



**Programmes for eradication, control and surveillance of animal diseases and zoonoses
submitted for obtaining EU financial contribution**

**Annex I.b: Programme for the eradication of bovine tuberculosis, bovine brucellosis or
sheep and goat brucellosis (*B. melitensis*)**

Member States seeking an EU financial contribution for national programmes of eradication, control and surveillance shall submit online this document completely filled out by the 31 May of the year preceding its implementation (Art. 2 of Decision (EU) 2015/2444 and Art. 12 of Regulation (EU) No 652/2014).

For multiannual programmes already approved, this document shall also be filled out and submitted after selection of the options:

This programme is multiannual: "YES"

"Funding request for subsequent year of already approved multiannual programme"

If encountering difficulties:

- concerning the information requested, please contact SANTE-VET-PROG@ec.europa.eu.

- on the technical point of view, please contact SANTE-BI@ec.europa.eu, include in your message a printscreen of the complete window where the problem appears and the version of this pdf: 2019 1.02

Instructions to complete the form:

- 1) You can attach documents (.doc, .xls, .pdf, etc) to complete your report using the button "Add attachments" on the last page of the form.
- 2) Before submitting this form, please use the button "Verify form"(bottom right of each page). If needed, complete your pdf document as indicated.
- 3) When you have finished completing this pdf document, save it on your computer.
- 4) Verify that your internet connection is active and then click on the "Submit notification" button and your pdf document will be sent to our server. A submission number will appear on your document. Save this completed document on your computer for your record.
- 5) For simplification purposes you are invited to submit multi-annual programmes.
- 6) You are invited to submit your programmes in English.

Member state : PORTUGAL

Disease : Bovine Brucellosis

Species : Bovines

This program is multi annual :

Request of Community co-financing for year :

1. Contact data

Name : Yolanda Vaz Phone : 00 351 213 239 650

Email : secdspa@dgav.pt Your job type within the CA : Head of Animal Protection Unit

Submission Date
28/09/2018 12:21:54

Submission Number
1538133716788-14781



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

2. Historical data on the epidemiological evolution of the disease

Provide a description on the target population (species, number of herds and animals present and under the programme), and the main results in the last 5 years (incidents, prevalence, qualification of herds and animals). The information is given for distinct periods if the measures were substantially modified.

(max. 32000 chars) :

Portugal is implementing the co-financed bovine brucellosis eradication programme (BBEP) since 1991, and holdings covered by the programme have a health status attributed in accordance with Council Directive 64/432/EEC of 26 June and its amendments and National Decree-Law 244/2000 and 79/2011. Portugal started the BB programme with 1% of positive holdings and 0.55% of positive bovines and reduced its prevalence by half with 10 years of implementation of the programme, improving at the same time its organization and information system.

In 2001, RB51 vaccine was introduced as a tool to accelerate eradication in certain islands of the Autonomous Region of Azores (RAAzores) and in 2010 in certain areas of the Continent with a positive progress of the epidemiological situation.

Due to the improvement of brucellosis status of herds, the RAAzores obtained the officially free status to 4 islands (Graciosa, Pico, Flores and Corvo) in 2002 and 2 more in 2009 (Santa Maria and Faial). By 2012, Algarve, one of the 5 veterinary regions of the continental territory, was also recognized as officially free of bovine brucellosis.

The bovine brucellosis eradication programme (BBEP) carried out in 2017 for the non-officially free region of Portugal (4 regions of the continental territory and 3 islands of the RAAzores) resulted in a positive evolution on herd prevalence.

The implementation of BBEP is very important regarding the advantages of the eradication not only due to the positive impact of the safety of products of animal origin but also on the market position of the national herds. The programme is advancing in a pre-eradication phase.

The BBEP was implemented as foreseen in 2017, reaching a coverage at herd level of 97.06%.

Decreasing tendency was observed in the herd apparent prevalence (herds with at least one serologically positive animal) from 0.22% to 0.20%, and in herd incidence (from 0.17% to 0.18%). The percentage of positive animals had a slight increase (from 0.036% to 0.042%). All regions are below 0.5% in herd prevalence.

CONTINENTAL TERRITORY:

In the Continent, coverage at herd level was 99.39%, varying from 97.22% in the LVT region to 99.99% in the Norte region.

There was a decrease in the herd apparent prevalence (from 0.21% to 0.17%) and in herd incidence (from 0.17% to 0.15%). The percentage of positive animals had a slight increase (from 0.04% to 0.047%). All regions are below 0.5% in herd prevalence.

The variation of apparent herd prevalence by region, from 2016 to 2017, was the following:

- Norte – increase 5.5% (from 0.18% to 0.19%)
- Centro – reduction (0.03% to 0.00%)
- LVT – 57.9% reduction (from 0.19% to 0.08%)
- Alentejo – 36.2% reduction (from 0.58% to 0.37%)

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

There were only 48 herds with at least one positive animal and 43 were new positive (89%). Infection was confirmed by bacteriology in 20 herds out of 40 herds investigated (50%).

All positive animals were subjected to sanitary slaughter and those coming from newly infected herds were subjected to organ collection for bacteriology. The percentage of positive animals slaughtered with isolation of *Brucella* was 40.54% - 45 from 111 samples tested. These bacterial isolations were obtained in 3 regions:

- 44 *B. abortus*: 36 from Norte and 8 from Alentejo
- 1 *B. melitensis*: from Lisboa e Vale do Tejo.

The geographical distribution of infected herds (B2.1) by 31/12/2017 is presented in Annex. By the end of 2017, only in the Norte region had one county with more than 3 infected herds. It can be observed that the confirmed presence of *B. abortus* is now clustered to 2 areas of the country.

The percentage of free (B3) and officially free (B4) herds was 99.52%. The percentage of suspended free (B3S) and suspended officially free (B4S) herds was 0.38% and the main reasons for attributing a suspended status was: non negative serology (20.7%); delays in regular sampling (47.4%); irregularities on animal movement (26.7%). Brucellosis suspicion accounts for only 5.2% of the suspensions of free status.

At 31st December 2017, 22 herds had an infected status. These herds are located only in 2 regions: 15 at Norte (68.2%) and 7 at Alentejo (31.8%).

Herds health status by region by end of 2017, was as follow:

- Norte (DSAVRN) – 16.040 tested herds, 22 non-officially free herds (B2) and 46 suspended herds (B4S/B3S). The bovine production is characterized by small production units, averaging 9 bovines over 12 months of age tested per herd.

- Centro (DSAVRC) - 6.347 tested herds, no non-officially free herds (B2) and 22 suspended herd (B4/B3). This region also presents a majority of small holding, averaging 12 bovines over 12 months of age tested per herd.

- Lisboa e Vale do Tejo (DSAVRLVT) – 1.329 tested herds, no non-officially free herd and 29 suspended herds (B3/B4). This region has an average of 45 animals over 12 months of age tested per herd.

- Alentejo (DSAVRALT) – 4.371 tested herds, 9 non-officially free herd and 19 suspended herds (B3/B4). Alentejo has a production system, with larger herds, most reared in extensive systems, where holdings have their own land without much contact between herds. Herds had an average of 95 bovines over 12 months tested under the programme.

Vaccination with RB51 was applied in 366 herds (1076 animals). Targets on vaccination for 2017 programme were of 420 herds (2400 animals).

See graph in the annex, regarding the evolution over time of vaccinated herds and animals.

The BBEP foresees the investigation of positive and infected herds in order to access the origin of infection. For this evaluation a specific data collection questionnaire is used (epidemiological enquiry). These enquiries are implemented with the objective to establish possible links to other holdings (trace-back and trace-forward) and characterize possible risk factors and sources of infection.

In 2017, 23 epidemiological inquiries were carried out at the continent. The main probable reasons identified, in order of importance was the direct contact with ruminants from other holdings (94.4%), introduction of animals (73.7%) and sharing pastures (52.6%). Please see graphs and tables in the annex.

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

At the continent there were no samples of abortions or placenta tested for Brucellosis.

According to the Directorate-General for Health (DGS), there were 16 notified and confirmed human cases of brucellosis in 2017 (50 in 2016), that represents an improvement. These 16 cases were distributed by the following districts:

- 1 case - Aveiro, Bragança, Setúbal and Vila Real;
- 2 cases - Castelo Branco, Coimbra, Lisboa, Porto, Santarém and Viseu.

