



Standard requirements for the submission of programme for eradication, control and monitoring PROGRAMME for ERADICATION : ANNEX I

Member States seeking a financial contribution from the Union for national programmes for the eradication, control and monitoring of animal diseases and zoonosis listed below, shall submit applications containing at least the information set out in this form.

Bovine brucellosis, bovine tuberculosis, ovine and caprine brucellosis (*B. melitensis*), bluetongue in endemic or high risk areas, african swine fever, swine vesicular disease, classical swine fever, rabies.

The central data base keeps all submissions. However only the information in the last submission is shown when viewing and used when processing the data.

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- 6) For simplification purposes you are invited to submit multi annual programmes
- 7) As mentioned during the Plenary Task Force of 28/2/2014, you are invited to submit your programmes in English.

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Submission date

Tuesday, September 30, 2014 10:02:48

Submission number

1412067771517-3817



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1. Identification of the programme

Member state: IRELAND

Disease: Bovine tuberculosis

Species: Bovines and buffalo

This program is multi annual: no

Request of Union co-financing
from beginning of:

2015

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1.1 Contact

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2. Historical data on the epidemiological evolution of the disease

Provide a concise description on the target population (species, number of herds and animals present and under the programme), the main measures (sampling and testing regimes, eradication measures applied, qualification of herds and animals, vaccination schemes) and the main results (incidents, prevalence, qualification of herds and animals). The information is given for distinct periods if the measures were substantially modified. The information is documented by relevant summary epidemiological tables (point 6), complemented by graphs or maps (to be attached).

(max. 32000 chars) :

A bovine tuberculosis (bTB) eradication programme (BTBEP), operated by the then Department of Agriculture, commenced in Ireland in 1954, when an estimated 80% of cattle herds were infected. Individual herd registration and a herd numbering system commenced at the same time to facilitate the administration and management of all disease eradication programmes, including bTB. An individual herd represented a single epidemiological unit i.e. all the animals in the herd regardless of ownership. Disease (bTB) incidence fell rapidly from 17% overall to less than 0.5% in 1965 at which stage all herds had individually at some stage achieved Officially Tuberculosis Free (OTF) status in accordance with Directive 64/432/EEC and no herds of unknown status remained in Ireland. The use of the SICTT, in Ireland, was justified to the EEC prior to Ireland becoming a member of the EEC. Indeed, quite a number of countries at that time had a problem with the fact that the only recognised test in the then Directive 64/432/EEC was the SIT and, while most countries did not experience the same problems with non-specific infection as Ireland and the UK, many were using the SICTT in particular areas or herds and all agreed that the use of the SICTT was justified and therefore should be incorporated into Directive 64/432/EEC as a recognised test. For details and for the recommendations for the text used to edit Annex B of Directive 64/432/EEC please see Schneider, W., Augier, J., Cavrini, C., Dam, A., Dobbelaer, R., Gayot, G., Haagsma, J., Herbert, N., Jorgensen, J., Lesslie, I., O'Reilly, L., Rees, H. (1979) Final report of the sub-group of the Scientific Veterinary Commission on tuberculins 2577/VI/79-EN Rev.4 on behalf of Commission of the European Communities, Directorate-General for Agriculture VI/B/II2 and also Directive 79/111/EEC. The same 1979 report (page 20) also references that when joining the EEC Denmark Ireland, and the United Kingdom were allowed derogation to "retain the methods applied in their territory for declaring a herd of cattle officially free of tuberculosis", as defined in Directive 64/432/EEC, rather than, presumably, those specified in Directives 77/391 and 78/52/EEC.

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Having brought all herds to OTF status by 1965, since 1980, Ireland has complied with the requirements of Directive 64/432/EEC in order for herds to retain OTF status or to restore OTF status, where status has been suspended or withdrawn according to this Directive.

Following on from the recommendation of the 1997 sub-group Directive 80/219/EEC subsequently replaced Annex B of Directive 64/432/EEC and introduced the Comparative intradermal tuberculin test as an official test under Directive 64/432/EEC.

A number of references are included in 2577/VI/79-EN Rev.4 which summarises them saying “extensive surveys carried out in Great Britain and Ireland with Weybridge and Rotterdam bovine PPD tuberculin have shown that from 8-12% of cattle in herds free from bovine tuberculosis give positive reactions in the single intradermal test” and “In other community countries, the problem of non-specific infection is not as great, with 0.5-1% of tuberculosis-free cattle giving positive reactions to bovine tuberculin.” In Ireland, test specificity of the SIT is, at best, between 92 and 94% as demonstrated by O'Reilly and Mac Clancy, (Estimation of the sensitivity, specificity and predictive value of the intradermal tuberculin test. 1978 Irish Veterinary Journal 32:127-128) who conducted a trial in TB-free herds in Ireland in 1975 in advance of the replacement of human with bovine tuberculin for the Irish BTBEP. This work was repeated in 2008 and again in 2013 (paper in preparation– see abstract submitted to M.bovis VI (attached: SIT effective for bTB screening in Ireland.pdf)) with similar results (6.3% of animals in 44.5% of bTB-Free herds false positive). To put this in context if 8.5m animal tests were performed using a test with a specificity of 94%, there would be 510,000 ‘false positive’ animals disclosed i.e. almost 10% of the total cattle population in Ireland. Removal of ‘false positive’ test responders would not further the goal of eradication of bTB and thus would not have any positive cost/benefit or impact to the programme. One of the reasons that SIT specificity is so poor and the SICTT is the test of choice in Ireland is because of the almost constant opportunity for animals to be exposed to non-specific sensitizing organisms causing cross reactivity [Cooney, R., Kazda, J., Quinn, J., Cook, B., Muller, K. and Monaghan, M. Environmental mycobacteria in Ireland as a source of non-specific sensitisation to tuberculins. 1997. Irish Veterinary Journal. 50:370-373]. The Cooney et al., study demonstrated that slowly growing non-pathogenic environmental Mycobacteria and especially *M. hiberniae* are abundant in the Irish environment and that various species of bryophytes common in cattle pastures in Ireland are rich sources of mycobacteria. It further demonstrated that the majority of 59 strains of such environmental Mycobacteria which were isolated from Irish farms during the study period, when administered parentally or orally, were capable of causing some animals to respond in a non-specific manner to bovine tuberculin PPD and so be positive to the SIT. However, in the trial, the reaction to avian tuberculin was larger and thus such animals would be correctly identified as non-tuberculous by the SICTT. Nonetheless the specificity of the SICTT is still <100% in Ireland and it is estimated that approximately 1% of Irish herds are restricted annually under the BTBEP as a consequence of non-tuberculous animals failing the test. The directive (Directive 64/432/EEC Annex A I 3A(b)) allows for the possibility to only suspend the status of such herds pending full laboratory examination and retest of the herd and to restore the status if bTB is not confirmed. However, as yet these herds, in which disease (TB) is not confirmed, and not epidemiologically suspected, still count in the statistical output for the eradication programme.

ERAD, a specialised agency, was established in 1988 to implement the BTBEP which included veterinary post-mortem surveillance of all animals intended for human consumption and, a comprehensive testing programme, using a more potent bovine tuberculin (30,000 I.U./ml) and a more severe interpretation than that required by Directive 64/432/EEC and covering all Mycobacterial spp that may cause TB in bovines. The ERAD programme involved additional and more frequent testing of administrative/local ‘black spot’ geographic areas with perceived higher disease prevalence, known high-risk herds, contiguous herds, herds that were linked epidemiologically, extended herd-restriction and also pre-movement testing. However, these measures failed to have any appreciable impact on the incidence of

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the disease and, in 1992, authority for determining policy and strategy and for managing the BTBEP reverted to the Department of Agriculture, Food and the Marine (DAFM) where it is managed by ERAD Division. One of the significant conclusions from the 1988-1992 period was that TB (*M. bovis*) is endemic in badgers (*Meles meles*) and, by acting as a wildlife reservoir for disease they are one of the main factors affecting the disease levels and the primary constraint to the eradication of bTB in Ireland.

The Table attached under 'Main results' outlines the cattle population trend over the past four decades and the disease incidence during that period. It describes (i) the considerable progress made in the early years of the BTBEP, (ii) the stagnation in efforts to reduce the incidence of the disease in the period 1965 to 1999 and (iii) the progressive reduction, with some annual variations, in the level of the disease since 1999 particularly regarding reactor numbers which fell from c.45,000 to 15,612 in 2013, the lowest level since the programme started in the 1950's.

Note on Epidemiological unit classification:

Each single unique epidemiologically distinct herd is allocated a herdnumber for the purpose of general disease control. An 'epidemiological unit' or herd is considered to be any number of animals that are held, kept or handled in such a manner that they share the same likelihood of exposure to infectious disease agents and that the control of the spread of infectious disease from the unit can be facilitated. The animals comprising the herd may be owned solely or jointly with others and the herd occupies parcels of land which may comprise parcels of land that are separated by some distance but, because of general proximity and/or management practices, constitute one epidemiological unit. Where the parcels of land used by the farmer are located in more than one administrative division and/or are sufficiently far distant to warrant being treated as two (or more) epidemiological units or where disease management controls dictate that it is prudent to regard them as two (or more) epidemiological units, a herdnumber will be issued to each such unit (herd).

Main measures 1992 – 2014:

Each herd is tuberculin tested at a minimum once annually, in accordance with Directive 64/432/EEC Annex A I.2 and full disease and movement control measures apply to each herd. Herds that are considered to be epidemiologically related have mandatory tracing and checking in the event of suspicion of disease in any of the herds. All parts of a herd which belong to the same epidemiological unit are subject to control if and when disease is identified i.e. the movement restriction applies to all the fragments used by the herd and the legislation empowers the Veterinary Inspector to confine animals to particular fragments if disease control so warrants. The measures implemented thus included an annual round screening test of all herds, routine veterinary post-mortem slaughter surveillance, controls on movement of animals, restriction of holdings, removal and slaughter of reactors, appropriate follow-up testing, including the use of blood tests as an adjunct to the skin test, specific targeted additional risk-based testing, curtailment of outward movement from herds on a high risk testing programme, compensation for farmers whose herds are affected by disease, a focused badger population control measures where they have been implicated as a probable cause of TB and a research programme that includes badger vaccination to prevent the spread of TB within and from that species. A more detailed description of the programme measures is set out in Section 4.

