private laboratories (National Milk Laboratories (NML) and Eclipse Laboratories[[6]](#footnote-6)) to conduct bulk milk tank testing for brucellosis, covering the whole of GB. When a positive or inconclusive result was detected, Defra had to be notified and the sample sent to VLA for confirmation. After careful consideration of the unit costs, procurement rules, need for continued investment and the desire to optimise utilisation of AHVLA facilities’ and expertise, a decision was taken to bring bulk milk tank testing in house to AHVLA for England and Wales. Scotland decided to continue using NML Scotland for this service, although confirmation testing remains with the Reference Laboratory at AHVLA Weybridge.
2. One of the major benefits of this course of action was that it provided an opportunity to support the government agency laboratories responsible for outbreak sample testing and expert advice, which otherwise would have required additional resource in the form of a direct payment to retain these services. AHVLA already played a part in the existing milk testing regime through preparing and issuing the sampling kits, quality control testing of participating commercial labs and confirming positive and inconclusive tests, and therefore already had significant knowledge of the requirements that could be harnessed. The testing itself continues to be paid for by UK Governments.
3. Following discussion with industry representatives and private laboratories, it was agreed that NML/Eclipse would continue to assist with the submission of bulk milk tank samples, by utilising their existing sample collection arrangements (these labs continue to test milk for quality purposes) from every active depot in England and Wales. The costs associated with this co-ordination (approx. 90p per sample[[7]](#footnote-7) to transfer milk into an appropriate sample pot, label it and transport to AHVLA) would be met by the milk purchasers. The benefits of this approach being to ease the process of submission of samples, which avoids the costs associated with each purchaser making their own sample deliveries direct to AHVLA. Dairy herd owners were also offered the option to submit milk samples directly to AHVLA, if this was their preferred approach, although this would probably be more costly to them.
4. It is recognised that the impact of this decision resulted in a small new cost to industry (i.e. the 90p per sample). Prior to this there were no costs to industry for the submission of these samples, since NML were under contract to conduct the Brucellosis milk testing, meaning there was no need to package and transport milk elsewhere. This Impact Assessment considers the costs and benefits of regulatory changes only. The decision to bring testing in-house to AHVLA was a matter of procurement policy and did not result in regulatory change. As such, the baseline we have set to estimate costs and benefits of a reduction in frequency of testing and for producer retailers to submit their own samples in future assumes that the samples are being sent to AHVLA.
5. The milk sample taken for the brucellosis surveillance programme is also tested for Enzootic Bovine Leukosis[[8]](#footnote-8). A fifth of the dairy herd are selected each year in England and Wales, so that each dairy herd is subject to a test every 5 years. Two milk samples from these selected cattle herds are tested a year, at 6 monthly intervals.

Industry

1. We understand that there are approximately 100 producer retailers in England and Wales (80% in England and 20% in Wales). Most, if not all, are made up of fewer than 10 employees, meaning they are classified as micro businesses.

**Policy objective**

1. The policy objective is a more cost-effective and proportionate surveillance programme for brucellosis that remains robust enough to detect and assist in the control of any re-emergence of the disease, in an acceptable timescale. This programme will still continue to support the maintenance of government agency laboratory expertise as contingency for any animal disease outbreak that may require large scale blood or milk sample testing. Specifically, this will result in reductions in costs to government and affected businesses. It will ensure a more appropriate level of cost and responsibility sharing in line with government policy, and create a more level playing field across industry for the submission of bulk milk tank samples. Bulk milk tank testing provides surveillance of the entire dairy herd and will therefore continue to complement post import inspections and investigations of reported abortions in cattle.
2. This impact assessment considers the impact of proposals to amend brucellosis bulk milk tank sampling arrangements in England and Wales. The Scottish Government has already amended their Order in respect of the reduction in frequency of bulk milk tank testing and to reflect a change in the approach to sampling producer retailers. This will ensure a consistent and enforceable approach to surveillance across Great Britain.

**Options considered**

1. Our **baseline option (do nothing)** is the option against which all others have been appraised. This means the continuation of monthly bulk milk tank testing for brucellosis and the AHVLA collecting monthly bulk milk tank samples from producer retailers. (It should be noted that quarterly bulk milk tank sampling/testing was implemented administratively in April 2011. However, the related legislation still reflects a statutory requirement for monthly sampling/testing. Hence, monthly testing has been established as the baseline, as this IA relates to amending the statutory requirement).
2. **Option 1** results in the Brucellosis Orders being revised to reflect the reduction in frequency of testing (from monthly to quarterly) for the whole industry. Producer retailers are currently subject to AHVLA visits to collect samples from their bulk milk tanks. A new obligation would be introduced, requiring producer retailers to submit three bulk milk tank samples a year for testing. We would also seek to extend the existing provision in legislation that enables a veterinary inspector to take action to obtain a milk tank sample and recover reasonable costs incurred, in the event of non-compliance. A fourth bulk milk tank sample would continue to be collected from producer retailers by AHVLA for audit purposes and in light of the higher risks to public health associated with raw milk/milk products.
3. **Option 2** results in bulk milk tank testing for brucellosis stopping. Again, the Brucellosis Orders would need to be amended to reflect this change. This would save industry and government the costs currently associated with this testing. It would however result in unacceptable risks associated with the undetected reintroduction, spread and re-establishment of the disease in GB and has therefore been rejected.
4. We also considered a non-regulatory approach, namely striking voluntary agreements with industry to supply bulk milk tank samples. This option was discounted at an early stage in the policy development process, because we would lack enforcement capability in the event that samples were not forthcoming. Having appropriate tools for enforcement is considered particularly important where there is a higher risk to public health associated with raw milk/milk products. Inconsistency between the legislation and the policy for bulk milk tank testing could also be cause for confusion.