Compulsory pre-movement testing has been applied to avoid the entrance of infected bovine in free and officially-free herds, with the following data registered at 2017 for the continent:

- 16.861 holdings / 72.353 animals.

AUTONOMOUS REGION OF THE AZORES (3 ISLANDS):

In 2017, the BBEP reached a coverage of 79.51% (2984 herds tested in a total of 3753 herds). Although the coverage of the herds submitted to serological controls/checks was less than 100%, milk ELISA test are quarterly conducted on all holdings in S. Miguel, Terceira and S. Jorge (total of 1826 herds tested). Therefore, the coverage of surveillance was 100%.

In 2017 there were 14 herds with positive animals and 14 with new positive animals, 14 herds were submitted to bacteriological tests, none of which was confirmed the presence of *Brucella abortus*. Therefore herd apparent prevalence was 0.47% and the percentage of positive animals was 0.01%, with no *B. abortus* confirmation. These values are similar to those of the previous years.

Although herd prevalence in blood test have increased a little, it is still residual and below 1%.

The percentage of free (B3) and officially free (B4) herds was 99.87% showing a positive progress. The percentage of suspended free (B3S) and suspended officially free (B4S) herds was 0.12% The main reasons for attributing a suspended status was non-negative results to serology and delays in regular sampling.

No infected animals have been detected since September 2006 at Terceira and since February 2009 at S. Jorge. The last isolation of *B. abortus* in S. Miguel Island was in October 2014.

Vaccination with RB51 was carried out at S. Miguel and 1.323 herds/17.789 animals were vaccinated. Targets on vaccination for 2017 programme were of 1.543 herds /18.013 animals.

In 2017, 31 epidemiological inquiries were carried at S. Miguel island and no suspicion of infection was consolidated.

There were 27 notified abortions in the RAA, 1 from S. Miguel and S. Jorge, 21 from Terceira (and 4 from other Officially free Regions), all with negative results regarding brucellosis.

No human cases of brucellosis were notified.

Compulsory pre-movement testing registered at 2017 has been applied to 154 herds with the total of 622 animals tested, distributed as follow:

- S. Miguel – 28 herds/ 113 animals;
- Terceira – 51 herds / 277 animals;
- S. Jorge – 75 herds / 232 animals.

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

AUTONOMOUS REGION OF THE MADEIRA (RAM):

The Brucellosis eradication programme started in 2018 and no evidence of this disease was found so far.

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) :

OBJECTIVES AND POPULATION:

The objective of the current programme is to achieve in the medium term disease-free status for all regions in Portugal. This objective requires the early detection of all outbreaks of disease and its elimination and to maintain the status of herds which are already of the disease. It is therefore necessary to ensure the coverage of all population, the rapid elimination of animals identified as reactors, the monitoring of compliance with re-inspection schemes of herds and the control of animal identification and movement.

BBEP programme covers all bovines over 12 months age with the exception of males for fattening provided that they come from isolated officially brucellosis-free herds and that they will not be used for breeding and will go directly for slaughter.

The classification of areas, based on the minimum area of a Food and Veterinary Intervention Division (DAV), is the decisive strategic objective for the implementation of the programme.

In the Continent, BBEP will be implemented throughout the territory except in the Algarve region (officially disease-free).

Regarding the Autonomous Region of the Azores, the programme will continue to be implemented in three islands and vaccination with RB 51 will only continue at S. Miguel.

During 2018, Autonomous Region of Azores will ask for recognition of Terceira and S. Jorge islands as officially brucellosis-free islands.

At the present time, 98% of herds of Terceira and S. Jorge are classified as B4.

For the second year, the programme will continue at the two islands of the Autonomous Region of Madeira (RAM), Madeira and Porto Santo, screening all bovine in accordance to the national eradication programme, in order to achieve the officially disease-free status of the disease for RAM. Taken into consideration the results from previous years, the objective is to perform an eradication programme for a period of 5 years (2018-2022).

ACTIVITIES:

The BBEP is based on the classification of herds through a test and slaughter policy, with compensation to farmers. In some areas RB51 vaccination is applied.

Data regarding herds, animals and actions on the animals regarding the programme are inserted and managed in a computerized information official system PISA.Net (informatic Programme for Animal

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

Health).

PISA.Net has different profiles of access authorized by DGAV for by each participant, as follows:

- OPP registers all sanitary action on the animals;
- Laboratories register results;
- DSAVR attribute sanitary classification of holdings, imposes sanitary restrictions and systematically evaluates and monitors the work performed at different levels;
- DGAV at central level (DSPA) analyses data on the implementation of the programme and also for evaluation and reporting.

Official diagnostic tests are the serological Rose Bengal tests (RBT), as screening test, and the Complement Fixation Test (CFT), as confirmatory test when serial diagnostic is applied.

In line with the objective, serological diagnosis is part of:

- (1) the surveillance activities for maintenance of the health status;
- (2) the eradication measures and validation of absence of infection when applied following detection of a positive animal;
- (3) to clarify risk situations, when applied in contact holdings following an epidemiological investigation and,
- (4) in pre-movement tests, mandatory for all bovine animals over 12 months of age within 30 days before entering to a breeding herd.

ELISA milk test is also used as a diagnostic test in dairy herds under the conditions defined in the current programme.

Bacteriological diagnosis is applied in serological positive animals detected in herds where brucellosis was not yet confirmed (B3/B4 herds). Samples are collected from animals subjected to sanitary slaughter by official veterinarians.

A bovine is considered positive for brucellosis when it is positive to RBT and has CFT ≥ 20 IU/ml.

In B2 (infected with last test negative) and B2.1 herds (infected), an animal positive to RBT and/or CFT is considered positive to brucellosis.

A brucellosis infected animal is the one with bacteriological isolation

An infected herd is the one where infection was confirmed, either through bacteriological confirmation, through epidemiological evidence or when the repetition of tests with positive results does not allow discarding the presence of brucellosis. The investigation of positive herds with 1-2 reactors with low CF titre will be carried out according with the protocol to investigate the possible false-positive serological reactions. The herds where it was not possible to discard brucellosis will be considered positive.

Details of sampling and testing scheme are provided in point 4.4.6.

Classification of herds: following the serologic surveillance, holdings covered by the programme have a health status attributed in accordance with Council Directive 64/432/EEC of 26 June and National Decree-Law No 244/2000 of 8 November 2000. Health status is assigned or amended by the regional official veterinary services (DSAVR), and are the following:

- officially brucellosis-free (B4);
- brucellosis free (B3);
- non-disease free, including herds which are undergoing health measures (B2) and infected herds (B2.1 – with isolation of *B. abortus* or *B. melitensis*).

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

The dynamic assignment, maintenance and change of health status is defined in the programme and described in point 4.4.4.

Measures in case of positive holdings include:

- suspension of status and restriction of movements of animals and products ("sequestro");
- epidemiological investigation;
- procedures for determination of infection when a false serological reaction is suspected, including retesting of positive animals or the herd. In cases where it is possible to discard brucellosis the suspicion is withdrawn and the herd regain the qualification and the herd will not be registered as a positive herd.

Detailed measures are described in point 4.4.9.

Regarding the Autonomous Region of Madeira (RAM), eradication programme was adopted in 2018 with the aim to have all holdings covered with 2 tests performed with 6 months interval, with a health status attributed, in accordance with Council Directive 64/432/EEC and national legislation. This programme will be carried out during a period of 5 years.

4. Measures of the submitted programme

4.1 Summary of measures under the programme

Duration of the programme: 2019 - 2019

- Eradication
- Testing
- Slaughter of animals tested positive
- Vaccination

Other, please specify

4.1.1 Timeline for the eradication

Provide the timeline foreseen for the eradication with detailed justification (max. 32000 chars):

According to the Working Document SANTE/2017/10186, Rev 1, "guidelines for the Union co-funded

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

programmes of eradication, control and surveillance of animal diseases and zoonoses for the years 2018-2020", when compared to 2015, the expected results (targets) considering minimum % reduction of 30%, will be as follows:

- herd prevalence: 0.17% in 2018, 0.15 % in 2019 and 0.12% in 2020;
- herd incidence: 0.14% in 2018 , 0.13% in 2019 and 0.1% in 2020.