Main results:

The Table attached (Cattle Population Trends and TB incidence 1960- 2013.doc) outlines the cattle population trend and compares the disease incidence during that period.

As stated in the footnote to the table attached (Cattle Population Trends and TB incidence 1960- 2013.doc) which outlines the cattle population trend and compared the disease incidence during that period each year a number of herds have no stock for testing during the programme year. If these herds restock during the following programme year, they are tested and if they do not restock they are taken off the

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list of herds under the programme. These herds account for the failure to achieve 100% coverage of testing. This accounts for 1.48% of the herds in the programme for 2013 and all other herds had a herd level check in accordance with the definition provided in Decision 2008/940 (and previously Decision 2002/677/EC).

There is no standard definition supplied in the template for programme submission, nor is there a suggestion that all the holdings in the programme should not be counted for the purpose of completing the template. Thus, in an attempt to ensure consistency between the data supplied for programme approval and the results of said programme the data supplied herewith by Ireland complies with the definitions in Decision 2008/940 (and previously Decision 2002/677/EC formulated by the various task force sub-groups including the TB Task Force) which are as follows: "(a) Herds equal flocks, or holdings as appropriate. (d) Total number of herds existing in the region, including eligible herds and non-eligible herds for the programme (e) Check means to perform a herd level test under the programme for the respective disease with the purpose of maintaining, upgrading, etc., the health status of the herd. In this column a herd should not be counted twice even if has been checked more than once".

There are no holdings/herds maintained under the programme that have been empty for a long time as such herds are removed from the programme (see explanation above) but the holding remains on the holding register as required by Directive 92/102/EEC which states that "holdings remain on the said list until three consecutive years have elapsed with no animals on the holding". Furthermore it would, also, not appear logical to Ireland to temporarily remove holdings from the programme when temporarily out of stock merely so as to submit a figure of 100% as the effective herd coverage figure but be assured it is Ireland's intention to test all holdings that have stock when tests are due or subsequently acquire stock. If standard definitions other than those in Decision 2008/940 are to apply for the programme submissions it would be appreciated if such definitions could be provided.

Background to Wildlife Policy:

Results from a number of small scale local reactor-removal trials in the 1980s identified a link between tuberculosis in badgers and tuberculosis in cattle in the same local areas. Formal studies i.e. the East Offaly Study (EOP), and the follow-up the Four Area Project (FAP), have shown that reducing the density of badgers over a wide area and maintaining these lower densities over a number of years resulted in significantly lower levels of tuberculosis in cattle locally than had been observed prior to the commencement of the trials and a reduction in risk of a herd restriction as a consequence of bovine TB.

Following on from these findings, the Department developed (i) an interim wildlife strategy, in 2000, (Wildlife Policy (Badgers) <http://www.agriculture.gov.ie/animalhealthwelfare/diseasecontrol/bovinetbbrucellosisradicationschemes/wildlifepolicybadgers/>), which involves the capture and removal of badgers associated with bovine tuberculosis breakdowns and (ii) a Government funded, Wildlife Research Programme to establish the efficacy and to quantify the effects of vaccinating badgers, to support and further the eradication of TB from the bovine population. It is the view of the Department of Agriculture, Food and the Marine that the implementation of the wildlife programme has contributed significantly to the reduction in the incidence of TB in Ireland in recent years. However, badgers are a protected species and in compliance with the Berne Convention local populations, even when diseased, cannot be exterminated but must be preserved to maintain genetic integrity and diversity of the species. Thus the Department is limited in the extent to which it can cull even infected populations which limits the effectiveness of the culling programme. It is widely recognised in the scientific community that TB is maintained independently in this species that share the same environment as cattle and that there is interspecies transmission. Therefore TB from these species continually spills back into cattle where it and

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any subsequent bovine-to-bovine caused cases will continue to be 'cropped' by the annual testing regime in cattle, until a more permanent solution can be developed.

Future research on wildlife:

A number of field vaccination trials have and are being conducted involving the introduction of a TB vaccine into badger populations over a number of areas for a period of at least 3 years. The objective of one trial is primarily to provide information as to the efficacy of an, individually delivered, oral vaccine in reducing the level of TB infection in the wild badger population under field study. It is anticipated that the outcome of this research project will be reported on by 2015. Other projects underway or in prospect are designed to assess the impact of badger vaccination on the incidence of TB in cattle when compared to continued badger culling. A number of badger immunological and ecology studies have also been conducted to further knowledge of the species with a view to developing methodologies to achieve the objective of vaccination at a population level without having to individually capture each badger being vaccinated and to reduce interspecies disease transmission.

3. Description of the submitted programme

Provide a concise description of the programme with its main objective(s) (monitoring, control, eradication, qualification of herds and/or regions, reducing prevalence and incidence), the main measures (sampling and testing regimes, eradication measures to be applied, qualification of herds and animals, vaccination schemes), the target animal population, the area(s) of implementation and the definition of a positive case.

(max. 32000 chars) :

Main Objective

The objective of the programme is the eradication of TB from the cattle herd, based on a suite of measures including conventional test, slaughter and movement controls for bovines; and measures designed to deal with TB in the wildlife population e.g. reducing the badger population in areas where they are seen to be contributing to bovine TB prevalence and trials for TB vaccine development and deployment in badgers. Section 4 provides details on the measures. The 2015 TB Programme is the fifth year of a 5-year eradication programme covering the period 2011-2015. All herds in Ireland are included in the programme.

Ireland believes that the programme currently in place, which has led to a very significant reduction in the incidence of bovine TB in recent years, is an effective programme and, and, as stated in the 2014 report of the Task Force, progress towards eradication "is steady but slow" noting that herd incidence has fallen by 34% (from 5.88% to 3.88%) between 2008 and 2013. Subject to certain modifications set out under 4.4.6.3 below, the programme constitutes a long-term strategy for the disease eradication. The programme, which is risk based and guided heavily by science, provides for a comprehensive testing regime and contains significant relevant controls on the movement of cattle from high risk herds. The programme has since its inception and remains constantly subject to review e.g. reviews conducted by Irish Veterinary Association 1979; EU Commission 1981; Irish Farmers Association 1982; Irish Veterinary Union 1982; Irish Veterinary Association 1982, Interdepartmental review Group 1983; Conjoint report of the veterinary groups 1984; Economic and Social Research Institute (Report) 1986 and more recently in addition to reviews instigated by Ireland by International TB experts, further EU Commission reviews, reviews and recommendations by the EU TB Task Force and the FVO. In light of experience in implementing recommendations from this many and varied reviews and specific scientific research substantial modifications have been introduced (e.g. more frequent testing of and more strict test

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interpretation in high risk herds and those contiguous to herds undergoing a TB breakdown, restrictions on cattle in contiguous herds prior to testing, the restriction of inconclusive reactors which pass the re-test to the holding of origin). It is also noteworthy that a study by Gallagher et al. (2013)(6) has shown that there has been a significant reduction in bTB recurrence in Ireland between 1998 and 2008, with 2008-derestricted herds being 0.74 times (95% confidence interval: 0.68-0.81) as likely to be restricted during the subsequent study period compared with 1998-derestricted herds. The results from the study also provides further reassurance of an improved national situation, both in terms of limiting the establishment of new infection (bTB incidence) and in effectively clearing infection once detected (recurrence following derestriction).

With regard to the longer term, scientific research conducted in Ireland and elsewhere has concluded that the main constraint to the eradication of bovine TB in the country is the presence of the disease in the Irish badger population and the programme therefore now includes measures (mainly badger culling) to address this constraint. The 2015 programme is the 5th and last of the current 5-year programme. However, Ireland accepts that, since badgers are a protected species, under the Berne Convention badger culling cannot be a permanent solution and, in any event, on its own culling will not prevent transmission of TB from badgers to badgers or badgers to cattle. Accordingly, substantial research is being undertaken by DAFM into the development and deployment of a badger vaccine for TB. The badger vaccine trial to determine the efficacy of badger vaccination in a wild population (rather than in a laboratory setting) was finalised in 2014. Data analysis is not yet completed and thus vaccine efficacy is not yet determined. This project has highest priority as the outcome will enable development of the strategy for the following 5-years to 2020. It is hoped that the vaccine trial will show that vaccine is sufficiently effective to have a beneficial impact on the transmission of TB from badgers to cattle. If so, Ireland will be in a position to routinely deploy oral vaccine to badgers sometime before 2020 (pending determination of the optimal delivery and vaccine deployment methodology and licensing of the final vaccine formulation as required under EU Medicines Directive). Vaccine efficacy and the success of deployment measures will determine how long it will take to have effective coverage and protection at a population level for badgers and also if continued culling will or will not be required and/or for how long. The outcome of this research will determine the precise long-term strategy. In the meantime, the programme envisages the continuation of badger culling, combined with badger vaccination in a number of project areas to determine the efficacy of badger vaccination on herd incidence in field conditions

(6) M.J. Gallagher, I.M. Higgins, T.A. Clegg, D.H. Williams, S.J. More (2013) Comparison of bovine tuberculosis recurrence in Irish herds between 1998 and 2008. Preventive Veterinary Medicine 1;111 (3-4):237-44. doi: 10.1016/

4. Measures of the submitted programme

4.1 Summary of measures under the programme

Duration of the programme: 2015

First year:

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- Control
- Testing
- Slaughter and animals tested positive
- Killing of animals tested positive
- Vaccination
- Treatment
- Disposal of products
- Eradication, control or monitoring

4.2 Organisation, supervision and role of all stakeholders involved in the programme

Describe the authorities in charge of supervising and coordinating the departments responsible for implementing the programme and the different operators involved. Describe the responsibilities of all involved.

(max. 32000 chars):

Section 4 details the measures of the programme which are summarised below:

- The national herd is tested at a minimum once annually (round test screening), in addition to any consequential testing arising,
- Restriction, under legislation, of test positive herds,
- Early removal of reactors and the provision of compensation to farmers,
- Post mortem surveillance by veterinarians of all animals slaughtered for human consumption and

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traceback to herd(s) of origin. Target set 1.5 submissions/1000 slaughtered for non-TB granulomas.