**Costs**

Option 1

1. The cost to producer retailers of submitting three bulk milk tank samples is estimated to be **£1.6k** per annum(around **£16.50 per business**, per annum). This is based on the assumption that all samples are submitted to AHVLA directly and that a Safebox™[[9]](#footnote-9) is used to transport the sample. It does not include the time to collect the sample itself, which is considered to be minimal and can be done at the farmers’ own convenience at any time up to emptying of the bulk milk tanks[[10]](#footnote-10).
2. There may be opportunities to reduce the costs to producer retailers by them submitting samples through the private laboratories that collect milk for other purposes (e.g. microbiological/quality testing). Some milk purchasers are using private laboratories to submit bulk milk tank samples to AHVLA for brucellosis testing, at a charge of approximately 90p per sample[[11]](#footnote-11). We will be seeking further views on this during consultation.
3. The cost to AHVLA of posting sample pots to producer retailers and issuing a reminder just prior to the sample due date is estimated at **£4.1k** per annum. This is based on an estimate of the cost of consumables (i.e. the sample pots, address labels, envelopes and postage) and AHVLA staff time.

Option 2

1. Costs associated with ceasing bulk milk tank testing for brucellosis includes those incurred to buy in expertise and laboratory capacity to deal with an outbreak, or expertise required for other purposes (e.g. to consider the impacts of a change in brucella status in other countries on national surveillance measures required). Loss of expertise and laboratory capacity cannot be looked at in isolation for brucellosis as both form part of the wider testing capability maintained by AHVLA for surveillance and for dealing with animal disease outbreaks. As such, a decision to cease bulk milk tank testing could have knock on impacts to other work areas. The costs of again having to set up larger scale testing capability in the face of, or as a result of, an outbreak, would be considerable (somewhere in the region of £100k[[12]](#footnote-12) minimum). There would also be a time delay in our ability to take action, in that expertise would need to be developed, during which time disease may spread making it even more costly to control.[[13]](#footnote-13)
2. Ceasing bulk milk tank testing is not considered to be a prudent option as it would increase the risk of a disease incursion spreading widely before being detected. It would be necessary to rely on import controls, the reporting of clinical signs and testing of material from reported abortions for detection. Despite it being a legal requirement, only an estimated 5.3% of all bovine abortions are reported. In 2010, fewer than 8% of all holdings with cattle in England and Wales and approximately 11% of holdings in Scotland reported at least one abortion and the trend in reporting abortions continues downwards[[14]](#footnote-14). This low and declining level of reporting is recognised as a weakness in the surveillance system for brucellosis.
3. Awareness raising campaigns have been implemented to try and address this. As such, if bulk milk tank testing ceased, more money would need to be spent on abortion awareness campaigns and the level of enforcement would need to be increased. This would in turn impose increased costs on government, for instance through an increase in the number of reported abortions being visited and tested. It would also be more onerous and costly to farmers, as this involves farm visits and testing.
4. Clinical signs associated with *Brucella abortus* can often take months to appear. This may increase the risk of humans becoming infected by consuming unpasteurised milk/dairy produce containing the bacteria, or through direct contact with infected material such as the placenta or discharges from infected cattle. This would have an impact on costs of treatment. Human illness can last for months and may become chronic; a small proportion of patients may die. In Great Britain, cases of human brucellosis are now rare and in almost all cases are acquired overseas. Infected milk can be made safe by effective heat treatment (pasteurisation).
5. There are also significant costs associated with the loss of OBF status. These include the loss of trade; the need to eradicate disease for both public and animal health protection; and re-negotiation of health certificates with veterinary authorities in third counties during the period when OBF status is lost. There would also be costs to businesses associated with production losses in the national herd, time to purchase and rear new stock, and loss of genetic merit in a herd in the event that cattle were slaughtered for disease control purposes. Dependent on the scale of the outbreak costs could be significant (as detailed in paragraph 9, dealing with a limited outbreak in four cattle herds cost government approx. £500k in 2003/4). The consequences of a disease outbreak could potentially remain with communities for many months or years.
6. We anticipate the costs for ceasing milk testing for brucellosis would also apply in the consequential ceasing of milk testing for Enzootic Bovine Leukosis (EBL). However, the scale of costs could be greater. This is because the clinical signs of EBL (e.g. tumours) are likely to take longer to detect than those for brucellosis. This increased time for detection of disease could result in more widespread disease in the event of disease incursion.