It has to be taken into account that the reduction could be lower, because Portugal is close to the eradication, being the last steps more difficult to manage and to achieve. However it seems possible to achieve the targets foreseen for this programme, with the decrease to 0.20% herd apparent prevalence, achieved in 2017.

The evolution of indicators at the Autonomous Region of Azores (RAAzores), suggests that brucellosis have been eradicated, as no isolation of Brucella as been obtained.

The Autonomous Region of Madeira (RAM) will achieve the free health status in 5 years, if absence of brucellosis is confirmed as expected.

4.1.2 Interim targets in relation to the timeline for eradication

based on herd prevalence and herd incidence at different periods in link with the timeline for eradication (max. 32000 chars):

Regarding the Continental territory, as explained, there are regional differences in the epidemiological situation of bovine brucellosis. The best situation is in Centro region, with no isolation of Brucella since 2015. Algarve Region is officially free and maintains its status.

At the moment and taken into consideration results from the previous years, expected foreseen timeline for eradication will be as follow:

- 2018 – 0.17% herd prevalence and 0.14% herd incidence
- 2019 – 0.15% herd prevalence and 0.13% herd incidence;
- 2020 – 0.12% herd prevalence and 0.1% herd incidence;
- 2021 – 0.08% herd prevalence and 0.0% herd incidence;
- 2022 – 0.04% herd prevalence;
- 2023 – 0.00% herd prevalence.

Regarding the Autonomous Region of Azores, there was an interruption of vaccination in 2016, at Terceira and S. Jorge, in order to obtain the status of "Islands officially brucellosis-free bovine" at the end of 2018 (three years after cessation of vaccination as Community legislation). However, the Veterinarian Services of these two islands have been classifying the holdings as officially free (B4) that do not have females vaccinated less than 3 years ago.

S. Miguel will have to wait until 3-4 years without vaccination to require the status of "Island officially brucellosis-free bovine. We expect to stop vaccination in 2020.

Regarding the Autonomous Region of Madeira (RAM), taken into account data on the previous years (since 2002) and that the eradication programme started in 2018, the goal would be to eradicate by 2022.

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

Although it has been difficult to eradicate the disease progress have been achieved in the last few years, and best efforts are being taken by official and private veterinary services. Being the last step of the eradication more difficult to manage and taking into consideration the need of 5 consecutive years of 99.8% officially free herds, the goal would be to eradicate bovine brucellosis at least by 2025.

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 stakeholders. Explain which actions are taken to actively involve the stakeholders in the implementation of the programme.

(max. 32000 chars) :

Continental territory:

The Directorate-General for Food and Veterinary (DGAV) is the authority responsible for the control and eradication of Bovine brucellosis and its central service, the Directorate for Animal Protection (DSPA) is responsible for coordinating and monitoring the programme.

Four Regional Directorates for Food and Veterinary (DSAVR), decentralised services of DGAV (Norte, Centro, Lisboa e Vale do Tejo and Alentejo), are responsible for overseeing the implementation of the various activities under the programme in their area, for the attribution of the health status for the herds and the implementation of restrictions in positive herds. DGAV/DSAVR is also responsible for monitoring compliance with the legal requirements arising from the agreements signed with the OPPs.

Most field activities of this programme are implemented by private veterinarians from Livestock Producers Organisations (OPPs) which annually submits sanitary programme to be approved by the official services. There is one veterinary co-ordinator per OPP. Each OPP is assisted by several veterinarians. OPP is responsible for: animal identification, vaccination, blood sampling, computerization of the data in PISA.Net and communication to the regional veterinary services of all irregularities.

Collection of blood samples from animals is carried out by OPP in around 99% of herds and by the DSAVRs or veterinarians employed by them in 1% of herds. The entity that collects the samples is also responsible for submitting them to the laboratory. Sampling during sanitary slaughter is carried out by the official veterinary inspector of the DSAVR.

All laboratories involved in Brucellosis Eradication Programmes are accredited by Portuguese Accreditation Body, named IPAC.

The National Institute for Agrarian and Veterinary Research (Instituto Nacional de Investigação Agrária e Veterinária, I.P., hereinafter - INIAV, I.P.) is the national reference laboratory (NRL) for food safety, animal and plant health.

INIAV, I.P., is the NRL for brucellosis and is responsible for the coordination and technical supervision of the official laboratories and the harmonization of the testing methods used, following guidelines supplied by EURL and OIE Manual. Since 2014, there are two delegations of INIAV performing official samples for brucellosis serology. One is located in the Norte (Vila do Conde) and the other in Alentejo (Évora). These delegations perform Rose Bengal Test (RBT) and Complement Fixation Test (CFT). Brucella Bacteriological examination and typing of Brucella are only performed at NRL at central level and the

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

results are electronically communicated to DGAV.

In the Continental territory, there are 7 private official laboratories located at the following districts:

- SEGALAB – Porto;
- PROLEITE – Aveiro;
- UADS – Viseu;
- LMV – Santarém;
- ASSISVET – Setúbal;
- COPRAPEC – Évora;
- ACOS – Beja.

Those laboratories carry out serological tests (RBT, CFT and iELISA) and issue the results in PISA.Net.

Regarding the activities implemented by the NRL to effectively monitor and control the technical competence of such official laboratories, Quality Assurance Office (QAO) of INIAV, since September 2010 advised them to participate in PT0015 “Brucella abortus CFT”, PT0020 “Brucella abortus RBT and PT0018 “Brucella abortus milk ELISA” organized by VETQAS (APHA Scientific) and their results are monitored by QAO.

VETQAS’s a APHA’s independent, accredited, proficiency testing service provided by the APHA’s Quality Assurance Unit (QAU). Recognised by national accreditation bodies, it is ISO/IEC 17043 accredited and is a market leader in the provision of proficiency tests schemes for veterinary laboratories, with over 30 years’ experience.

NRL provides technical training for staff either for initial qualification or for requalification on RBT, CFT and ELISA techniques. NRL provides official Labs with Positive Control Serum for RBT and CFT techniques.

Bovine producers and traders have the responsibility to provide access and the necessary means to carry out the necessary interventions on the animals, to comply with the rules on identification and animal movement, to allow loading and transport for slaughter of positive animals and to comply with the movement restrictions and depopulation periods imposed following total slaughter. They have the right to be compensated for the value of their animals compulsory slaughtered or culled provided that they fulfill their responsibilities under the applicable legislation.

Autonomous Region of Azores (RA Azores):

The authority responsible for coordinating and monitoring the Bovine Brucellosis Eradication Programme is the Regional Directorate of Agriculture, via the Directorate for Veterinary Services.

The implementation of measures is co-ordinated on each island via a veterinarian who is a Head of Division or Head of the Veterinary Service Sector of the Agricultural Development Service of the island, who may request cooperation from veterinarians from other bodies. The measures under the plan are implemented by technicians from the agricultural development services of the different islands.

Since 2016, in S. Miguel Island, the Official Services have protocols firmed with Farmers Associations and those private veterinarians perform the blood sampling and vaccination, unless in positive herds, that is performed by Official Veterinarians. Serological diagnostic testing, milk ELISA testing and bacteriological examinations for the isolation, identification and typing of Brucella are carried out in the LRVA - Regional Laboratory of the Autonomous Region of the Azores.

Autonomous Region of Madeira (RAM):

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

The authority responsible for coordinating and monitoring the Brucellosis Eradication Programme is the Regional Directorate of Agriculture (DRA), via the Directorate for Food and Veterinary Services (DSAV), unit from DRA. Blood samples will be collected by DSAV and data will be introduced in PISA.Net. The Regional Laboratory of Veterinary and Food security of RAM (LRVSA) is authorized by DGAV to perform RBT while FCT and bacteriology are carried out by INIAV (Instituto Nacional de Investigação Agrária e Veterinária, I.P.).

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) :

The programme will be implemented to the whole Continental territorial territory of Portugal with the exception of Algarve, which has officially disease-free status. The area covered by the Directorate for Food and Veterinary of the Algarve Region (DSAVRALG), corresponding to the geographical area of the district of Faro, is therefore excluded.

Regions covered by the programme are identified in the attached document (map) and are the following:

- Directorate for Food and Veterinary of the Norte Region (DSAVRN);
- Directorate for Food and Veterinary of the Centro Region (DSAVRC);
- Directorate for Food and Veterinary of Lisboa e Vale do Tejo (DSAVRLVT);
- Directorate for Food and Veterinary of the Alentejo Region (DSAVRALT).