- Epidemiological investigation of bTB outbreaks including trace-back and trace-onward of infected/potentially infected animals and of movement of animals into and out of herds that are detected as bTB infected,
- Mandatory 30-day pre-movement test on animals exported and on movements between restricted herds,
- Targeted blood testing as an adjunct to the skin test in certain bTB infected herds,
- Maintenance of a reduced local badger population where associated with TB breakdowns and following epidemiological linkage to TB outbreak in cattle
- Computerised system for organising, recording and follow-up of tests; control of animal movements; traceback and trace forward of epidemiologically linked animals
- Movement out of OTF herds on a high risk testing programme curtailed
- Badger vaccination and ecological studies to address questions of efficacy of badger vaccination for TB.
- Implementation of various badger based research projects
- Implementation of quality control measures on all aspects of the programme.

4.2.1. Programme and Policy

The initiation and drafting of the BTBEP and policy is the responsibility of the ERAD (Eradication of Animal Disease) Administrative and Veterinary HQ Divisions of the DAFM under the responsibility of a Director of Animal Health and Welfare and Deputy Chief Veterinary Officer (DCVO). In consultation with ERAD HQ the programme is implemented through the Department's regional Veterinary offices (RVOs) which are operated and managed by Area Management teams (AMTs) whose main function is to ensure delivery of the programme and verification of the effectiveness of controls.

4.2.2. Veterinary Laboratory Services

The Veterinary Laboratory Services (VLS) comprises the Central Veterinary Research Laboratory (CVRL) and the Regional Veterinary Laboratory at Backweston in Co. Kildare, the Brucellosis Laboratory, Cork, and five Regional Veterinary Laboratories located in Athlone, Cork, Kilkenny, Limerick and Sligo. The Bacteriology/Parasitology Division of the VLS provides a number of services to the BTEP, including:

- Culture and histopathological examination of diagnostic samples, including those submitted from the slaughterhouse surveillance programme;
- Potency assays on the bovine tuberculin protein purified derivative used in the TB test in conjunction with staff from ERAD division;
- DNA 'fingerprinting' of *M. bovis* isolates;
- Evaluation of new methods for the identification and typing of *M. bovis*;
- Serological tests to aid diagnosis in problem herds.

Other laboratory services are additionally contracted to provide specific support services to the programme including primary tissue collection from badgers for submission to the CVRL for culture, routine and developmental work on IFN- γ Assay, evaluation of new serological tests to aid TB diagnosis, support for badger vaccine development and deployment.

4.2.3. Veterinary Public Health Inspection Service

The Veterinary Public Health Inspection Service (VPHIS) of the Department in conjunction with the Food Safety Authority of Ireland (FSAI) is responsible for ensuring food safety in slaughtering premises, cutting premises, cold stores, meat and meat products premises, and poultry slaughtering establishments. VPHIS, under the aegis of a DCVO, has a permanent staff complement of c. 183 veterinary inspectors and technical staff and engages some 610 private veterinarians on a part-time basis. All cattle presented for slaughter in the State undergo a veterinary post-mortem inspection under the control and supervision of VPHIS staff in one of some 30 plants in which cattle are slaughtered, or, in the case of abattoirs, under the

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control and supervision of the veterinary staff of the various Local Authorities. For the purpose of Regulation (EC) No 854/2004, supervision of the Local Authority (i.e. smaller, locally based) slaughterplants is conducted under contract to the FSAI (Food Safety Authority of Ireland) which ensures Veterinary Post-mortem Procedures are conducted under a standardised SOP (A2) developed in conjunction with the FSAI so as to facilitate the recording of the incidence of zoonotic agents at the level of primary production as required by EU Directive 99 of 2003. All granulomas detected at slaughter are submitted for laboratory examination to the CVRL and pending determination of the outcome the supplying herds are restricted (status suspended).

4.2.4. Keepers

Individual keepers are responsible for the testing of their herds so as to maximise herd health protection and certification status of herds. In particular, they are responsible for arranging annual herd tests, with their private veterinary practitioners (PVPs), within timescales prescribed for them by the Department in order to comply with the Directive, and for payment of test performance fees directly to PVPs in respect of, in general, one test/annum. Farmers, in addition contribute towards the general cost of the eradication programme including research, reactor transport and additional compensation measures via a levy system, amounting to approximately €5m per annum.

4.2.5. Private Veterinary Practitioners

TB testing is, in general, performed by authorised PVPs, who are contracted to comply with the terms and conditions set out by the Department for tuberculin testing. PVPs are also reminded each year of the professional advices that they should provide to their clients in respect of bovine TB and procedures when a bTB outbreak has been detected or is underway. The Department ordinarily pays for the performance of any tests under the BTBEP additional to the legal yearly test requirement or pre-movement tests. PVPs are subject to ongoing monitoring and supervision by the Department. Furthermore herds experiencing an outbreak of TB are subjected to epidemiological investigation by Department personnel. During field visits by Department personnel, additional quality control checks are carried out on, testing facilities, the reactor animals with regard to the appearance, location and regression of reactions, fitness to transport and aspects of animal welfare. Random selections of samples are taken for IFN- γ assay correlation.

4.2.6. Milk Processors

Trade in milk is governed by Regulation 2004/853/EC of the European Parliament which establishes that milk originating from herds that do not have OTF status must be heat-treated and that milk from animals showing a positive or inconclusive reactor result to the tuberculin test must not be used for human consumption. Milk from the healthy animals in the herd can be used in the manufacture of milk products but must first undergo a heat treatment equivalent to pasteurisation provided authorisation has been granted. The Department is legally obliged to inform persons to whom milk is supplied of the restriction or de-restriction of a herd under the BTBEP. During the visits to the reactor herds, checks are carried out to ensure that reactors are isolated, that milk from reactor/inconclusive reactor animals is not being supplied to the food business operator (FBO) as per milk supply contract between producer and FBO and that it is being properly disposed of. Notices informing the FBO that a supplier herd is experiencing a breakdown and the number of cows involved (including inconclusive reactors) are automatically generated and sent by the Department's Animal Health Computer System (AHCS).

4.2.7. Valuers

In general, suitably qualified valuers, who are authorised by the Department, value reactor animals on the basis of current market values and by reference to guidelines drawn up by Department staff. The work of valuers is closely supervised by the Department. Department personnel visiting reactor herds

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will also report any visible defects of the reactors that might downgrade valuation, for cross referencing against the relevant valuation reports.

4.2.8. Reactor Collection Service

Reactors are, in general, transported free of charge from the holding to designated factories for slaughter. This service is operated by the Department on the basis of contracts awarded to private hauliers following a tender procedure. Hauliers are subject to supervision by the Department.

4.2.9. Factories tendering to receive reactors

Reactor animals (apart from exceptional cases where no compensation is payable to the farmer) are slaughtered by plants selected by the Department on the basis of a weekly tendering arrangement. Prices paid by the plant for reactors are monitored by ERAD on a regular basis.

4.3 Description and demarcation of the geographical and administrative areas in which the programme is to be implemented

Describe the name and denomination, the administrative boundaries, and the surface of the administrative and geographical areas in which the programme is to be applied. Illustrate with maps.

(max. 32000 chars) :

Ireland has 26 Counties which are divided into 29 DVO areas which are equivalent, for example, to the local veterinary unit within an autonomous community in Spain. 16 Regional veterinary office (RVO) units serve the 26 counties and 29 DVO areas. The programme in Ireland operates in the same manner throughout the country, the different counties are not separate regions and do not have any autonomous structures. The programme is operational throughout the 26 counties of Ireland and is implemented by the Department of Agriculture, Food and the Marine through the 16 RVOs. A Superintending Veterinary Inspector (SVI) oversees the veterinary aspects of the programme within the area. Implementation of the work of the RVOs is overseen by two AMTs, each consisting of a Senior Supervisory Veterinary Inspector (SSVI), an SVI, an R/AP and an Area Superintendent, covering the North and South of the country. These AMTs liaise with ERAD HQ in relation to implementation of the TB eradication programme (attached: 26 Counties of Ireland.pdf). A table is now attached to show the herds under the programme etc. in each county for 2013 (attached: County Breakdown 2013.doc).

4.4 Description of the measures of the programme

A comprehensive description needs to be provided of all measures unless reference can be made to Union legislation. The national legislation in which the measures are laid down is mentioned.

4.4.1 Notification of the disease

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(max. 32000 chars):

In full compliance with Directive 64/432/EEC, Bovine Tuberculosis is a notifiable disease under the Animal Health and Welfare Act 2013. Under legislation, veterinary practitioners, keepers and others who have reason to suspect that the disease may be present are required to notify the SVI at the RVO.

4.4.2 Target animals and animal population

(max. 32000 chars):

All bovine animals in Ireland are included in the programme. There is no category of herd, or individual animal greater than 6 weeks old or animals involved in cultural or sporting events excluded or exempted from tuberculin testing. For trade within Ireland, the current legal requirement is that each animal moving to the open market must have been tested within the previous 12 months and the holding is not under restriction.

4.4.3 Identification of animals and registration of holdings

(max. 32000 chars):

All herds are registered as the epidemiological units in accordance with Directive 64/432/EEC and the registration functions additionally for control of diseases not included in that Directive. Holdings are registered in accordance with Council Regulation (EC) No 73 of 2009. Ireland has operated a system of herd (epidemiological unit) registration and individual bovine tagging since the 1950s. The current national system (S.I. No. 77 of 2009 refers) is in accordance with Regulation 1760/2000. Ireland currently continues to maintain an individual animal passport/identity card. Movement control, from a disease and movement eligibility perspective, is enhanced by the linkage of the AHCS with the Animal Identification and Movement system (AIM) at markets and slaughter premises which ensures that movement of ineligible animals is prevented or detected. The most recent test dates for individual animals are displayed at point of sale in markets and for animals in the herd are available to the keeper who has access to his herd profile electronically. In the event of a detection of an ineligible animal, AIM sends an alert message to the RVO(s) with responsibility for the herds involved.