**Benefits**

Options 1

1. Reducing the testing frequency for the whole industry and transferring responsibility for sampling to producer retailers lessens the overall burden on industry, government and ultimately the taxpayer. It is estimated that cost savings for government are in the region of approximately **£445k** per annum. This saving is generated by reducing the number of tests and visits by AHVLA staff to collect samples from producer retailers. Industry cost savings are estimated at approximately **£88k** per annum. These savings are principally to larger producers, as a result of having to supply bulk milk tank samples less often[[15]](#footnote-15). Producer retailers save on staff time required to arrange and accompany AHVLA visits[[16]](#footnote-16).
2. In turn, this improves the overall cost-effectiveness of the brucellosis surveillance programme whilst remaining balanced against risks. Whilst the reduction in frequency will increase the possible time to detect a disease incursion, it will generally still be within a timeframe to enable controls to be put in place sufficiently promptly to prevent wide scale spread of infection.
3. The Food Standards Agency (FSA) previously confirmed they were content that the reduction in frequency of testing does not constitute a significantly increased risk to human health. This is because there is a risk based surveillance programme for brucellosis in place and the organism is destroyed through pasteurisation of milk. The FSA asked Defra to ensure that producer retailers selling unpasteurised milk or raw milk products directly to the final consumer are prioritised for investigations of any abortions that occur and this prioritisation has already been implemented. This surveillance provides extra reassurance that there is a greater level of scrutiny commensurate to the risk to public health associated with the sale of unpasteurised milk or raw milk products.
4. There are potentially some benefits to producer retailers in having responsibility for submitting bulk milk tank samples. Namely, the removal of small biosecurity risks associated with farm visits to collect samples and slightly more flexibility over when milk is sampled (i.e. not having to wait for an AHVLA visit before the bulk milk tank can be emptied). This will reduce the disruption to the daily routine associated with having to take time out to accompany a sampling visit and ultimately should be of some benefit to business operations. However, some businesses may perceive this as extra red tape and a risk of enforcement action if they fail to comply.

Option 2

1. The benefit of stopping bulk milk tank testing altogether is the significant cost savings, estimated to be in the region of **£750k p.a**. This is equivalent to the baseline costs. However, we have assumed that milk testing for Enzootic Bovine Leukosis continues.

**Summary of Monetised Costs and Benefits**

Table 1: Costs of Option 1 (**additional** to the baseline) by item (constant prices[[17]](#footnote-17), £)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **Total** |
| **Industry** |  |  |  |  |  |  |  |  |  |  |  |
| Direct submission of samples (p-rs) | 1200 | 1601 | 1601 | 1601 | 1601 | 1601 | 1601 | 1601 | 1601 | 1601 | **15605** |
| **Government** |  |  |  |  |  |  |  |  |  |  |  |
| Postage of sample pots | 3050 | 4066 | 4066 | 4066 | 4066 | 4066 | 4066 | 4066 | 4066 | 4066 | **39646** |
| **Total** | 4250 | 5667 | 5667 | 5667 | 5667 | 5667 | 5667 | 5667 | 5667 | 5667 | **55251** |

Table 2: Benefits of Option 1 (**costs saved** compared to baseline) by item (constant prices, £)\*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **Total** |
| **Industry** |  |  |  |  |  |  |  |  |  |  |  |
| Submission of samples (larger producers) | 63806 | 85074 | 85074 | 85074 | 85074 | 85074 | 85074 | 85074 | 85074 | 85074 | **829476** |
| Staff time accompanying AHVLA visits (p-rs) | 3769 | 5026 | 5026 | 5026 | 5026 | 5026 | 5026 | 5026 | 5026 | 5026 | **48999** |
| Industry Total: | 67575 | 90100 | 90100 | 90100 | 90100 | 90100 | 90100 | 90100 | 90100 | 90100 | **878475** |
| **Government** |  |  |  |  |  |  |  |  |  |  |  |
| Variable costs of testing | 285894 | 381192 | 381192 | 381192 | 381192 | 381192 | 381192 | 381192 | 381192 | 381192 | **3716625** |
| AHVLA visits to producer retailers | 47743 | 63657 | 63657 | 63657 | 63657 | 63657 | 63657 | 63657 | 63657 | 63657 | **620658** |
| Gov. Total: | 333637 | 444850 | 444850 | 444850 | 444850 | 444850 | 444850 | 444850 | 444850 | 444850 | **4337283** |
| **Total** | 401212 | 534950 | 534950 | 534950 | 534950 | 534950 | 534950 | 534950 | 534950 | 534950 | **5215758** |