In the Autonomous Region of Azores (RAA) the programme will be implemented in three of the nine islands of the Azores:

- S. Miguel;
- Terceira;
- S. Jorge.

In the Autonomous Region of Madeira (RAM) the programme will be implemented in two islands:

- Madeira;
- Porto Santo.

4.4 Description of the measures of the programme

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

4.4.1 Notification of the disease

(max. 32000 chars) :

Brucellosis is a notifiable disease since 1953 and appears the annex of Decree Law No 39:209 of 1953. The requirement to notify is reinforced by national Decree-Law No 244/2000 of 27 September. Disease treatment is strictly prohibited.

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

Laboratories approved by DGAV to perform diagnostic tests notify the veterinary services and insert serological results in PISA.Net.

Notification of abortions is under article 7 of Decree-Law No 244/2000 of 27 September 2000 and Order 178/2007, with last amendments, where animal Keepers are required to notify abortions occurring in female bovine, sheep and goats animals to the OPP veterinarian.

The notification must give rise to an epidemiological investigation and the collection of material for bacteriological diagnosis.

The veterinarian is responsible for identifying risks and to inform DGAV. The procedural rules for collecting and sending material from abortions to the laboratory were drawn up jointly by the DGAV and the INIAV and are published on website.

INIAV, as NRL (pursuant to article 4(c) of Decree-Law 244/2000 of 27 September 2000), carries out bacteriological diagnostic tests and sends out the results to DGAV. An investigation is conducted on the holding of origin in response to positive results on testing for Brucella.

Following a positive serology or a positive result in investigation of abortions, the health status of a herd is suspended and appropriate measures are carried out. These procedures are described in the guidelines for bovine brucellosis, named as "Manual de Procedimentos para a Classificação Sanitária de Efetivos", and published at DGAV website.

SNIRA database is also updated when requirements for maintaining a herd's disease-free or officially disease-free status are not met, allowing the ban of animal movements between holdings.

4.4.2 Target animals and animal population

(max. 32000 chars):

BBEP programme covers all bovines over 12 months old with the exception of males for fattening provided that they come from officially brucellosis-free isolated herds and that they will not be used for breeding and will go directly for slaughter.

In non-disease free herds (B2) all bovines over 6 months old are checked.

In officially disease-free herds (B4), the age of the bovines to be checked is determined according to the epidemiological indicators of the region and the respective risk assessment.

Animal population for the BBEP in the Autonomous Region of the Azores also covers all female bovines over 12 months of age and all breeding males in herds on the islands of S. Miguel, Terceira and S. Jorge. Although herd coverage is less than 100% where serological checks are concerned, Milk ELISA tests are conducted on all holdings at S. Miguel, Terceira and S. Jorge islands.

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

4.4.3 *Identification of animals and registration of holdings including detailed reference to relevant Union legislation and its implementation in the Member State for this disease*

(max. 32000 chars) :

Decree-Law No 142/2006 of 27 July 2006 and its amendments, regulates the National Animal Information and Registration System (Sistema Nacional de Informação e Registo Animal - SNIRA) and lays down measures for the identification, registration and movement of bovine animals, with specific regard to the accompanying documentation required. SNIRA for bovine consists of three essential elements, namely:

- Ear tags for individual identification of animals;
- Individual passport mandatory only for animals intended for intra-Community trade;
- Updated registration of movements per holding extracted from the database;
- National computerised database (SNIRA) with holding registration and each animal and its movement, which is the base of updated farms registration.

All bovine holdings are identified with a unique holding code (ME), attributed by DGAV and are recorded in SNIRA database. This thus contains all cattle producer and their premises and animals.

The bovine passport is issued only for bovine animals intended for intra-Community trade. The PB has the registration of the identity of the animal, the current holding, the holdings where the cattle went by and the health status of the herd.

All bovines are identified with a unique number applied to the animal in two ear tags, one in each ear. Ear tags are attributed to the holdings, officially authorized, and the respective keeper is responsible for this identification and as well to communicate to SNIRA database the birth of any animal within 7 days from the date of identification. Identification is mandatory and can not exceed 20 days from the date of birth of the animal.

4.4.4 *Qualifications of animals and herds including detailed reference to relevant Union legislation and its implementation in the Member State for this disease*

(max. 32000 chars) :

As already mentioned, all holdings covered by the programme have a health status in accordance with Council Directive 64/432/EEC of 26 June 1964 and national Decree-Law No 244/2000 of 8 November 2000.

The existing health status for holdings are:

- B2 - not free;
- B3 - free (if there are vaccinated animals for less than three years ago);
- B4 - officially free.

And in complement:

- B2.1 - when isolation of Brucella is officially confirmed, post mortem or other;
- B 3S - suspended free status;
- B 4S - suspended officially free status.

According to national legislation an "epidemiological unit" can be a holding or a group of holdings and this classification will be decisive for the preparation and implementation of the programme. These concepts apply uniformly throughout the mainland.

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

This health classification is maintained or changed, according to the criteria set out at the legislation and guidelines named as “Manual de Procedimentos para a Classificação Sanitária de Efetivos”, published at DGAV.

Herds are considered as “Officially Free of Bovine Brucellosis” (B4) if:

- the testing programme has been completed;
- there are no vaccinated bovines, with the exception of females vaccinated at least three years ago;
- all bovines over 12 months old which entered into the herd from another herd with the same status tested negative in RB and CF tests (pre-movement tests) 30 days prior to their introduction to the herd of destination, in accordance with the rules set out in the relevant manual produced by the DGAV.

The status of “Brucellosis-Free” (B3) is attributed to herds which meet the requirements for B4 status, but which include females vaccinated less than three years ago.

B3 and B4 status may be maintained in accordance with the methodology described in point 4.4.6.

Disease-free and officially disease-free status are suspended (B3S, B4S) in the following situations:

- Following a positive serological test;
- As a result of the detection of brucellosis following an abortion notification;
- If the Epidemiological Inquire (EI) reveals the possibility of infection;
- When there are no conditions for the herd to be classified as free or officially disease-free (whenever the plan is not being fulfilled);
- For any other reason considered relevant to the strategy against brucellosis by the veterinary services.

B3 and B4 health status are regained whenever:

- following the slaughter of animals with positive results (CFT), two serological tests were carried out with negative results on all animals over 12 months old (the first serological test 30 days after slaughter and the second 60 days after the first), and bacteriological results of the samples taken during slaughter were negative.
- in other cases of suspension, where two negative serological checks were carried out on all animals over 12 months old, at an interval of at least 60 days.

B3 and B4 health status are withdrawn wherever the presence of *Brucella* is confirmed though its isolation in a bacteriological examination of samples taken from sanitary slaughter or life in suspect animals. The herd is then classified as non-disease-free, infected (B2.1)

Infected herds are considered non disease-free, or undergoing health measures (B2) when they have obtained negative results in two successive serological tests carried out to all cattle over six months old, with the first check being carried out 30 days after the slaughter of the last animal which tested positive, and the second 60 days after the first.

B2 herds regain B3/B4 status if they obtain negative results in two successive serological tests, with a minimum interval of 3 months, performed to all bovine animals over six months of age.

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

4.4.5 Rules of the movement of animals including detailed reference to relevant Union legislation and its implementation in the Member State for this disease

Please detail also the rules existing for transhumance and common grazing areas, if any.

(max. 32000 chars):

National Decree-Law No 142/2006 of 27 July 2006 and its amendments, lays down measures for the monitoring of movements of bovine animals.

When animals are transferred from one holding to another, or when they go directly for a slaughterhouse they must be accompanied by a movement document (named as "Guia de circulação") currently issued from the SNIRA database according to the health status of holdings involved.

There is a web service between SNIRA and PISA.Net used to validate the movement. The conditions for each movement are part of the informatics system validation. The validation determines the type of movement authorized, the document that is necessary and who can obtain it. The system is prepared to emit alerts that will help veterinary official services to perform control activities.

The movement document can therefore be obtained directly from the online system by the animal Keeper or at an information collection point located at the Official Veterinary Services (OVS) or at Agricultural Confederations reception desks.

Despite the emission of the Movement document ensures the movement's registration on the SNIRA database, the Keeper of the holding of destination must notify the computerised database of the entrance of the animal within the period of 7 days, and this procedure is mandatory to update the information in the system.