4.4.4 Qualifications of animals and herds

(max. 32000 chars):

The eradication programme is conducted under the Bovine Tuberculosis (Attestation of the State and General Provisions) Order, 1989 and amendments thereto (currently under consolidation and revision) under the Animal Health and Welfare Act 2013. The attribution, maintenance, suspension and withdrawal of qualifications are in accordance with Directive 64/432/EEC as amended. AHCS has been programmed to ensure compliance with Directive 64/432/EEC is maintained. At the end of each year Ireland reports to the EU as required under Regulation 2008/940 on surveillance done and suspect submissions for laboratory investigation from non-bovine domestic and wild species. Apart from bovines there are no animals routinely tested under the Bovine TB eradication programme. Dairy goat herds are required to have a TB control plan in place under Regulation (EC) 853/2004 laying down

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specific rules for food of animal origin. Under this plan goats that die on farm require p.m., goats slaughtered for human consumption will have veterinary examination and a number of skin tests will be performed. If dairy goats are on a holding with cattle they must be tested at the same frequency as the cattle. The 2013 census contained details of 945 keepers who had a total of 12,182 goats – 84% of keepers have less than 10 goats and only 3% have 100 or more goats. If (non-dairy) goats are present with a TB confirmed herd these are also required to be tested and, if there are test failures, or TB is suspected in these or any other species, it is compulsory to notify DAFM. Any animals of a susceptible species slaughtered for human consumption have a veterinary ante- and post-mortem examination. Suspect TB in all species is notifiable under Irish Law.

4.4.5 Rules of the movement of animals

(max. 32000 chars):

4.4.5.1 General rule on movement of animals: A bovine animal may only be moved out of or into a herd or accepted for routine slaughter at a registered abattoir/slaughter plant if the individual animal is identified and properly documented (passport or a movement permit). Bovine animals may not be moved into a herd or from a herd, except direct to slaughter, unless the herd from which it comes and the individual animal have been tested within the previous 12 months. Ireland complies fully with EU Directive 64/432/EEC in that it carries out 30-day pre-movement TB testing on all eligible bovines exported to the EU. In general, restricted herds, intending to move animals in, must have had at least one clear reactor retest. The only exceptions to this are herds that meet the feedlot criteria, restricted herds moving in replacement suckler calves (to replace a dead calf) or a stock bull and restricted herds moving in their own test negative animals on welfare grounds. In the very limited circumstances in which movements are permitted between restricted herds i.e. where the movement is necessary to alleviate or prevent a welfare problem and the movement of a stock bull into a restricted herd, Ireland requires a 30 day pre-movement test on the moved animals.

Note: A 'Feedlot' herd designation exists solely in the context of a TB diagnosis in the herd and consequent loss of OTF status and restriction. A Feedlot is merely a subset within those herds that operate a beef fattening enterprise. A 'Feedlot' herd is a herd that comprises a 'non-breeding' unit which disposes of all cattle direct for slaughter and fulfils at least one of the following three criteria: (i) the cattle are permanently housed (never on pasture) or (ii) there are no contiguous holdings/lands with cattle or (iii) the boundaries are walled, double fenced or equivalent so as to prevent any direct contact with cattle on contiguous lands/premises/holdings. Thus a Feedlot herd, is a herd that poses minimal risk of infecting other cattle because of effective isolation from other herds. 'Feedlot' herds that fatten females must have the capability of rearing any unplanned calves until slaughtered or OTF status has been restored. When a herd that meets the criteria to be regarded as a 'Feedlot' herd is restricted under the TB Order, either by virtue of test reactors or detection of *M. bovis* in a slaughtered animal, when veterinary opinion is that there is no evidence of a within-herd TB focus or spread of infection, a special official supervisory and testing protocol is established to, as far as possible, facilitate the enterprise to function as a commercial entity while complying with animal health legislation and practice. Such herds are not exempted from testing or disinfection requirements. Feedlot herds that continue to acquire and finish cattle while restricted are ineligible for compensatory payments for test reactors acquired while restricted. The ER22 requires that any manure and slurry on the holding is stored for at least two months prior to being moved off or spread on the holding (time is in effect a mechanical disinfection procedure). When TB is diagnosed, the restriction notice (ER22) specifies conditions with respect to disinfection of premises and equipment and also storage and spreading of manure/slurry that must be respected. Test reactors must be removed under permit and within the timeframe specified (ER30) by the DVO. OTF status will only be restored to a restricted feedlot herd in full compliance with Directive 64/432/EEC.

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(Report Sanco 2010-8408-6). When the OTF status is restored to an erstwhile feedlot designated herd no additional controls apply over and above any other OTF status herd.

Herds that are designated feedlot do NOT only source animals from restricted herds. The position is that the vast majority of Feedlots only source animals from OTF herds in the open market and never from restricted herds. However, some Feedlots will, when necessary to help to alleviate or prevent an animal welfare problem in a restricted herd, accept a proportion of cattle from these herds. Such cattle are subjected to a 30 day pre-movement test and therefore present minimal risk on movement. Feedlots which accept such cattle are immediately restricted (normally they will only accept such cattle when already restricted). As stated previously, Ireland believes that, because of effective isolation from other herds, the nature of the enterprise (no breeding stock kept and all stock supplied directly for slaughter), herds designated Feedlot pose minimal risk of infecting other cattle and, accordingly, may acquire animals to be finished for slaughter while status is withdrawn. In response to assumptions that there is no incentive to achieve OTF status please be advised that certain, higher value, markets have purchasing rules that go beyond EU Regulations and will only take meat from OTF herds, thus there is a financial incentive for feedlots to strive to attain and maintain OTF status.

Regulation (EC) no 854/2004 of the European Parliament and of the Council lays down specific rules for examination of animals intended for human consumption. It further provides that all animals that are presented to a slaughterhouse for slaughter must as a general rule be slaughtered there. Accordingly, where an animal not tested within the previous 12 months leaves a holding and is presented for slaughter, the animal will be slaughtered. However, appropriate action must be taken at herd level in order to ensure compliance with TB testing rules and to minimise the risk of onward spread of disease to other herds. Thus where an animal is presented for slaughter and the previous test on that animal is between 12-18 months the animal will be slaughtered but the test status of the herd will be assessed. Herds where more than 20% of individual animals have not been tested within the previous 12-months will be restricted. Where an animal is presented for slaughter and the previous test on that animal is in excess of 18 months, the animal will be slaughtered and the herd of origin will be restricted. (Report Sanco 2010-8408-5).

4.4.5.2. Movement of animals FROM a 'restricted' holding

Controlled trading rules apply to herds with restricted status (OTF suspended/withdrawn or trading status suspended i.e. are not allowed to trade animals on the open market). Since January 2013, the Department effectively manages and controls the movement of cattle from restricted herds through a permit system from AHCS for test reactors to slaughter or exceptionally to the DAFM research farm (Report SANCO 2010-8408-7) and for test negative animals through the AIM computer system. This AIM system is programmed to automatically prohibit all movement of animals from restricted herds, other than to slaughter and, if deemed necessary, movement even to slaughter can be prohibited. Restricted herds are identified as such by the AIM system and the controls by the system are such that it is not possible for a herdowner to move cattle from a restricted herd to another farm, or mart or for export. For example, if a herdowner attempts to move an animal from a restricted herd to a mart, the AIM system (which is linked to the mart) will "flag" the animal as coming from a restricted herd and will "reject" the animal at the mart, making it impossible for the animal to be sold. With regard to farm to farm movements, the AIM system requires all such movements to be subject to the prior issue of a "Compliance Certificate" by the system and, if the animal is located in a restricted herd, the system will not generate the "Compliance Certificate", thereby preventing the movement. The Department has made it clear to farmers that any attempt to move cattle from a restricted holding, other than to slaughter, (or in exceptional, mainly welfare, related cases, for test negative animals only with specific DAFM authorisation under permit to a feedlot (Report SANCO 2010-8408-7)) would result in a reduction

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in compensation payments and the application of penalties, under Cross Compliance, to payments made under the Single Payment Scheme and Rural Development Schemes. Any animals moving between restricted herds (OTF status suspended or withdrawn for TB rather than for administrative reasons) are required to have been tested with negative results within the 30 days prior to movement. By their nature exceptions are not normal and outward movements from restricted herds, other than directly to slaughter are avoided except when necessary to alleviate or prevent a welfare problem (which would then breach EU legislation). Where the movement is necessary, the movements take place under permit by DAFM and are permitted only if the moved animals have been clear on a test within the 30 days pre-movement. As stated by the TB Task Force during the meeting held in March 2014, any such movements lead to restrictions on the holding into which the animal has moved and on all epidemiologically linked units/holdings.

4.4.5.3 Movement of animals INTO a 'restricted' holding:

The Irish programme permits movements into restricted herds only under permit when such movements fully comply fully with Article 17 of Directive 78/52/EEC in that the herd is not re-stocked until the cattle over six weeks old remaining in it have passed one or more official tuberculosis tests after the slaughter of those animals considered to be infected.

The general rule is that, animals may not be moved into a restricted holding prior to the completion of a clear retest. However, the following categories of exceptions are provided for:

- Assembly of newly established herds (OTF status suspended)
- Introduction of a replacement stock bull(s) (The bull must have passed a TB test within the previous 30 days)
- Emergency replacement suckler calf (where a calf suckling a cow dies and must be replaced)
- Movement of a farmers own 'test negative' animals for welfare reasons. The movement must be necessitated by the need to alleviate or prevent a welfare problem and the animals in question must have passed a 30 day pre-movement test.
- Movement into a beef herd that meets the feedlot criteria where the SVI is satisfied that there is no evidence of within herd acquisition of infection (i.e. no evidence of transmission of infection)

Otherwise movement into a restricted herd may only be allowed under permit following a clear test conducted after the reactor or TB-infected animal(s) has been removed, where the SVI/VI-in-charge of the herd is satisfied, following the completion of a clear test, that the risk of exposure from and to the moved-in animals is minimal. The available research suggests that there is no statistically significant increased risk to introducing animals to a herd after a retest has been conducted regardless of the test result (Clegg, T.A., Blake, M., Healy, R., Good, M., Higgins I.M., More, S.J. (2013). The impact of animal introductions during herd restrictions on future herd-level bovine tuberculosis risk. *Preventive Veterinary Medicine* 109, (3–4):246–257 PREVET (2012), <http://dx.doi.org/10.1016/j.prevetmed.2012.10.005>). (Report SANCO 2010-8408-6, 2010-8408-7).

4.4.5.4 Movement of animals from herds contiguous to a high risk breakdown (TB and within herd spread evident) and movements of animals disclosing an inconclusive test result

In accordance with changes introduced in 2012, intended to curtail the movement of potentially infected animals following disclosure of a high risk breakdown, Department personnel assess the herd concerned, to determine, among other issues, the relevant contiguous herds, for which a special contiguous testing programme is to be implemented. Those herds on the contiguous testing programme, which have not been tested within the previous 4 months, are restricted, trading status temporarily suspended (other than to slaughter), pending test completion. As long as these herds remain OTF and on the programme, the same trade suspension pending test will apply from the 4-month anniversary of their previous test. RVOs may authorise permission for inward movement of stock

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under permit for a period not exceeding 30 days from the date of restriction. Free-trading status will be immediately restored once the herd reacts negatively to the test.