Table 3: Net benefits of Option 1 (constant prices, £)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **Total** |
| **Industry Net** | 66375 | 88500 | 88500 | 88500 | 88500 | 88500 | 88500 | 88500 | 88500 | 88500 | 862870 |
| **Industry NPV (discounted at 3.5%)** | 66375 | 85507 | 82615 | 79822 | 77122 | 74514 | 71994 | 69560 | 67208 | 64935 | 739651 |
| **Government Net** | 330587 | 440783 | 440783 | 440783 | 440783 | 440783 | 440783 | 440783 | 440783 | 440783 | 4297637 |
| **Government NPV (discounted at 3.5%)** | 330587 | 425878 | 411476 | 397561 | 384117 | 371128 | 358578 | 346452 | 334736 | 323416 | 3683929 |
| **Net Value** | 396962 | 529283 | 529283 | 529283 | 529283 | 529283 | 529283 | 529283 | 529283 | 529283 | 5160508 |
| **NPV (discounted at 3.5%)** | 396962 | 511384 | 494091 | 477383 | 461239 | 445642 | 430572 | 416012 | 401944 | 388351 | 4423580 |

Table 4: Costs of Option 2 (**additional** to the baseline) by item (constant prices[[18]](#footnote-18), £)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **Total** |
| **Industry** |  |  |  |  |  |  |  |  |  |  |  |
| Direct submission of samples (p-rs) | 60 | 107 | 107 | 107 | 107 | 107 | 107 | 107 | 107 | 107 | **1020** |
| **Government** |  |  |  |  |  |  |  |  |  |  |  |
| Postage of sample pots | 457 | 813 | 813 | 813 | 813 | 813 | 813 | 813 | 813 | 813 | **7777** |
| **Total** | 517 | 920 | 920 | 920 | 920 | 920 | 920 | 920 | 920 | 920 | **8797** |

Table 5: Benefits of Option 2 (**costs saved** compared to baseline) (constant prices, £)\*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **Total** |
| **Industry** |  |  |  |  |  |  |  |  |  |  |  |
| Submission of samples (larger producers) | 92518 | 123358 | 123358 | 123358 | 123358 | 123358 | 123358 | 123358 | 123358 | 123358 | **1202740** |
| Staff time accompanying AHVLA visits (p-rs) | 4043 | 5391 | 5391 | 5391 | 5391 | 5391 | 5391 | 5391 | 5391 | 5391 | **52563** |
| Industry Total: | 96562 | 128749 | 128749 | 128749 | 128749 | 128749 | 128749 | 128749 | 128749 | 128749 | **1255303** |
| **Government** |  |  |  |  |  |  |  |  |  |  |  |
| Variable costs of testing | 429353 | 572470 | 572470 | 572470 | 572470 | 572470 | 572470 | 572470 | 572470 | 572470 | **5581586** |
| AHVLA visits to producer retailers | 51215 | 68287 | 68287 | 68287 | 68287 | 68287 | 68287 | 68287 | 68287 | 68287 | **665797** |
| Gov. Total: | 480568 | 640757 | 640757 | 640757 | 640757 | 640757 | 640757 | 640757 | 640757 | 640757 | **6247382** |
| **Total** | 577130 | 769506 | 769506 | 769506 | 769506 | 769506 | 769506 | 769506 | 769506 | 769506 | **7502685** |

Table 6: Net benefits of Option 2 (constant prices, £)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **Total** |
| **Industry Net** | 96502 | 128642 | 128642 | 128642 | 128642 | 128642 | 128642 | 128642 | 128642 | 128642 | 1254283 |
| **Industry NPV (discounted at 3.5%)** | 96502 | 124292 | 120089 | 116028 | 112104 | 108313 | 104651 | 101112 | 97692 | 94389 | 1075172 |
| **Government Net** | 480110 | 639944 | 639944 | 639944 | 639944 | 639944 | 639944 | 639944 | 639944 | 639944 | 6239605 |
| **Government NPV (discounted at 3.5%)** | 480110 | 618303 | 597394 | 577193 | 557674 | 538816 | 520595 | 502990 | 485981 | 469547 | 5348603 |
| **Net Value** | 576612 | 768586 | 768586 | 768586 | 768586 | 768586 | 768586 | 768586 | 768586 | 768586 | 7493888 |
| **NPV (discounted at 3.5%)** | 576612 | 742595 | 717483 | 693221 | 669778 | 647129 | 625245 | 604102 | 583673 | 563936 | 6423775 |

**\***The size of these benefits is uncertain. Therefore ranges are given in Annex 1.

**Risks**

Option 1

1. We considered introducing the changes to producer retailers by voluntary agreement with industry. However, this presents a risk to enforcement in the event of non-compliance with the requirements for bulk milk tank testing. Relying on voluntary implementation has been discounted because it is in direct contravention to the requirements set out in the Brucellosis Order. Enforcement is particularly important where there is a higher risk to public health associated with raw milk/products. Amending the legislation will also enable government to recover costs from producer retailers in the event that AHVLA has to step in to collect a missing sample; a provision that is already available in relation to samples submitted by milk purchasers.

Option 2

1. There is an increased risk of wide scale spread of disease in the absence or as a result of a reduced surveillance programme. Given the costs associated with this option, this risk is not considered acceptable.