Irregularities to animal movement rules are detected either during visits to the farms or through reports of SNIRA database and infractions are subjected to administrative offense.

In order to support the maintenance of B3 and B4 status, animals entering the holding must come from holdings with B3 or B4 status and been submitted to pre-movement testing up to 30 days before entry (combination of the RB and CF serological tests). Procedures for the implementation of pre-movement tests at national territory are published at DGAV website.

Due to the favorable epidemiological indicators of the Azores, in this region the pre-movement tests (TPM) can be exempted when the movements are within the island, after a case-by-case assessment.

Animal movement of herds under surveillance are always under official control and there are several controls in place, such as:

- Systematic trace back is carried out and contact herds are serological investigated (data on field work is entered by OPP on PISA.net, allowing DSAVR to control the compliance with the registered checking's and the number of animals present in the holdings);
- Restricted holdings are blocked in the electronic database that issues movement permits, therefore animals are not authorized to move, except directly to slaughter;
- Whenever links are identified, related holdings are subject to restrictions (or even considered the same

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

epidemiological unit if contacts are regular).

4.4.6 Tests used and sampling and testing schemes including detailed reference to relevant Union legislation and its implementation in the Member State for this disease (including herd frequency per region, animal coverage in each herd, interpretation rules of the test,...)

*For bovine tuberculosis, please detail how the quality/reliability of the skin-testing is ensured/verified (training and supervision of field veterinarians, recheck of some officially-free herds by the official veterinarians, quality insurance system in force if any, etc. ...)
Please detail also how the surveillance of bovine tuberculosis is monitored in slaughter houses (Training of vets, monitoring of the lesions submission rates and positivity rates, link with the field vets in case of positive results, etc. ...)*

(max. 32000 chars) :

Laboratory testing procedures are carried out in accordance with Council Directive 64/432/EEC of 26 June 1964 and its amendments and national Decree-Law No 244/2000 of 27 September 2000.

The organization of sampling within BBEP takes into account the following aspects:

- Percentage of infected cattle herds with bovine brucellosis does not exceed 1% of herds in the country;
- Requirements for the Enzootic Bovine Leucosis programme - only serological testing by sampling is required in most regions of the country, as they are officially Enzootic Bovine Leucosis-free;
- Certain DAV (Food and Veterinary Health Units) have at least 99.8% of cattle herds free and officially free of brucellosis over the past 4 years (Alentejo Central, Alentejo, Litoral, Aveiro, Braga, Bragança, Castelo Branco, Coimbra, Guarda, Leiria, Oeste, Porto, Ribatejo, Setúbal, Viana do Castelo and Viseu).

The serological tests used are Rose Bengal (RBT) and Complement fixation test (CFT) and the methodology to be applied depends on the health status of the herds, as follows:

1- In B4 and B3 herds:

a) Procedures to maintain the health status: samples are taken from all animals over 12 months old, except in the DAVs of Alentejo Central, Alentejo, Litoral, Aveiro, Braga, Bragança, Castelo Branco, Coimbra, Guarda, Leiria, Oeste, Porto, Ribatejo, Setúbal, Viana do Castelo and Viseu, in which samples are taken only from animals over 24 months old;

All sera submitted undergo RBT;

All bovines RBT positive undergo CFT;

If at least 1 animal positive RBT test positive to CFT, DSAVR can decide, based on the risk assessment for the region, to require the submission to CFT of all the remaining sera sampled (of the same blood collection). If necessary the False positive reaction protocol is used.

Regarding the Autonomous Region of the Azores, in the Islands at the pre-eradication stage where isolation of Brucella is not obtained for several years, the programme provides for the possibility of application of a false positive reaction investigation protocol with re-testing animals from B3 or B4 herds after 30 days, wherever animals identified as positive are isolated and provided that the risk assessment reveals a very low risk of infection.

b) Procedures for the pre-movement testing:

Samples are taken from all animals over 12 months old which are to be introduced in the herd;

RB and CF are the diagnostic tests.

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

2 - In B4S and B3S herds:

In B4S and B3S herds samples are taken from all animals over 12 months old and all sera submitted undergo testing with RBT and CFT. The occasions are:

- a) Following slaughter of a positive animal, as a test for the purposes of withdrawal of suspension;
- b) As a risk assessment test (TAR) – this test is used for non-free or non-officially free herds moving negative animals to fattening herds with a special status (E2), accepting these animals for fattening and sending them only to slaughter.

3 - In non-brucellosis free herds (B2 and B2.1):

In B2 and B2.1 herds samples are taken from all animals over 6 months of age and all sera submitted undergo to RBT and CFT.

- a) Following slaughter of a positive animal in B2.1 infected holding the first check is carried out 30 days after and the second 60 days after the first. If the results of both tests are negative, the herd obtains the status of non-brucellosis free undergoing health measures (B2);
- b) As a test for regain of status B3 or B4 - following the checks referred to in a), two serological checks are carried out at an interval of three months on all animals over six months old. If the result of these two checks is negative, the herd obtains the status of disease-free (B3) or officially disease-free (B4);
- c) As a risk assessment test (TAR).

4 - In herds with animals to be vaccinated, samples are taken at the time of vaccination for the purpose of serological tests to be applied in accordance with the herd status.

Milk ELISA test is used for the purposes of maintaining health status B3 and B4 in dairy herds:

Two Milk Elisa tests are carried out each year at an interval of at least three months, with a serological check also being carried out at the time of the first sampling on all breeding males and all females not yet lactating, including heifers and replacement females. The second check to be carried out (at least three months after the first) consists simply of a Milk ELISA test.

Milk ELISA is not applied in the following situations:

- Where the DSAVR has previously determined that the conditions for the collection of milk samples are not met;
- In herds of the DAV Porto, since this region is not yet free of EBL, therefore blood sampling is compulsory;
- In municipalities subject to serological checks in order to maintain the region's status as EBL- free;
- In the Continental territory, the list of farms selected for the application of milk ELISA test for the screening of brucellosis is cross checked with the data available in PCOL (the official milk control plan) on the farms supplying the dairy industry. This list is also checked with the one presented in the sanitary programme of OPP;
- Along the year, information is exchanged between local veterinary services and OPP in order to allow the exclusion of the list of the farms that are no longer in compliance with the requirements.

The farms are excluded from the list of holdings that can undergo milk ELISA when the following situations are detected by the OPP:

- Changes in the animals present in the farm;
- Detection of non-compliance of the rules for the introduction of animals in the farm;
- Presence of brucellosis outbreaks in the neighboring farms;
- Lack of conditions for the collection of milk samples in all the milk tanks of the farm;
- Difficulties in the individual identification of all the cows related with each milk

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

container.

When the above mentioned conditions are detected, serological tests are carried out in all the eligible animals in the farm and the OPP reports to the Regional Veterinary Services the reason for the option for the blood sampling methodology.

Regarding the Autonomous Region of the Azores, as a survey test, Milk ELISA tests are conducted every quarter at all holdings of S. Miguel, Terceira and S. Jorge. Positive results are evaluated case by case. Milk sampling in the dairy tanks is carried out by specific services named "SERCLA" (Classification Service Officer RAA Milk). Sampling are carried out quarterly in order to ensure that in the sum of sampling, there will be more than 30% of dairy cows in milk from each farm. ELISA test is used as a complementary screening test and all cows under the programme are serologically (individually) tested.

BACTERIOLOGY

Bacteriology is an important tool to confirm infection, used in the decision process to define the status of the holdings and is routinely applied to sanitary slaughtered animals from herds where infection is not yet confirmed (all non B.2.1 holdings). Isolation of Brucella is also followed by typing.

Sampling for the above-mentioned tests and examinations is based on the procedures of the DGAV and INIAV, I.P..

Regarding the Autonomous Regions of the Azores and Madeira, bacteriological investigation is carried out in all cases of sanitary slaughter.

BRUCELLOSIS SKIN TEST (BST)

Procedures with the use of the Brucellosis Skin Test (BST) will be carried out as a complementary diagnostic test, within the protocol of investigation of False Positive Serological Reactions (FPSR) in specific geographical areas.

The accreditation status of the laboratories performing the Brucellosis eradication programmes testing, is published in DGAV website "List of the approved laboratories".