Since 2012, any animal that has been disclosed with an inconclusive reactor response, and that passes the mandatory retest at/after 42 days is prevented from moving for the duration of its lifetime, except to slaughter or exceptionally to a registered feedlot from where it shall move within a reasonable timeframe direct to slaughter.

In essence, the focus of the current controls is on the holding where TB has been identified (the "Index herd") where the herds occupying such holdings are immediately restricted and, in addition, on the herds adjoining (or contiguous to) an "index herd". The position is that TB outbreaks frequently cluster around index herds and their contiguous herds: the area covered by these herds is de-facto the high-risk area of relevance and these herds are subjected to additional testing. Ireland places herds which have experienced a high risk breakdown on a 6 month testing regime over an 18 month period after the herd tests clear of TB and OTF status is restored. This means that such herds are subjected to a more intensive testing regime (minimum 2 tests/annum) than other herds while they remain at higher risk of experiencing a further outbreak of bTB (12). In addition, herds which are adjoining a herd experiencing a high risk breakdown (i.e. contiguous herds) are placed on a programme of testing whereby a herd test is scheduled for the herd each 4 months while infection is still being identified in an index herd, with the intention that the last test under the programme for a contiguous herd would be carried out more than 60-days after the last positive reactor was removed from the index herd i.e. the programme of testing in the contiguous herds runs while the index herd is undergoing reactor retesting. The AHCS computer system has been programmed so that the programme of testing in contiguous herds runs automatically. In effect, when Ireland refers to high risk areas, these are de-facto the relevant areas. If badgers are implicated in the breakdown in the "index herd" a badger removal programme will be instigated (if not already operating) in the same area, taking into account the limitations on such badger removal necessitated under the Berne Convention and agreement with the responsible Irish CA. Any contiguous herd on a 'contiguous testing programme' is immediately restricted if it has not had a TB test within the previous 4 months and is only permitted to move cattle, other than direct to slaughter, following a clear test. In this manner, movement of potentially infected animals from such herds is controlled.

With regard to the implementation of severe interpretation, the post de-restriction or classification related check test regime provided for in the programme have, in the first instance, standard interpretation inconclusive reactors removed as reactor. However, if infection is confirmed by reason of the number of test reactors or otherwise, a more severe interpretation regime, including where appropriate only having regard to the reaction at the bovine site (i.e. effectively the SIT), will apply and the interferon- γ assay is employed with a view to removing all potentially infected animals in as short a time-frame as possible. In this manner Ireland ensures that all herds in high risk areas have higher frequency of testing and more severe test interpretation.

In summary, Ireland believes that a reduction of bTB recurrence requires effective implementation of multiple control strategies, focusing on identifying and removing residually infected cattle, and limiting environmental sources of infection, which in Ireland primarily relates to badgers. These strategies are already included in the programme. The approach to risk mitigation in the Irish programme was explained in greater detail to the TB-subgroup in March 2014 and, they did not therefore recommend an area based approach to higher frequency testing.

(12) F.J. Olea-Popelka P.W. White J.D. Collins J. O'Keeffe D.F. Kelton S.W. Martin (2004) Breakdown severity during a bovine tuberculosis episode as a predictor of future herd breakdowns in Ireland. Preventive Veterinary Medicine 63 163–172

4.4.5.5 Pre-movement tests

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Ireland complies fully with EU Directive 64/432/EEC in that it carries out 30-day pre-movement TB testing on all eligible bovines exported to the EU.

Ireland avails of the derogation provided for under point 1.1 (c) of Annex A to the Directive, which does not require pre-movement testing on all domestic movements. Ireland does not operate a network system as referred to in Article 14 of the Directive. For normal trade between herds within Ireland, S.I. No. 32 of 2003 provides the current legal basis. Each animal must have been tested within the previous 12 months and the holding not restricted. Special emphasis is placed on pre-movement testing and keepers are encouraged to acquire pre-movement tested animals, particularly potential breeding animals, as a key husbandry practice to assist herd health protection decided with their veterinary practitioners. To facilitate this it is a legal requirement that the date of the most recent tuberculin test is displayed on an electronic screen when an animal is presented for sale at market. Markets and slaughter premises have access to an on-line system to determine an animals' eligibility for movement to display the latest test-data available on AHCS (see section 4.4.6.3). In 2013, 316,567 male animals and 302,744 female animals moved herd within 30 days of a TB test some 256,947 animals were specifically individually pre-movement tested (private test) for TB, and other animals would have been tested during a herd level test immediately prior to movement. Research has indicated that the benefits of a nationwide compulsory pre-movement test (T.A. Clegg, S.J. More, I.M. Higgins, M. Good, M. Blake, D.H. Williams. (2008). Potential infection-control benefit for Ireland from pre-movement testing of cattle for tuberculosis. Preventive Veterinary Medicine 84 94–111) do not indicate that this is the most appropriate manner to expend resources. Alternative options such as increased herd test frequency of certain herds (ex-high risk herds, contiguous herds, traceback and traceforward herds) with increased herd test frequency and herd level restrictions when tests are due/overdue and animal level restrictions (e.g. ex-inconclusive reactors) are used to curtail movement opportunities for potentially infected animals. For 2014 onwards, Ireland requires any animals moving between restricted herds (OTF status suspended or withdrawn for TB rather than administrative reasons) to have been tested with negative results within the 30-days prior to movement. Such movements only take place in exceptional cases to prevent or alleviate a welfare problem.

4.4.6 Tests used and sampling schemes

(max. 32000 chars):

4.4.6.1 Types of tests used

The principal test used in the programme is the Single Intradermal Comparative Test (SICTT) as specified in Council Directive 64/432/ EEC (as amended) - See also section 2.

The Interferon Gamma assay is used under practical field conditions as an adjunct to the tuberculin test in bTB infected herds. The use of the interferon-gamma assay is targeted towards herds classified as high risk where the assay is of particular use if tuberculin testing has failed to speedily resolve the problem or where complete depopulation of the herd would be the only alternative. In all herds experiencing a high risk breakdown classified as a 'H' breakdown, following disclosure of reactors to the tuberculin test, consideration is given to having the remaining animals, particularly breeding animals, blood tested so that additional infected animals will be removed. This test makes available a mechanism to remove infection from the herd earlier than on foot of the follow-up tuberculin retest set at a mandatory minimum of 60 days from the removal of the last positive reactor.

Experimentally, the use of Gamma Interferon assay was also assessed in potentially exposed herds.

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However, while it continues to be used as an adjunct to the skin test in high risk herds, it did not prove suitable, for specificity reasons, to use as an additional screening test in contiguous herds. Gamma Interferon assay is also used for quality control and correlation purposes on a sample of SICTT reactors. Already in 2014 additional use is being made of the Interferon- γ assay and this has resulted in a greater number of total reactors being removed in the first half of 2014 than was removed in 2013 (i.e. ~1,300 additional reactors). However, rather than always awaiting confirmation of TB or for the first retest Ireland has commenced to introduce immediate sampling in herds where possible and where it is clear that the herd is infected (e.g. ≥ 4 reactors). Logistically this is not always possible (where, for example, it is not possible for samples to arrive in the laboratory within 6-hours of sampling) and thus Ireland is investigating the possibility of having the incubation phase of the assay conducted at regional centres. One Regional laboratory is currently operating in this manner and it is hoped to be in a position in 2015 to extend this to other regional laboratories and thus extend the use of the Interferon- γ assay further. Wildlife involvement in the outbreak is not considered particularly relevant to the determination of the benefit to conduct the Interferon- γ assay in a herd or to the necessity to identify and remove infected bovines as rapidly as possible and therefore it is not part of the criteria.

4.4.6.2 Annual "Round" screening test

Ireland requires each herd to be tested at least once every 12 months. The Department issues lists of herds with notification to test to PVPs throughout the year in advance of the anniversary from the previous herd test. Reminders are sent out as appropriate to ensure testing is carried out by the prescribed dates. Penalties for failure to test on time includes restriction of the herd, a reduction in/ forfeiture of compensation payments in the event of a breakdown, payment of testing fees (which would otherwise be paid for by the Department), possible prosecution and possible penalties on any payments due under the Single Payment and Rural Development Programme Schemes. Ireland complies fully with Commission Decision 2008/341 in that the BTBEP is based on the available relevant scientific knowledge and complies with Community Legislation. The measures of the BTBEP, as selected, are the most efficient and effective measures to achieve the objective within the duration of the Programme. The BTBEP is regularly monitored and evaluated on its efficiency and effectiveness. The tools and measures adopted are cost-effective.

4.4.6.3 Consequential/Supplementary testing

In accordance with Article 5 of Annex B of Directive 64/432, supplementary testing is part of the Irish TB programme. Herds and animals in restricted herds are risk-categorised on the basis of infection levels and are subject to a customised testing (interpretation and test frequency) regime. The epidemiological investigation indicates the focus of risk and relevant epidemiological linkages and thus forms the basis for requiring testing (termed special check testing) outside the normal frequency of testing in OTF herds. The title of the test (test type) also determines the prioritisation for completion e.g. a round test is the annual test issued in conformity with the Directive for those herds with risk category D (default) – this is the lowest risk category – and, while it must be completed within the prescribed time frame (i.e. yearly), it has the lowest priority. All bTB infected herds are scheduled for a test six months post OTF restoration. Thus more frequent testing is conducted on higher risk herds and in herds adjacent to these herds e.g.:

- following OTF restoration after a high-risk breakdown, herds are placed on a 6-monthly herd-testing regime for the succeeding one and a half years (Post-de-restriction/ special check test).
- following disclosure of a high risk breakdown, a special testing programme for herds assessed as at risk by virtue of being contiguous to infection (contiguous tests);
- tests are additionally conducted on herds with epidemiological links, including traceback and trace-onward indicating a risk of infection (special check test).