**Assumptions**

1. The key assumptions made in this cost-benefit analysis include:

Option 1

* 1. There are approximately 10,400 business holdings supplying milk purchasers (not including producer retailers – see below) with roughly 11,000 milk tanks/vats. This means some 44,000 bulk milk tank tests as a result of quarterly testing; a reduction of 67% compared to a monthly testing regime (Source: AHVLA management records, incorporating data from National Milk Records);
  2. There are approximately 100 producer retailers in England and Wales. We have assumed each of these businesses only have one milk tank each and choose to submit their bulk milk tank samples direct to AHVLA, rather than via private laboratories (Source: AHVLA management records);
  3. According to the Defra June Survey virtually all dairy farms are micro-businesses.
  4. The risk of introducing disease inadvertently to GB remains unaltered.
  5. *Brucella abortus* remains susceptible to pasteurisation.

Option 2 (in addition to those above)

1. Milk testing for Enzootic Bovine Leukosis (EBL) would continue. The EBL surveillance programme is due to be reviewed shortly.

**Conclusion**

1. Option 1 is the preferred option, with a net present value over 10 years of **£4.424m**. This cost-benefit analysis shows that reducing the frequency of bulk milk tank testing to quarterly for the whole industry results in significant cost savings to government and industry. At the same time an appropriate and proportionate surveillance programme for brucellosis remains in place.
2. By introducing a requirement for producer retailers to submit three bulk milk tank samples a year in future, this represents a more cost-effective option than AHVLA continuing to conduct quarterly visits to collect all the samples. It also levels the playing field with milk purchasers who are already submitting samples and meeting the costs of this. This is a conclusion from the initial analysis that we intend to test with industry during consultation.
3. Initial discussions with Dairy UK, the main UK dairy industry representative body, suggested they would be generally supportive of the move to transfer sampling responsibility to producer retailers. We understand their preferred option is a legislative amendment, so that the requirements are clear, enforceable and in line with the requirements for milk purchasers. Discussion with the Scottish and Welsh Governments indicates that making such changes through legislation is also their preferred option and indeed the Scottish Government have already implemented this.

**One-In-Two-Out**

1. This is a national measure which falls within the scope of One-In-Two-Out (OITO) rules.[[19]](#footnote-19) The net impact of the measures results in lower costs to business and should be scored as an “OUT”.
2. The decision has been taken to produce one Impact Assessment to cover both the reduction in frequency of bulk milk tank testing and the proposed change in milk tank sampling arrangements for producer retailers. This is so that the net impact of the two changes is clear. Furthermore, the impact of the second measure is assessed to be very small, meaning that it is considered disproportionate (in terms of staff time) to prepare and seek clearance for two separate Impact Assessments. We received confirmation that this approach is acceptable from the Better Regulation Executive on 27th June 2013.

**Wider impacts**

1. Small firm’s impact test: Altering the testing frequency reduces the impact on all affected businesses regardless of size. The introduction of a requirement for producer retailers (all falling under the definition of micro businesses) to submit bulk milk tank samples would impose a new statutory responsibility, representing a very small cost to these businesses. There are options open to producer retailers to reduce these costs. For example, by utilising the private laboratories to which they normally send samples (e.g. for quality/microbiological testing), the collection and transfer of bulk milk samples to the testing laboratory can be streamlined.
2. Greenhouse Gas: The preferred option would reduce the frequency of testing from monthly to quarterly, in turn likely to result in reduced gas emissions through the reduction in transport costs and the number of AHVLA producer retailer sampling visits. Ceasing bulk milk tank testing could increase the risk of a disease incursion becoming established. This in turn may impact slightly on greenhouse gas emissions through the additional costs and effort to eradicate the disease. However, this risk is considered to be low.
3. Wider Environmental issues - animal health and welfare: The reduction in frequency of testing will increase the possible time to detect an incursion. However, detection would still generally be within a timeframe that would enable controls to be put in place to prevent wide scale dissemination of infection. Ceasing milk testing altogether would increase the risk of a case of disease remaining undetected and becoming widely spread in GB, which could have severe impacts on animal health and welfare.
4. Health and welfare: In the event that disease is confirmed in a herd, the Consultant in Communicable Disease Control (CCDC) has to be informed; the farmer advised not to drink raw milk, or offer it to his family, employees or visitors. This is particularly important where all milk from the herd is not routinely pasteurised. A wide scale investigation would need to be conducted by the CCDC, costing public health services considerable time and resource to identify and possibly treat exposed people, particularly those who consumed unpasteurised milk. However, it is believed that changing the frequency of bulk milk testing to quarterly would not significantly impact on the probability of cases of disease in animals or human infection occurring.

Ceasing milk testing altogether may increase the risk of spread following the introduction of *Brucella abortus*. However, given the low risk of importation in live cattle and other importation and surveillance control measures in place, this is considered to be of low risk.