4.4.7 Vaccines used and vaccination schemes including detailed reference to relevant Union legislation and its implementation in the Member State for this disease

Explain also how the vaccination coverage is monitored by the official authorities

(max. 32000 chars) :

Vaccination is considered a useful tool for brucellosis control as it increases herd immunity and decreases environmental contamination. Vaccination with lyophilised vaccine contains the RB51 strain of Brucella abortus can only be introduced in a farm once a written compromise is established (protocol) between the official veterinary services (DSAVR) and the farmer with the participation of the private veterinarians of the OPP, where measures to be undertaken are laid down in order to control the Brucella infection in the herd. The protocol includes the vaccination strategy of young and/or adult females cattle among other measures (such as the schedule of testing, the herd health management, sanitary practices, animal movements, animal identification, etc) and it clearly refers that the entities involved are obliged to fulfil the written responsibilities during the minimum period of 5 years. Procedures to this regard are detailed at the published at DGAV website "Manual de Apoio às Estratégias de Controlo da Brucelose Bovina".

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

Vaccine application against bovine brucellosis at national territory is under DGAV authorisation and it consists on the administration of 2 ml subcutaneously. Male bovines are not vaccinated.

Vaccination is exclusively carried out in the epidemiological units defined in the special vaccination programmes. As mentioned above, these programmes describe the measures to be taken, in particular the timetable for testing, health management of the herd, movements of animals into and out of the herd, animal identification, the vaccination strategy (young and/or adult female cattle) and any other information considered necessary. The necessary requirements to stop vaccination in particular areas depend on the favourable evolution of the epidemiological situation at the epidemiological units and it includes the following:

- No positive herds for the last 3 years;
- No clinical or other sign of Brucella infection.

For the following epidemiological units vaccination programmes with RB51 vaccine will continue to be implemented:

- RAA: S. Miguel Island;
- DSAVR Norte: counties of Montalegre and of Ribeira de Pena and contiguous parishes;
- DSAVR Alentejo (certain units).

See annexes on vaccination.

Vaccination at the DSAVR Norte

On B3 or B4 holdings which through an epidemiological investigation a relationship with an infected herd are identified, vaccination will be carried out depending on the risk assessment.

- High risk - vaccination of all replacement females from 4 months old and non-pregnant adult females.
- Low risk - vaccination of young replacement females between 4 and 12 months of age.

At herds classified as non disease-free (B2), disease-free suspended (B3S) and officially disease-free suspended (B4S), vaccination of all female breeding from 4 months of age will be performed, independently of their state of pregnancy.

Vaccination programme at Montalegre and contiguous parishes of the County of Vieira do Minho (Campos, Vilar Chão, Anjos, Pinheiro, Ruivães and Cantelães) can also be extended to other contiguous parishes, if justifiable. Actions of the programme will be performed by the following OPP:

- Mútua de Basto, Vieira do Minho, under the supervision of DAV of Braga.
- Coopbarroso, Association of Bons e Valentes, under the supervision of DAV of Chaves-Mirandela.

Being the Montalegre municipality a cross border region, dominated by two breeds with designation of origin, the "barrosão" and cross-breed beef of "Lameiro" (DPO), the implementation of this programme is necessary in order to ensure the preservation of genetic heritage.

Depending on the evolution of the epidemiological situation at the different holdings revaccination of adult females and young, passed 6-12 months can be determined.

Vaccination programme at the municipality of Ribeira de Pena and in some contiguous parishes of the municipalities of Vila Real, Boticas, Mondim de Basto and Cabeceiras de Basto can also be extended to other contiguous parishes, if justifiable.

Actions will be performed by the OPP of Boticas e Mútua de Basto, under the supervision of DAV of Vila Real and Douro Sul, Chaves-Mirandela and Braga.

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

The intention of this vaccination programme is to ensure the preservation of the genetic heritage of "Maronesa" breed, a local breed predominantly for meat (meat is a DOP product that must be protected and maintained).

The programme will cover all existing bovine animals from:

- Municipalities of Ribeira de Pena;
- Parishes of Lamas de Olo, Vila Marim, Vila Cova e Pena (municipality of Vila Real);
- Parishes of S. Salvador do Viveiro, Alturas do Barroso, Covas do Barroso and Vilar (municipality of Boticas);
- Parishes of Atei, Ermelo, Bilhó, Campanhó, Vilar de Ferreiros and Pardelhas (municipality of Mondim de Basto);
- Parishes of Cabeceiras de Basto, Abadim, Rio Douro, Vilar de Cunhas, Gondiaes and Cavez (municipality of Cabeceiras de Basto).

Vaccination in DSAVR Alentejo

The vaccination plan which began in 2008 is applied across Alentejo Region (DSAVRALT) with the exception of the municipalities of Cuba and Alvito in which other specific plan of vaccination is in place. Since the introduction of vaccination on the region, there has been an improvement of the disease.

Vaccination will be applied according to the following schedule:

- Primo-vaccination to all heifers with more than 4 months of age and revaccination to young females 6 to 12 months after the first inoculation;
- After this first vaccination, annual vaccination with one inoculation to all replacing young females between 4 and 12 months age;
- Adult and young females introduced into the herd will be vaccinated at the entrance.

Vaccination at the Autonomous Region of Azores

In the RAAzores, vaccination began in 2001, in all females of the holdings at the three islands. Once all holdings were vaccinated, only replacement females from 4 months old from S. Miguel have been vaccinated.

Terceira and S. Jorge islands stopped vaccination at the end of 2015, almost 10 and 7 years after the last case of infection in both islands, respectively. Its planned to stop vaccination S. Miguel island in 2019, 5 years after the last infected case

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

Please detail also the situation as regard to this disease in the wildlife, and explain the surveillance and control measures in wildlife if any, and the coordination between the stakeholders involved (hunters, farmers, official service labs, vets, etc ...)

(max. 32000 chars) :

During epidemiological inquiries, farmers are faced with a range of questions related to biosecurity measures and management which have also informative and educational purposes. Subjects as management of pregnant animals, use of pastures, risk on sharing equipment, and the scope for direct or indirect contact with other herds are referred.

The notification to the owner related to sanitary "sequestration" contains instructions related to cleaning and disinfection of the stables and outbuildings, areas and loading points of the materials or substances from animals or been in contact with them, as well as containers, utensils and other objects used by

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

animals.

There are also at the web site “codes on good practices on farms” describing biosecurity measures and management, produced by agricultural associations in cooperation with the DGAV.

4.4.9 Measures in case of a positive result including detailed reference to relevant Union legislation and its implementation in the Member State for this disease

A description is provided of the measures as regards positive animals and detailed reference to the Union legislation provisions (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, a procedure for the restocking with healthy animals of holdings which have been depopulated by slaughter. A definition of a suspicion and of a confirmation should be provided, with detailed measures implemented in both situation and how the herd is requalified as free after a positive result. Detailed information should also be provided as regard the epidemiological investigations done, and the additional laboratory tests foreseen (culture, PCR, IFGamma, etc ...). Please mention if national guidelines are available.

(max. 32000 chars) :

Whenever there are positive results in B3 and B4 herds, health status is suspended by the regional veterinary services (DSAVR) which shall notify the animal keeper on the results obtained and the imposition of animal movements restrictions (sequestration).

DSAVR decides if the pattern of results and information available sets the grounds for the application of the protocol of investigation of positive serological reactions. In cases where this protocol is not applicable, DSAVR sets procedures such as marking of animals intended for sanitary slaughter, and transport and slaughter which are undertaken under official responsibility. Keepers are compensated.

General measures are the following:

a) Prohibition on moving susceptible animals to and from holdings by imposing a quarantine wherever animals with a positive reaction are identified in disease-free or officially disease-free (B3, B4) herds. This restriction remains in place until the herd has regained its status. Consequently all B4S, B3S, B2 and B2.1 herds are under restrictions (sanitary sequestration).

b) In herds confirmed as infected, the keeper is instructed in order to:

- Ensure that milk from positive animals may only be used by animals from the same holding after undergoing suitable heat treatment, in accordance with Regulation (EC) No 853/2004 of 29 April 2004;
- Ensure that milk from negative animals is prevented from leaving the holding, except where it has undergone suitable heat treatment, in accordance with Regulation (EC) No 853/2004 of 29 April 2004;
- Immediately destroy fetuses, stillborn animals and placentae, unless they are to undergo laboratory analysis;
- Destroy by incineration or burial, after treatment with officially approved disinfectant solution, the straw, bedding and any other materials or substances that have been in contact with infected animals or placentas;
- Prevent the use, without appropriate treatment, of manure from infected sheds or any other quarters used by the animals;
- The grazing areas where infected animals were kept may not be used within 60 days in winter or 30 days in summer, though it is recommended that the depopulation period should never be less than 180 days;
- A system is established for the verification of cleaning and disinfection by OPP or the official veterinarian, after the slaughter of positive animals or after total slaughter, prior to reintroduction of animals.