The effect of the first two tests mentioned above is to ensure that higher risk herds are subject to herd tests at six-monthly intervals for a two year period unless a test of higher priority dictates more frequent

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tests (e.g. contiguous test). Notifications to test are sent out in advance to ensure testing is carried out by the prescribed dates. Failure to test on time will lead to restriction of the herd, payment of testing fees which would otherwise be paid for by the Department, a reduction in/forfeiture of compensation payments in the event of a breakdown, possible prosecution and possible penalties on any payments due under the Single Payment and Rural Development Programme Schemes.

In line with the recommendation in the report of the Task Force, Ireland plans, in 2015, to introduce enhanced controls on the movement of animals out of High Risk herds, in particular, by shortening the 6-month movement window in the post de-restriction regime which currently applies to these herds. Research is on-going and will include further analysis of the 2011-2013 data presented at the meeting in March, as requested by the Task Force, to establish the optimal time window for movement out of these herds. The Task Force did not, however require a more general application of pre-movement testing stating "A general use of pre-movement testing is not recommended as it may provide a false sense of security without giving enough additional reduction of the risk".

Post Mortem Surveillance:

Post mortem surveillance of animals slaughtered for human consumption and traceback of all granulomatous lesions detected with restriction of supplying herd pending laboratory diagnosis is a fundamental part of the TB eradication programme. Some 1.6M bovines are slaughtered annually. The annual non tuberculous granuloma detection target rate at 1.5/1,000 slaughtered (rate in 2013 = 1.6/1,000) ensuring adequate surveillance for the occurrence of TB granulomas which are then in addition to the 1.5/1,000. The rate of confirmed TB granulomas per 10,000 animals slaughtered has fallen from 20.7 in 2007 to 14.7 in 2013, which shows a continuing declining trend. There has been a significant improvement in the incidence of the disease since 1999. For example, reactor numbers have fallen from approximately 45,000 animals in 1999 to 15,612 in 2013. The herd incidence also continues to fall and has declined from 7.7% in 1999 to 3.88% in 2013. As referred to previously in this section, Ireland complies fully with EU Directive 64/432/EEC.

4.4.7 Vaccines used and vaccination schemes

(max. 32000 chars) :

As previously detailed, there is no TB-vaccine approved and licensed throughout the EU for use in either bovine animals or affected wildlife species. Over the last 10-years, Ireland has been involved in a research project to develop such a vaccine for use in badgers; efficacy of a candidate vaccine has been confirmed at laboratory level and a 3-4 year duration field trial commenced in 2009 (Aznar, I., McGrath, G. E., Murphy, D., Corner, L.A.L., Gormley, E., Frankena, K., More, S.J., Martin, W., O'Keeffe, J.J., De Jong, M.C. M., 2011. Trial design to estimate the effect of vaccination on tuberculosis incidence in badgers. *Veterinary Microbiology* 151, 104–111) to evaluate efficacy in badgers in a natural environment. If the trial demonstrates sufficient efficacy it is Ireland's intention to progress to a situation where oral badger vaccination will be incorporated into the programme as a matter of routine. Further vaccine trials were initiated in 2012 comparing intra-muscular vaccination of badgers with BCG to continued culling. These will run to the end of 2017 so that efficacy of vaccination may be assessed. Currently all badger vaccines are delivered to the individual badger post capture i.e. capture/vaccinate/release. Work is continuing to attempt to develop an effective methodology of delivering vaccine to badgers that will not require individual capture and thus a number of ecological based studies are continuing.

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4.4.8 Information and assessment on bio-security measures management and infrastructure in place in the holdings involved.

(max. 32000 chars) :

Advice on appropriate bio-security measures is provided by the Department to herdowners via direct advice from the local RVO in the event of a breakdown, leaflets, publicity etc. In addition, in herds with high risk breakdowns payment of compensation is conditional on the cleansing and disinfection of the holding following a breakdown with an approved disinfectant effective against TB. Compliance checks are carried out on herds following risk assessment of the consequences of failure to complete disinfection. Furthermore, the legislation empowers the veterinary inspector to confine animals to or exclude them from particular areas of the holding if the disease epidemiological situation so warrants. (Report SANCO 2010-8408-6).

4.4.9 Measures in case of a positive result

A short description is provided of the measures as regards positive animals (slaughter, destination of carcasses, use or treatment of animal products, the destruction of all products which could transmit the disease or the treatment of such products to avoid any possible contamination, a procedure for the disinfection of infected holdings, the therapeutic or preventive treatment chosen, a procedure for the restocking with healthy animals of holdings which have been depopulated by slaughter and the creation of a surveillance zone around infected holding)

(max. 32000 chars) :

Under legislation, veterinary practitioners are required to notify the SVI at the RVO of details of all positive and inconclusive test results within 3 days. Some 98% of test results are communicated electronically from the office of the testing PVP and the RVO via a link to AHCS.

In general, where reactors are identified and/or suspect lesions detected at slaughter, the holding of origin is restricted, the status of the herd is suspended (or withdrawn), and reactor animals are removed for slaughter. Where reactors are eligible for compensation they will be generally removed via the reactor collection service, which is organised by the Department. Legislation provides an immediate restriction when a test reactor or TB suspect animal is disclosed and DAFM then issues a formal restriction notice in respect of the holding. The restriction can only be lifted by issue of a formal derestriction notice. A quality control procedure is carried out, where possible within 5 working days of the receipt of a notification of a breakdown, with regard to testing, reactors identified, isolation of reactors and disinfection as well as an assessment of contiguous herds, animal welfare and testing facilities.

Controls on the movement of animals into and out of a restricted holding are described at Pars 4.4.5.2 and 4.4.5.3 above. Slurry and manure storage and premises disinfection requirements are specified on the ER22 restriction notice (issued under the TB Order 1989) and may subsequently be varied during the course of an investigative farm visit. The ER22 requires that disinfection be carried out using an approved disinfectant (TB) and that any manure and slurry on the holding is stored for at least two months prior to being moved off or spread on the holding (time is in effect a mechanical disinfection procedure) (Report SANCO 2010-8408-6). Further procedures are notified directly to the farmer and appropriate follow-up re-testing takes place until the final clearance test shows the herd to be clear and the status is then restored in accordance with Directive 64/432/EEC. Compliance with the disinfection requirements are checked and penalties are applied where non-compliance is detected (Report SANCO 2010-8408-6, 2010-8408-8).

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In addition, as described above, a special contiguous testing programme is conducted for relevant herds adjoining the infected herd with a high risk breakdown and some such herds will have movement restrictions imposed pending test (i.e. at 4-month anniversary of previous herd test) – see Section 4.4.5.4. Tests are additionally conducted on herds with epidemiological links indicating a risk of infection.

All TB infected herds are scheduled for test 6-months post status restoration and, following restoration of status after a high risk breakdown, herds are placed on a 6-monthly herd-testing regime for the succeeding one and a half years.

Notwithstanding the above, in certain circumstances, as provided for in Directive 64/432/EEC Annex A I 3A(b), where herds disclose a single tuberculin reactor and the herd is classified as low-risk as determined by the epidemiological criteria set down below, the disease status of herds is 'suspended' rather than 'withdrawn' and the holding is restricted. Criteria for consideration under "singleton" protocol are as follows:

- 1) one reactor disclosed at the index test
- 2) the bovine minus avian increase differential must be less than 12 millimetres
- 3) no oedema present at the bovine site.
- 4) the herd must not have had its OTF status withdrawn due to bTB during the 3 years prior to this reactor and
- 5) none of the contiguous herds are concurrently undergoing a High risk breakdown

The holding will be de-restricted where the criteria for eligibility continue to be met: TB is not confirmed at post mortem, laboratory examination is negative, the herd has been subjected to SICTT conducted at least 42 days after the removal of the reactor animal and the results of the herd level SICTT are negative. As provided for in the Directive, this protocol may, in exceptional cases, be applied to herds with multiple reactors where it is apparent that the herd is not infected with TB.

Where a granulomatous lesion (suspect TB) is detected at a slaughter plant in a carcase from an animal originating in a clear herd, the holding is immediately restricted, the suspect lesion is subjected to laboratory examination and the herd is then subjected to the appropriate testing regime as defined in Council Directive 64/432/EEC, as amended.

Serious consideration is given to herd depopulation, full or partial, where the level of infection in the herd is such that, despite standard and repeated tuberculin testing, the application of the Interferon gamma assay, epidemiological assessment and strategic removal of individual animals within the herd, disease continues to spread. The herd or infected group must be subjected to the Interferon gamma assay where it has not already been used, and then the suitability for removal of the entire infected group (partial depopulation or in-contact removal) must be assessed. When the assay and/or in-contact removal has failed to resolve the problem, depopulation of the herd must be considered. As a more general rule, cases where more than 30% of the herd has tested positive may lead to depopulation being considered, whereas if 50% of the herd are reactors then depopulation must be considered. Depopulation must also be considered where the epidemiological assessment determines that control of TB in the herd or area will be otherwise compromised such as by an inability to implement satisfactory controls in the herd. Where herd depopulation has been deemed necessary, the SVI determines an appropriate rest period for the land usually of about four months during which the keeper may not restock. Furthermore, unless badgers have been excluded as a cause of the outbreak a badger capture programme will be conducted and a programme of testing undertaken in contiguous herds.

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Where depopulation is necessary to ensure infection is removed from a herd or to remove a source of infection to a neighbourhood, it takes place in the entire epidemiological unit and it has always been part of the Irish programme. The figures provided in reports are, therefore, only where the entire epidemiological unit has been depopulated. Consideration of the criteria for depopulation, so as to ensure that this tool is used to its full potential, whenever a control benefit could be derived from it, as suggested by the TB Task Force has not yet been completed. Increased and judicious use of the gamma interferon assay has reduced the imperative to depopulate herds.

4.4.10 Compensation scheme for owners of slaughtered and killed animals

(max. 32000 chars) :

The BTBEP takes into account the income loss experienced when a herd is restricted and reactors are removed. Compensation in line with market values is provided for under the On-Farm Market Valuation Scheme. Prior to their removal, reactor animals are valued on the basis of current market prices, with a right of appeal provided for the keeper. The keeper is paid the carcase-salvage value directly by the slaughter plant and the differential between this salvage value and the market valuation is paid by the Department. Compensation reflects individual animal market value but is subject to ceilings. Compensation entitlements are subject to compliance with the rules of the scheme, the Directive (64/432/EEC) and also other legislative obligations such as bovine animal identification Regulations (1760/2000). A penalty system, which varies with the degree of non-conformance, is in place.