1. Justice Impact:

Whilst the existing offence in the Brucellosis Order will be extended to include producer retailers, it is not anticipated that the change in policy approach will have an impact on the Courts and Tribunals Service or National Offender Management Service. This is because we consider the risk of non-compliance to be low; particularly as maintaining OBF status results in trade benefits for industry. Clearance was obtained from the Ministry of Justice on the 17th February 2014.

**Annex 1: Ranges for the benefits of each policy option**

A range of benefits is given, as the number of milk tanks/vats in England and Wales from which samples are taken is uncertain. The high estimate of 14,100 milk tanks/vats was a preliminary estimate provided by AHVLA. The low estimate of 10,416 milk tanks/vats is based on the number of holdings in England and Wales. The best estimate, used in the analysis above, is 11,117 milk tanks/vats in England and Wales, with an estimate of the number of holdings with more than one tank. (Source: AHVLA management records, incorporating data from National Milk Records).

Table A1: Benefits of Option 1 (high estimate)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **Total** |
| **Industry benefits** |  |  |  |  |  |  |  |  |  |  |  |
| Submission of samples (larger producers) | 85552 | 114070 | 114070 | 114070 | 114070 | 114070 | 114070 | 114070 | 114070 | 114070 | **1112179** |
| Staff time accompanying AHVLA visits (p-rs) | 3769 | 5026 | 5026 | 5026 | 5026 | 5026 | 5026 | 5026 | 5026 | 5026 | **48999** |
| Industry Total: | 89321 | 119095 | 119095 | 119095 | 119095 | 119095 | 119095 | 119095 | 119095 | 119095 | **1161178** |
| **Government benefits** |  |  |  |  |  |  |  |  |  |  |  |
| Variable costs of testing | 307178 | 409571 | 409571 | 409571 | 409571 | 409571 | 409571 | 409571 | 409571 | 409571 | **3993318** |
| AHVLA visits to producer retailers | 47743 | 63657 | 63657 | 63657 | 63657 | 63657 | 63657 | 63657 | 63657 | 63657 | **620658** |
| Gov. Total: | 354921 | 473228 | 473228 | 473228 | 473228 | 473228 | 473228 | 473228 | 473228 | 473228 | **4613976** |
| **Total benefits** | 444243 | 592324 | 592324 | 592324 | 592324 | 592324 | 592324 | 592324 | 592324 | 592324 | **5775154** |
| PV: | 444243 | 572293 | 552940 | 534242 | 516176 | 498721 | 481856 | 465561 | 449817 | 434606 | **4950454** |
| **Industry costs** |  |  |  |  |  |  |  |  |  |  |  |
| Direct submission of samples (p-rs) | 1200 | 1601 | 1601 | 1601 | 1601 | 1601 | 1601 | 1601 | 1601 | 1601 | **15605** |
| **Government costs** |  |  |  |  |  |  |  |  |  |  |  |
| Postage of sample pots | 3050 | 4066 | 4066 | 4066 | 4066 | 4066 | 4066 | 4066 | 4066 | 4066 | **39646** |
| **Total costs** | 4250 | 5667 | 5667 | 5667 | 5667 | 5667 | 5667 | 5667 | 5667 | 5667 | **55251** |
| PV: | 4250 | 5475 | 5290 | 5111 | 4938 | 4771 | 4610 | 4454 | 4303 | 4158 | **47361** |
| **Total net value** | 439993 | 586657 | 586657 | 586657 | 586657 | 586657 | 586657 | 586657 | 586657 | 586657 | **5719904** |
| NPV: | 439993 | 566818 | 547650 | 529131 | 511237 | 493949 | 477246 | 461107 | 445514 | 430448 | **4903093** |

Table A2: Benefits of Option 1 (low estimate)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **Total** |
| **Industry benefits** |  |  |  |  |  |  |  |  |  |  |  |
| Submission of samples (larger producers) | 59725 | 79633 | 79633 | 79633 | 79633 | 79633 | 79633 | 79633 | 79633 | 79633 | **776420** |
| Staff time accompanying AHVLA visits (p-rs) | 3769 | 5026 | 5026 | 5026 | 5026 | 5026 | 5026 | 5026 | 5026 | 5026 | **48999** |
| Industry Total: | 63494 | 84658 | 84658 | 84658 | 84658 | 84658 | 84658 | 84658 | 84658 | 84658 | **825419** |
| **Government benefits** |  |  |  |  |  |  |  |  |  |  |  |
| Variable costs of testing | 280557 | 374076 | 374076 | 374076 | 374076 | 374076 | 374076 | 374076 | 374076 | 374076 | **3647242** |
| AHVLA visits to producer retailers | 47743 | 63657 | 63657 | 63657 | 63657 | 63657 | 63657 | 63657 | 63657 | 63657 | **620658** |
| Gov. Total: | 328300 | 437733 | 437733 | 437733 | 437733 | 437733 | 437733 | 437733 | 437733 | 437733 | **4267900** |
| **Total benefits** | 391794 | 522392 | 522392 | 522392 | 522392 | 522392 | 522392 | 522392 | 522392 | 522392 | **5093319** |
| PV: | 391794 | 504726 | 487658 | 471167 | 455234 | 439840 | 424966 | 410595 | 396710 | 383295 | **4365986** |
| **Industry costs** |  |  |  |  |  |  |  |  |  |  |  |
| Direct submission of samples (p-rs) | 1200 | 1601 | 1601 | 1601 | 1601 | 1601 | 1601 | 1601 | 1601 | 1601 | **15605** |
| **Government costs** |  |  |  |  |  |  |  |  |  |  |  |
| Postage of sample pots | 3050 | 4066 | 4066 | 4066 | 4066 | 4066 | 4066 | 4066 | 4066 | 4066 | **39646** |
| **Total costs** | 4250 | 5667 | 5667 | 5667 | 5667 | 5667 | 5667 | 5667 | 5667 | 5667 | **55251** |
| PV: | 4250 | 5475 | 5290 | 5111 | 4938 | 4771 | 4610 | 4454 | 4303 | 4158 | **47361** |
| **Total net value** | 387544 | 516725 | 516725 | 516725 | 516725 | 516725 | 516725 | 516725 | 516725 | 516725 | **5038068** |
| NPV: | 387544 | 499251 | 482368 | 466056 | 450296 | 435069 | 420356 | 406141 | 392407 | 379137 | **4318625** |