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

c) Compulsory slaughter (sanitary slaughter) of all animals testing positive under the supervision of the OVS and with appropriate compensation for their owners; animals are slaughtered no later than 30 days following official notification of the owner. For 2018, we intend to maintain the objective of having 75% of animals slaughtered no later than 15 days after their owners are officially notified. In herds confirmed as being infected (B2.1) animals which test positive in the RBT (reactor animals) are also subject to slaughter on health grounds, provided that the same inspection reveals the presence of at least one animal testing positive in the CFT. In these herds female offspring of positive or reactors females will be also slaughtered. The destination of the carcass is determined by the sanitary inspector of the slaughterhouse, depending on the lesions observed. DSAVRs enter data on slaughtered animals in PISA. Net and inform the OPPs so that these may assist with the subsequent checks.

d) After animals from an infected holding have been unloaded in the slaughterhouse, the means of transport are cleaned and disinfected with officially approved disinfectants in line with the codes of good practice defined.

e) Upon the imposing of restrictions in infected farms, specific recommendations for cleaning and disinfection are issued by the official veterinarians and OPP veterinarian provides the verification of compliance with these requests. Lifting of restrictions is conditioned to this control of cleaning and disinfection.

f) In order to clarify positive results, samples are always taken from animals subject to sanitary slaughter for the purpose of laboratory (bacteriological) analysis, except where they come from infected herds (B2.1).

g) Payment of compensation for sanitary slaughter of animals.

h) An epidemiological investigation carried out systematically within 15 days of the result being made available, wherever the presence of Brucella is confirmed through isolation thereof in a bacteriological examination. This is identified as one of the main issues in the eradication of brucellosis. As a rule, all infected holdings are subjected to epidemiological investigation. Efforts are being done in order to increase capacities of regional official veterinarians, and to reach conclusions on possible sources of infection. Positive holdings where single serological reactions occurred, with no further evidence of brucellosis (negative testing, absence of contacts or introduction of animals), sometimes are not subjected to investigation, due to human resources difficulties. OPP veterinarians are also involved in the epidemiological evaluation of holdings. Further detail regarding epidemiological investigations done in case of outbreak and detailed procedures to support measures in order to control the disease are described at the guidelines named as «Manual de apoio às estratégias de controlo da brucelose bovina», published at DGAV website. It includes the epidemiological inquiry (IE) carried by the local veterinary services (mod 794/DGAV). The IE requires the characterization of the holding, the investigation of possible sources of infection including introduction of animals, contacts at pasture and possible contacts with wildlife. It also investigates all herds that have contacts with the herd in question. Non-compliances identified are subjected to penalties and contact herds have to be controlled.

i) In addition to these measures, and following the epidemiological surveys carried out by the DSAVR, any herd from which animals have been in contact (whether out in the pasture, during milking or under other circumstances) with animals from herds in which brucellosis has been diagnosed will be treated as suspect and will undergo serological diagnostic testing within 30 days. A similar procedure must be followed in herds in which abortions have occurred for unknown reasons, together with any symptoms that might lead to infection with brucellosis being suspected.

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

j) The follow up of positive herds starts 30 days following sanitary slaughter - all cattle in the herd over 6 months of age undergo for serology. The result of this sampling and the result of the bacteriological examinations of the samples collected during the slaughter on health grounds determine the implementation and frequency of subsequent checks, as well as whether the status is maintained or altered.

k) The use of depopulation (total slaughter) of outbreaks, when necessary, is laid down in accordance with article 12th of Decree-Law 244/2000 of 27 September. Depopulation is an important strategy for the areas not covered by the special programmes. Taken into consideration the financial restrictions, this strategy is analysed on cost/benefit terms and this measure is taken based on the risk assessment of specific situations, according to the following criteria:

- When there is no improvement in the health qualification of an infected herd or an epidemiological unit, in the last 12 months;
- When *Brucella* has been isolated;
- When, in certain epidemiological conditions of a geographical area, it is the most appropriate measure to improve the situation;
- When it is not possible to implement any other prophylactic animal health measure.

The proposal for depopulation, which is a sanitary decision performed by regional veterinary services (DSAVR), is always followed with two documents:

- The epidemiological inquiry (IE);
- An expressed commitment of the keeper regarding its compliance with the "waiting period before restocking" and with the expressed conditions for restocking.

l) Keepers are committed to perform cleaning and disinfection of holdings and equipments, in accordance with instructions of DSAVR after depopulation and before the entry of new animals. These procedures are supervised by the OPP and validated by the DSAVR. Pastures used by infected animals can not be used before for 60, or 30 days according to weather conditions (winter or summer respectively) however, it is advised that the waiting period should not be less than 180 days. Details on procedures are laid down on guidelines "Procedimentos de trabalho PT/BB07 – serologia positiva/suspeita de infeção/abate total do efetivo".

m) In certain regions of the Continental territory where large farms exist in extensive regime (Alentejo) and regions where indigenous breeds of cattle are concentrated, efforts have been made to implement strategies as the special vaccination programmes, since otherwise depopulation option would entail high costs and the risk of losing genetic heritage, which could endanger the sustainability of certain indigenous breeds.

Forecasts made for 2019 were based on data related to the previous years, namely in 2016 and 2017 with a rate of depopulation of zero percent. However we are aware of the benefits of this measure in areas with low prevalence and will consider its application case by case.

Expenditure related to depopulation, as described at point 8, e) includes: slaughter, average cost per km travelled between the holding and the slaughterhouses, costs of destruction of carcasses, cleaning and disinfection of vehicles.

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

4.4.10 Compensation scheme for owners of slaughtered and killed animals

(max. 32000 chars) :

The relevant compensation is paid to the breeder pursuant to Implementing Order No 205/2000 of 5 April and joint Order No 530/2000 of 16 May 2000.

The compensation payable is calculated as the sum of several indices according their applicability to each case (Compensation scheme is referred at the attached document).

In cases of slaughter of an entire herd (depopulation) the compensation paid relates not only to positive and reactor animals but to all exposed and cohabiting animals, too.

In Autonomous Region of Azores the compensation for animals slaughtered is based in accordance with the provisions of regional legislation of the Regional Secretariat of Agriculture and Forests of the Regional Government, published annually. The same will be applied to the Autonomous Region of Madeira.

4.4.11 Control on the implementation of the programme and reporting including detailed reference to relevant Union legislation and its implementation in the Member State for this disease

Please indicate also when the last FVO audit has taken place and provide a table listing the recommendations and the actions taken by the national authorities to this regard.

Please mention if a Task Force subgroup visit has taken place and the state of play as regards the implementation of the recommendations suggested if any.

(max. 32000 chars) :

The different entities with intervention in the programme, have well defined profiles in PISA.Net for data recording, enabling the DSAVR to systematically evaluate and monitorize the measures taken at different levels (regional and local), in order to control implementation of the programme's rules which have a decisive impact on changes in the health status of herds, the reduction of infection levels, the rapid detection of positive and reactor animals and their removal from the holding.

All laboratories that are involved in the brucellosis eradication programmes are designated and accredited.

The definition of the information circuits and respective destinations also controls and standardises the quality of the information produced.

Inspections of OPP by DSAVR:

1. OPP are controlled at the beginning of each annual programme, when the proposal is analysed to verify its compliance to the programmes and the inclusion of all eligible holdings;
2. OPP are controlled during the implementation of the programme through:
 - Monitoring the sanitary actions performed and its compliance to the programmes;
 - Monitoring the samples sent to the laboratories;
 - Monitoring the data inserted in PISA.Net database;
 - Official on-the-spot controls to a selected samples of OPP, including checks to their field work - DSAVR carry out on-the-spot risk based official controls, planned with control procedures established in the national Control Programme (PNCPIU) and it requires a minimum of 20% of OPP per

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

Region to be controlled.