4.4.11 Control on the implementation of the programme and reporting

(max. 32000 chars) :

Control and implementation of the programme rests with the Competent Authority at headquarters in conjunction with the Area Management Teams at regional level. The implementation of the programme takes place in regional RVOs. Controls on implementation include scheduling of tests, checks on testing returns, removal of infected animals, epidemiological investigations and all aspects of the programme, including evaluation of results, delivery and quality control aspects. To facilitate control and implementation, considerable use is made of computerised systems developed by the Competent Authority specifically for the task, such as AHCS, Herdfinder and the AIM database.

- AIM is live at markets, export points and slaughterhouses. Through linkage to AHCS AIM provides information in real time before sale/slaughter on animal status, TB test data and movement/export eligibility, information including an animal's compliance with identification, Animal Health requirements and eligibility for sale/slaughter. In particular, certification of live animals for export may only be completed if all checks on AIM confirm full eligibility.
- AHCS is live at all but the smaller slaughterhouses. This ensures prompt recording of detection of suspect TB granulomas, notification of detections to DVOs and thereby ensures prompt restriction of supplying herds pending laboratory examination of the detected granuloma.
- Linkage of AHCS and the Laboratory Information System (LIMS) at the CVRL ensures that samples submitted to the laboratory from
 - o smaller slaughterhouses, under contract to the FSAI (see section 4.2.3) or
 - o other locations
- will be notified to RVOs so that supplying herds may be restricted as appropriate. This linkage also

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ensures that RVOs may monitor the progress of samples through the laboratory.

- Linkage of Veterinary Practitioners electronically to AHCS is designed to facilitate herd profile production (download) immediately preceding testing and prompt upload of test results to DAFM RVOs.
- The AHCS and the AIM are interlinked and thus more closely monitor the testing of the national herd, ensure that animals cannot evade the annual or any herd-level test, allows greater analysis of data, trace-onward/back and epidemiological investigation tracking.
- The Geographic Information System based 'Herd Finder' programme is used to rapidly locate and identify herds that may be, or may have been, at risk of exposure.

Additionally, resources have been allocated to continue to provide intensive laboratory analysis, including culturing and strain typing at DAFM's CVRL.

A series of dedicated and specific periodic reports are produced, via the above systems, as a routine to monitor programme implementation and delivery on an on-going basis as well as trends in the incidence of the disease, quality control of testing veterinarians etc. These reports are examined in the context of regular meetings of the ERAD Management Committee. Further data generated by the programme are analysed so as to determine specific risk factors, as required by Decision 2008/341/EC, that may militate against disease eradication or where modification of the programme would be indicated e.g. Clegg, T.A., Good, M., Duignan, A., Doyle, R., More, S.J. (2011). Longer-term risk of Mycobacterium bovis infection in Irish cattle following an inconclusive diagnosis to the single intradermal comparative tuberculin test. Preventive Veterinary Medicine. 100:147-154. doi:10.1016/j.prevetmed.2011.02.015

4.4.12. Dissuasive action in the case of non-compliance:

Where farmers fail to comply with the requirements of the TB eradication scheme, a number of actions can be taken ranging from warning notices and restriction of the herd, to requiring farmers to pay for testing otherwise payable by the Department, to sanctions on or non-payment of compensation, to penalties on payments under other EU funded schemes and, ultimately, to prosecution. (Report SANCO 2010-8408-13)

5. Benefits of the programme

A description is provided of the benefits of the programme on the economical and animal and public health points of view.

(max. 32000 chars):

The agriculture, food and the marine sector continues to make a significant contribution to the Irish economy and the most recent figures available suggest it accounts for 7.1% of GVA at factor cost, 9.2% of employment and 12.3% of all goods exported. Within agriculture, over 70% of output value is from the production of beef and milk. Given the predominant position of the dairy and beef sector in Irish agriculture and as a generator of very substantial foreign earnings from the export of livestock and livestock products, the projected expenditure of approx. €62m (including staffing costs) will yield significant benefits, in terms of improving (i) the overall health of the national herd population and (ii) the ability of Irish farmers and exporters to trade in livestock and livestock products. For maximum efficiency in utilisation of limited national resources, Bovine Tuberculosis testing is predominantly carried out in conjunction with Brucellosis testing of herds.

The programme is aimed at the eradication of bTB in Ireland. The existence of bTB in the country results

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in significant income losses to farmers in terms of (i) reduced productivity, restrictions on trade (ii) testing costs and (iii) levies on production. In addition, the existence of the disease involves considerable public expenditure on disease eradication measures, thereby imposing a heavy burden on the Irish taxpayer. A successful eradication policy – or a significant reduction in the incidence of the disease – would reduce the financial burden arising from these losses/costs to farmers and taxpayers. In fact, the cost of the programme has fallen from €80m in 2008 to €55.2m in 2013, mainly as a result of the significant reduction in the incidence of the disease during that period. The number of herds restricted due to TB has also been reduced by over 50% during the past 10 years, thereby ameliorating the economic impact of this disease on cattle farmers. A value for money review of the BTBEP which was completed in 2008 concluded that the public expenditure on the programme has enabled the Irish Livestock industry to maintain and develop exports markets for cattle and beef. In addition, it found that the net impact of the Programme has been to facilitate the growth of the Irish cattle industry by creating and enhancing export opportunities and by improving the productivity of cattle rearing. The export trade in beef, was worth €2.1 billion in 2013, is dependent on the effective implementation of the eradication Programme. The benefit of improved market access accrues to the farmer producer and to the processing sector in the first instance, while the benefits of improved animal productivity and public health accrue primarily to the farmer producer. Society at large also benefits from the Programme's impacts in these three areas to the extent that the improved economic performance of the farming industry spills over into the wider economy and to the extent that the Programme contributes to enhanced public health. In addition, any improvement in the disease situation will reduce the burden on the national exchequer and, accordingly, the taxpayer.

As stated in 3, the objective of the programme is the eradication of bovine TB. Notwithstanding that, as noted in the 2014 report of the Task Force, progress is steady but slow and herd incidence has fallen by 34% between 2008 and 2013. It is inevitable that achievement of the objective of eradication will take a considerable time. The reasons for this are set out in 3. The factors outlined at 3. also explain why it will be difficult to achieve the targets set by the Commission in SANCO 10181/2014. In addition, the disease statistics reported by Ireland exaggerate the incidence of disease in the country. This arises from the fact that there are approximately 1,000 herds, each year in Ireland, where reactors are identified and removed but TB is not confirmed. This is as a consequence of the Specificity (Sp) of the Single Intradermal Comparative Tuberculin Test (SICTT) which is in the region of 99.985%. As Ireland is a country that has TB it is not possible to determine the precise Sp of the SICTT. However, even with a Sp of 99.985%, there will be false positive reactors ~15/100,000 tests. At current level of testing in Ireland (~8M individual animal tests) some 1,200 animals will test positive, even if there was no actual infection, and a ~1% herd incidence consequently is to be expected. If, as it has done to date, Ireland continues to report every herd with a test reactor, regardless of TB confirmation or not, (and the test is done accurately) herd incidence will not decline below 1% and thus this base line 1% is factored into the expected decline in herd incidence and has to be taken into account in assessing achievement of the target set.

Notwithstanding the foregoing, our objective is to achieve the targets set out in WD SANCO/10181/2014 rev2 and these (again using the definitions in Decision 2008/940). These targets are set out in table 7.1.2.1.

For brucellosis (bovine and small ruminants) and tuberculosis, if an annual programme is submitted, please provide also the targets for herd incidence and prevalence, and the animal prevalence for at least 3 years (including the year for which the programme is submitted).

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6. Data on the epidemiological evolution during the last five years

yes

6.1 Evolution of the disease

Evolution of the disease : Not applicable Applicable...

6.1.1 Data on herds for year : **2013**

Region	Animal species	Total number of herds	Total number of herds under the programme	Number of herds checked	Number of positive herds	Number of new positive herds	Number of herds depopulated	% positive herds depopulated	Indicators			
									% herds coverage	% positive herds Period herd prevalence	% new positive herds Herd incidence	
Ireland	Bovines	115 765	115 765	114 051	4 640	4 430	22	0,474	98,519	4,068	3,884	X
Total		115 765	115 765	114 051	4 640	4 430	22	0,474	98,519	4,068	3,884	

Standard requirements for the submission of programme for eradication, control and monitoring

	Add a new row
--	----------------------

6.1.2 Data on animals for year : **2013**

Region	Animal species	Total number of animals	Number of animals to be tested under the programme	Number of animal tested	Number of animals tested individually	Number of positives animals	Slaughtering		Indicators		
							Number of animals with positive result slaughtered or culled	Total number of animals slaughtered	% coverage at animal level	% positive animals Animal prevalence	
Ireland	Bovines	6 146 958	6 146 958	6 055 947	6 055 947	15 612	15 612	16 325	98,519	0,26	X
Total		6 146 958	6 146 958	6 055 947	6 055 947	15 612	15 612	16 325	98,52	0,26	
								ADD A NEW ROW			

6.2 Stratified data on surveillance and laboratory tests

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6.2.1 Stratified data on surveillance and laboratory tests for year : 2013

Region	Animal Species	Test Type	Test Description	Number of samples tested	Number of positive samples	
Ireland	Bovine	serological test	Gamma Interferon	14 621	8 637	X
Ireland	Bovine	serological test	Elisa	4 136	1 194	X
Ireland	Bovine	microbiological or virological test	Microbiological	4 556	2 203	X
Ireland	Deer	microbiological or virological test	Microbiological	74	39	X
Ireland	Badger	microbiological or virological test	Microbiological	2 141	234	X
Ireland	Sheep	microbiological or virological test	Microbiological	7	0	X
Ireland	Goats	microbiological or virological test	Microbiological	4	0	X
Ireland	Dogs	microbiological or virological test	Microbiological	1	0	X
Ireland	Cats	microbiological or virological test	Microbiological	9	4	X
Ireland	Alpaca	microbiological or virological test	Microbiological	2	1	X
Ireland	Goats	other test	SICTT	950	0	X
Total				26 501		
				ADD A NEW ROW		

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6.3 Data on infection

Data on infection

Not applicable

Applicable...

6.3 Data on infection at the end of year :

2013

Region	Animal Species	Number of herds infected	Number of animals infected	
Ireland	Bovines	3 056	8 472	X
Total		3 056	8 472	
			Add a new row	

6.4 Data on the status of herds

Data on the status of herds :

Not applicable

Applicable...