Table A3: Benefits of Option 2 (high estimate)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **Total** |
| **Industry benefits** |  |  |  |  |  |  |  |  |  |  |  |
| Submission of samples (larger producers) | 124051 | 165401 | 165401 | 165401 | 165401 | 165401 | 165401 | 165401 | 165401 | 165401 | **1612659** |
| Staff time accompanying AHVLA visits (p-rs) | 4043 | 5391 | 5391 | 5391 | 5391 | 5391 | 5391 | 5391 | 5391 | 5391 | **52563** |
| Industry Total: | 128094 | 170792 | 170792 | 170792 | 170792 | 170792 | 170792 | 170792 | 170792 | 170792 | **1665222** |
| **Government benefits** |  |  |  |  |  |  |  |  |  |  |  |
| Variable costs of testing | 461279 | 615039 | 615039 | 615039 | 615039 | 615039 | 615039 | 615039 | 615039 | 615039 | **5996625** |
| AHVLA visits to producer retailers | 51215 | 68287 | 68287 | 68287 | 68287 | 68287 | 68287 | 68287 | 68287 | 68287 | **665797** |
| Gov. Total: | 512494 | 683325 | 683325 | 683325 | 683325 | 683325 | 683325 | 683325 | 683325 | 683325 | **6662422** |
| **Total benefits** | 640588 | 854117 | 854117 | 854117 | 854117 | 854117 | 854117 | 854117 | 854117 | 854117 | **8327644** |
| PV: | 640588 | 825234 | 797328 | 770365 | 744314 | 719144 | 694825 | 671329 | 648627 | 626692 | **7138445** |
| **Industry costs** |  |  |  |  |  |  |  |  |  |  |  |
| Direct submission of samples (p-rs) | 60 | 107 | 107 | 107 | 107 | 107 | 107 | 107 | 107 | 107 | **1020** |
| **Government costs** |  |  |  |  |  |  |  |  |  |  |  |
| Postage of sample pots | 457 | 813 | 813 | 813 | 813 | 813 | 813 | 813 | 813 | 813 | **7777** |
| **Total costs** | 517 | 920 | 920 | 920 | 920 | 920 | 920 | 920 | 920 | 920 | **8797** |
| PV: | 517 | 889 | 859 | 830 | 802 | 775 | 748 | 723 | 699 | 675 | **7516** |
| **Total net value** | 640071 | 853197 | 853197 | 853197 | 853197 | 853197 | 853197 | 853197 | 853197 | 853197 | **8318847** |
| NPV: | 640071 | 824345 | 796469 | 769535 | 743512 | 718369 | 694077 | 670605 | 647928 | 626017 | **7130929** |