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6.4 Data on the status of herds at the end of year : 2013

Status of herds and animals under the programme																
		Not Free or not officially free from disease														
Region	Animal Species	Total number of herds and animals under the programme		Unknown		Last check positive		Last check negative		Free or officially free from disease status suspended		Free from disease		Officially free from disease		
		Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	
Ireland	Bovines	115 765	6 146 958	0	0	1 425	178 122	1 087	116 976	289	33 970	0	0	112 964	5 817 890	X
Total		115 765	6 146 958	0	0	1 425	178 122	1 087	116 976	289	33 970	0	0	112 964	5 817 890	
										Add a new row						

Standard requirements for the submission of programme for eradication, control and monitoring

6.5 Data on vaccination or treatment programmes

Data on vaccination or treatment programmes is Not applicable Applicable...

6.6 Data on wildlife

Data on Wildlife is: Not applicable Applicable...

6.6.1 Estimation of wildlife population for year : **2013**

Region	Species	Method of estimation	Estimation of the population	
Ireland	badger	hunting bag	80 000	X
			ADD A NEW ROW	

6.6.2 Disease surveillance and other tests in wildlife for year :

2013

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Region	Species	Test type	Test Description	Number of samples tested	Number of positive samples	
Ireland	badger	microbiological test	-	2 141	234	X
ADD A NEW ROW						

6.6.3 Data on vaccination or treatment of wildlife for year : **2013**

Region	Square km	Number of doses of vaccine or treatment to be administered	Number of campaigns	Total number of doses of vaccine or treatment administered	
Ireland - vaccines	3 740	740	2	740	X
Ireland - badgers removed	3 740	6 103	0	6 103	X
ADD A NEW ROW					

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7. Targets

The blocks 7.1.1, 7.1.2.1, 7.1.2.2, 7.2, 7.3.1 and 7.3.2 are repeated multiple times in case of first year submission of multiple program.

7.1 Targets related to testing (one table for each year of implementation)

7.1.1 Targets on diagnostic tests for year : **2015**

Region	Type of the test	Target population	Type of sample	Objective	Number of planned tests	
Ireland	Tuberculin Skin test	Bovines	SICCT	Programme implementation	8 500 000	X
Ireland	Gamma Interferon Assay	Bovines	Heparinised Blood	Programme implementation and Research	15 000	X
Total					8 515 000	
Add a new row						

7.1.2 Targets on testing herds and animals

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7.1.2.1 *Targets on testing herds*

Not applicable

Applicable...

7.1.2.1 *Targets on the testing of herds for year :* **2015**

Region	Animal species	Total number of herds	Total number of herds under the programme	Number of herds expected to be checked	Number of expected positive herds	Number of expected new positive herds	Number of herds expected to be depopulated	% positive herds expected to be depopulated	Target indicators			
									Expected % herd coverage	% positive herds Expected period herd prevalence	% new positive herds Expected herd incidence	
Ireland 2015	Bovines	115 300	115 300	114 930	3 839	4 160	25	0,65	99,68	3,34	3,62	X
Ireland 2016	Bovines	115 300	115 300	114 930	3 359	3 952	21	0,63	99,68	2,92	3,44	X
Ireland 2017	Bovines	115 300	115 300	114 930	2 879	3 744	18	0,63	99,68	2,51	3,26	X
Total		345 900	345 900	344 790	10 077	11 856	64	0	99,68	2,92	3,44	
									Add a new row			

7.1.2.2 *Targets on testing animals*

Not applicable

Applicable...

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Region	Animal species	Total number of herds and animals under the programme		Expected not free or not free from disease						Expected free or officially free from disease status suspended		Expected free from disease		Expected officially free from disease		
		Herds	Animals	Expected unknown		Last check positive		Last check negative		Herds	Animals	Herds	Animals	Herds	Animals	
Ireland	Bovines	115 300	6 300 000	0	0	1 375	160 000	1 000	116 000	225	27 000	0	0	112 700	5 997 000	X
Total		115 300	6 300 000	0	0	1 375	160 000	1 000	116 000	225	27 000	0	0	112 700	5 997 000	
												Add a new row				

7.3 Targets on vaccination or treatment

7.3.1 Targets on vaccination or treatment is Not applicable Applicable...

7.3.2 Targets on vaccination or treatment of wildlife is Not applicable Applicable...

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7.3.2 Targets on vaccination or treatment of wildlife for year : 2015

Region	Square km	Targets on vaccination or treatment programme			
		Number of doses of vaccine or treatments expected to be administered in the campaign	Expected number of campaigns	Total number of doses of vaccine or treatment expected to be administered	
Ireland	3 740	300	2	600	X
Total		300		600	
			Add a new row		

Standard requirements for the submission of programme for eradication, control and monitoring

8. Detailed analysis of the cost of the programme

8.1 Costs of the planned activities for year :

2015

The blocks are repeated multiple times in case of first year submission of multiple program.

To facilitate the handling of your cost data, you are kindly requested to:

1. Fill-in the text fields IN ENGLISH
2. Limit as much as possible the entries to the pre-loaded options where available.
3. If you need to further specify a pre-loaded option, please keep the pre-loaded text and add your clarification to it in the same box.

1. Testing							
Cost related to	Specification	Unit	Number of units	Unitary cost in EUR	Total amount in EUR	Union funding requested	
Cost of analysis	Tuberculin test	-	8 500 000	0.3	2 550 000	yes	X
Cost of analysis	Department Paid Testing	-	2 260 000	4.09	9 243 400	yes	X
Cost of analysis	Gamma-Interferon Assay Lab analysis	-	15 000	15.23	228 450	yes	X
Cost of sampling	Gamma Interferon Assay fees	-	15 000	2.54	38100	yes	X
					Add a new row		
2. Vaccines							
Cost related to	Specification	Unit	Number of units	Unitary cost in EUR	Total amount in EUR	Union funding requested	
Purchase of vaccine/treatment of animal product	BCG	600	600	11.03	6618	no	X

Standard requirements for the submission of programme for eradication, control and monitoring

							Add a new row	
3. Compensation paid to owners								
Cost related to	Specification	Unit	Number of units	Unitary cost in EUR	Total amount in EUR	Union funding requested		
Compensation of animals	Slaughtering/culling with salvage value	Animal	16 500	750	12,375,000	yes	X	
Compensation of animals	Slaughtering/culling with salvage value	Animal	1	2,520,000	2,520,000	no	X	
Transport costs	Slaughtering/culling with salvage value	Animal	16 500	40.91	675,015	no	X	
							Add a new row	
4. Cleaning and disinfection								
Cost related to	Specification	Unit	Number of units	Unitary cost in EUR	Total amount in EUR	Community funding requested		
							Add a new row	
5. Slaughtering/culling costs								
Cost related to	Specification	Unit	Number of units	Unitary cost in EUR	Total amount in EUR	Union funding requested		
							Add a new row	
6. Other costs								
Cost related to	Specification	Unit	Number of units	Unitary cost in EUR	Total amount in EUR	Union funding requested		
Salaries	FRS Contract employees	-	1	2,257,760	2,257,760	no	X	
Wildlife Salaries	-	-	1	1,262,561	1,262,561	no	X	
Supplies	-	-	1	509,000	509,000	no	X	

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Badger Vaccination Trial	-	-	1	1,300,000	1,300,000	no	X
Wildlife Unit Travel	DAFM Staff	-	1	354,485	354,485	no	X
Travel & subsistence, computerisation, Publicit	-	-	1	4,000,000	4,000,000	no	X
DAFM Staff Salaries	DAFM Staff	-	1	25,000,000	25,000,000	no	X
					Add a new row		
Total					62 320 389		

8.2 Co-financing rate:

The maximum co-financing rate is in general fixed at 50%. However based on provisions of Article 5.2 and 5.3 of the Common Financial Framework, we request that the co-financing rate for the reimbursement of the eligible costs would be increased:

- Up to 75% for the measures detailed below
- Up to 100% for the measures detailed below
- Not applicable

Please explain for which measures and why co-financing rate should be increased (max 32000 characters)

Ireland operates a badger control programme that includes capture and vaccination, see table 8 above for a breakdown of the costs involved. Ireland requests that this element of the BTBEP be considered for co-funding under Article 12(h) of the Common Financial Framework on the basis that the wildlife programme has and is continuing to contribute to a significant reduction in the incidence of TB in the country. There has been a

Standard requirements for the submission of programme for eradication, control and monitoring

8.3 Source of national funding

Please specify the source of the national funding:

- public funds*
- food business operators participation*
- other*

Please give details on the source of the national funding (max 32000 characters)

The majority of the national funding for the programme is provided by the national exchequer. Food business operators (farmers), pay levies of €1.27 per animal slaughtered or exported and €0.06 per litre of milk, amounting to €5m a year, towards the overall cost of the TB and Brucellosis eradication schemes. These disease levies are to be replaced shortly under the Animal Health and Welfare Act 2013 by Health Levies (at the same rate) and will no longer be linked specifically to the TB and Brucellosis eradication schemes but will have general application across the entire animal health area. Farmers also pay for one test per year, thereby saving the national exchequer approximately €25m per year.

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Attachments

IMPORTANT :

- 1) The more files you attach, the longer it takes to upload them .
- 2) This attachment files should have one of the format listed here : **jpg, jpeg, tiff, tif, xls, xlsx, doc, docx, ppt, pptx, bmp, pna, pdf.**
- 3) The total file size of the attached files should not exceed 2 500Kb (+ 2.5 Mb). You will receive a message while attaching when you try to load too much.
- 4) IT CAN TAKE **SEVERAL MINUTES TO UPLOAD ALL THE ATTACHED FILES.** Don't interrupt the uploading by closing the pdf and wait until you have received a Submission Number!
- 5) Only use letters from a-z and numbers from 1-10 in the attachment names, otherwise the submission of the data will not work.

List of all attachments

	Attachment name	File will be saved as (only a-z and 0-9 and -_):	File size
	3817_3383.pdf	3817_3383.pdf	498 kb
	3817_3384.pdf	3817_3384.pdf	46 kb
	3817_3385.doc	3817_3385.doc	70 kb
	3817_3386.doc	3817_3386.doc	57 kb
		Total size of attachments :	671 kb