Table A4: Benefits of Option 2 (low estimate)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **Total** |
| **Industry benefits** |  |  |  |  |  |  |  |  |  |  |  |
| Submission of samples (larger producers) | 86601 | 115468 | 115468 | 115468 | 115468 | 115468 | 115468 | 115468 | 115468 | 115468 | **1125809** |
| Staff time accompanying AHVLA visits (p-rs) | 4043 | 5391 | 5391 | 5391 | 5391 | 5391 | 5391 | 5391 | 5391 | 5391 | **52563** |
| Industry Total: | 90644 | 120859 | 120859 | 120859 | 120859 | 120859 | 120859 | 120859 | 120859 | 120859 | **1178372** |
| **Government benefits** |  |  |  |  |  |  |  |  |  |  |  |
| Variable costs of testing | 421347 | 561796 | 561796 | 561796 | 561796 | 561796 | 561796 | 561796 | 561796 | 561796 | **5477510** |
| AHVLA visits to producer retailers | 51215 | 68287 | 68287 | 68287 | 68287 | 68287 | 68287 | 68287 | 68287 | 68287 | **665797** |
| Gov. Total: | 472562 | 630083 | 630083 | 630083 | 630083 | 630083 | 630083 | 630083 | 630083 | 630083 | **6143307** |
| **Total benefits** | 563206 | 750941 | 750941 | 750941 | 750941 | 750941 | 750941 | 750941 | 750941 | 750941 | **7321678** |
| PV: | 563206 | 725547 | 701012 | 677306 | 654402 | 632272 | 610891 | 590233 | 570274 | 550989 | **6276133** |
| **Industry costs** |  |  |  |  |  |  |  |  |  |  |  |
| Direct submission of samples (p-rs) | 60 | 107 | 107 | 107 | 107 | 107 | 107 | 107 | 107 | 107 | **1020** |
| **Government costs** |  |  |  |  |  |  |  |  |  |  |  |
| Postage of sample pots | 457 | 813 | 813 | 813 | 813 | 813 | 813 | 813 | 813 | 813 | **7777** |
| **Total costs** | 517 | 920 | 920 | 920 | 920 | 920 | 920 | 920 | 920 | 920 | **8797** |
| PV: | 517 | 889 | 859 | 830 | 802 | 775 | 748 | 723 | 699 | 675 | **7516** |
| **Total net value** | 562689 | 750021 | 750021 | 750021 | 750021 | 750021 | 750021 | 750021 | 750021 | 750021 | **7312881** |
| NPV: | 562689 | 724658 | 700153 | 676476 | 653600 | 631498 | 610143 | 589510 | 569575 | 550314 | **6268617** |

1. Producer-retailers - Producers who sell milk/milk products direct from the farm to the public or retailers. This can include the sale of raw (unpasteurised) milk/milk products. [↑](#footnote-ref-1)
2. Diseases which can transmit from animals to humans. [↑](#footnote-ref-2)
3. Non-excludable – it is impossible to provide without it being possible for others to enjoy. Non-rival – when the good is consumed, it doesn’t reduce the amount available for others. [↑](#footnote-ref-3)
4. The Brucellosis (England) Order 2000 (S.I. 2055/2000), as amended. The Brucellosis (Wales) Order 2006 (S.I. 866/2006). [↑](#footnote-ref-4)
5. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31964L0432:en:NOT> [↑](#footnote-ref-5)
6. Now part of the Australian Laboratory Services Group. [↑](#footnote-ref-6)
7. Industry/labs estimate. [↑](#footnote-ref-7)
8. Enzootic Bovine Leukosis (EBL) is a viral disease of cattle causing malignant tumours in affected animals. Once clinical signs of the disease appear, this rapidly leads to death of the animal. The disease does not affect humans. [↑](#footnote-ref-8)
9. Safebox™: Royal Mail pre-paid and secure packaging solution for sending and receiving specimens. A pack of 12 Safeboxes costs £66, excluding VAT, for first class postage. [↑](#footnote-ref-9)
10. Farmers already collect milk tank samples for other purposes (e.g. for quality tests). The time to collect an additional sample when emptying the bulk milk tank is therefore considered negligible. [↑](#footnote-ref-10)
11. Industry/labs estimate. [↑](#footnote-ref-11)
12. AHVLA estimate – includes costs of preparing re-agents, staff training, updating the database of milking herds, programming processors and setting up IT systems. [↑](#footnote-ref-12)
13. We do not expect Option 1 (quarterly testing) to result in similar costs. [↑](#footnote-ref-13)
14. Not all farms are expected to have abortions every year. [↑](#footnote-ref-14)
15. Each sample is estimated to cost £0.90 if submitted via a private laboratory, or £5.50 if submitted directly by post to AHVLA (approx. 1% of samples are submitted directly by post). Therefore, 88,000 fewer tests under a quarterly sampling regime saves industry approx. £85k per annum. [↑](#footnote-ref-15)
16. Producer-retailers currently incur a cost to arrange and supervise AHVLA sampling visits. This is estimated at £4.70 per visit, based on the Annual Survey of Hours and Earnings (provisional results 2013); the labour rate for ‘skilled agricultural and related trades’ (SOC 51) is £8.88 per hour. Adjusting for inflation (2.1% HMT estimate) and adding 30% for overheads gives an hourly wage of £11.30 in 2012 prices. It is estimated to take 25 minutes to arrange and supervise a visit. The net saving after taking account of small new costs to submit three samples by post (at £5.50 per sample, using a Safebox) is approx. £3k per annum. [↑](#footnote-ref-16)
17. The figures in these tables are given in constant prices i.e. they exclude the effect of inflation over time. [↑](#footnote-ref-17)
18. The figures in these tables are given in constant prices i.e. they exclude the effect of inflation over time. [↑](#footnote-ref-18)
19. <https://www.gov.uk/government/policies/reducing-the-impact-of-regulation-on-business/supporting-pages/operating-a-one-in-two-out-rule-for-business-regulation> [↑](#footnote-ref-19)