3. OPP are controlled at the end of the year, with the final detailed verification and evaluation of the work carried out by each OPP which needs to justify all the cases where the planned activities have not been carried out, under the penalty being of non-payment of the subsidy;

4. OPP are controlled through measures that envisage compliance with the deadlines for re-inspection in herds and identifying different degrees of non-compliance and/or improved performance.

SAMPLING:

Guidelines for the selection of samples for brucellosis screening are sent to the Regional services (DSAVR) by the central services of the DGAV, at the beginning of each year and are applied in areas corresponding to at least a parish or group of parishes, a council or group of councils, where 99.8% of the small-ruminant population is brucellosis-free (B3) or brucellosis officially -free (B4). The guidelines are sent out with a file (excell) containing data analysed by local services (DAV) and the classifications used for calculating the percentages.

The DSAVR then inform the OPPs (by fax or e-mail) regarding the areas in which random checks can be carried out, drawing attention to the criteria followed in making the selection and to the extreme importance of properly sampling a representative proportion chosen at random, since responsibility for selecting animals on livestock holdings lies with the OPPs.

When a new herd is created, its registration should be completed before the entrance of the animals coming from a free or officially free holding, with permission of DSAVR. In the eventuality of a non-registered herd is identified, OPP notifies the DSAVR and the registration of the herd is promoted in accordance with the rules in place, in addition to the adoption of penalties for the non-compliance on animal movement. The new herd is subjected to sanitary checks for classification.

VACCINATION:

In vaccination areas random checks on vaccination coverage will be carried out. These controls will evaluate the number of animals that should be vaccinated in the holding according with its age, and the execution of these vaccinations in the holding. Recommendations will be issued whenever procedures are not correctly followed. Continuous sensitization of farmers and veterinarians are carried out, however it is difficult in remote areas to reach the farmers.

ANIMAL MOVEMENT CONTROL:

Small ruminant's movements are validated in real time with sanitary information from PISA.Net database, which sends the holding health status to SNIRA database from where movement permits are issued.

Traditional pasture areas "baldio" are registered in SNIRA and holdings sending animals for staying in "baldios" have their marks associated with the "baldio". The arrival (and exit) to the "baldio" must be confirmed through a communication to the database of the list of individual identification of animals that are transferred.

Special control teams also undertake systematic checks on 3% of holdings including at least 5% of the animals to check proper identification of animals and communications to the database.

CLEANING AND DISINFECTION:

As mentioned at point 4.4.9, a procedure is implemented as regard control of cleaning and disinfection, upon the imposing of restrictions in infected farms and specific recommendations for cleaning and

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

disinfection are issued by the official veterinarians and OPP veterinarian in order to make the verification of compliance with these requests. Lifting of restrictions is conditioned to this control of cleaning and disinfection.

SUPERVISION:

Local veterinary services are supervised at central and regional level by monitoring of PISA.Net data and working meetings in order to evaluate the progress of the programme.

The sampling scheme for this supervision is defined in the light of the available resources and is carried out with pre-defined targets, such as compliance with the deadlines for sanitary slaughter, while identifying areas for improvement.

Those control measures are defined at «multiannual control plan 2018-2020» for bovine tuberculosis, bovine brucellosis and sheep and goat brucellosis, prepared in accordance with Regulation (EC) No 882/2004 of the European Parliament and of the Council.

The results of the controls carried out, are reported to the responsible units and entities and, if necessary, corrective measures are requested.

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.
Describe*

- progress expected compared to the situation of the disease in the previous years, in line with the objectives and expected results
- cost efficiency of the programme including management costs

(max. 32000 chars) :

Disease situation in the previous years is represented in the attached document.

When determining a cost/benefit ratio, various factors must be taken into account, including the cost of the disease, which corresponds to direct and indirect losses, including barriers to free trade.

The increase in the number of officially disease-free herds reduces the costs of successive visits and tests on the animals in herds, slaughter of animals on health grounds and losses arising from the restriction of movement on health grounds.

Attainment of officially disease-free status encourages livestock production, permits conservation of genetic stock, provides grounds for fixing populations and draws on the pooling of efforts for the common good with socio-economic benefits at the level of the different regions and of the country.

The benefits from the reduction of the rates of infection among the animal population associated with the reduction of the probability of transmission of the disease to the human population are incalculable.

These effects alone make the investment in a programme like this one extremely positive.

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

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 : **2019**

Region	Type of the test	Target population	Type of sample	Objective	Number of planned tests	
DSAVR_N	Rose Bengal test	Bovines	blood	qualification	170 120	X
DSAVR_C	Rose Bengal test	Bovines	blood	qualification	86 950	X
DSAVR_LVT	Rose Bengal test	Bovines	blood	qualification	76 050	X
DSAVR_ALT	Rose Bengal test	Bovines	blood	qualification	488 250	X
RA Madeira	Rose Bengal test	Bovines	blood	qualification	6 000	X
RA Açores (3 Islands)	Rose Bengal test	Bovines	blood	qualification	135 000	X
DSAVR_N	complement fixation test	Bovines	blood	qualification	23 060	X
DSAVR_C	complement fixation test	Bovines	blood	qualification	10 450	X
DSAVR_LVT	complement fixation test	Bovines	blood	qualification	11 810	X
DSAVR_ALT	complement fixation test	Bovines	blood	qualification	66 530	X
RA Madeira	complement fixation test	Bovines	blood	qualification	4 950	X
RA Açores (3 Islands)	complement fixation test	Bovines	blood	qualification	13 000	X

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

DSAVR_N	Elisa test	Bovines	milk	qualification	1 800	X
DSAVR_C	Elisa test	Bovines	milk	qualification	1 020	X
DSAVR_LVT	Elisa test	Bovines	milk	qualification	180	X
DSAVR_ALT	Elisa test	Bovines	milk	qualification	50	X
RA Madeira	Elisa test	Bovines	milk	qualification	0	X
RA Açores (3 Islands)	Elisa test	Bovines	milk	qualification	10 000	X
DSAVR_N	bacteriological test	Bovines	organs, lymph nodes, fet	qualification	97	X
DSAVR_C	bacteriological test	Bovines	organs, lymph nodes, fet	qualification	1	X
DSAVR_LVT	bacteriological test	Bovines	organs, lymph nodes, fet	qualification	1	X
DSAVR_ALT	bacteriological test	Bovines	organs, lymph nodes, fet	qualification	90	X
RA Madeira	bacteriological test	Bovines	organs, lymph nodes, fet	qualification	10	X
RA Açores (3 Islands)	bacteriological test	Bovines	organs, lymph nodes, fet	qualification	60	X
Total					1 105 479	
Add a new row						

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

	Total number of tests
Total number of tests	1 105 479
Rose Bengal test	962 370
complement fixation test	129 800
SAT test	0
Elisa test	13 050
bacteriological test	259
PCR	0

7.1.2 Targets on testing herds and animals

7.1.2.1 Targets on the testing of herds for year : **2019**

										Target indicators			
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	Expected % herd coverage	% positive herds Expected period herd prevalence	% new positive herds Expected herd incidence		
DSAVR_N	Bovines	16 300	13 040	12 400	15	12	2	13,333	95,092	0,121	0,097	X	

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

DSAVR_C	Bovines	6 500	4 850	4 350	0	0	0	0,000	89,691	0,000	0,000	X
DSAVR_LVT	Bovines	2 000	1 100	1 000	1	1	2	200,000	90,909	0,100	0,100	X
DSAVR_ALT	Bovines	4 600	4 350	4 150	9	7	0	0,000	95,402	0,217	0,169	X
RA Madeira	Bovines	770	770	770	5	5	0	0,000	100,000	0,649	0,649	X
RA Açores (3 Islands)	Bovines	4 460	3 440	3 440	10	10	0	0,000	100,000	0,291	0,291	X
Total		34 630	27 550	26 110	40	35	4	10,000	94,773	0,153	0,134	
									Add a new row			

7.1.2.2 *Targets on the testing of animals for year :* **2019**

Region	Species	Total number of animals	Number of animals under the programme	Number of animals expected to be tested	Number of animals to be tested individually	Number of expected positive animals	Slaughtering		Target indicators		
							Number of animals with positive result expected to be slaughtered or culled	Total number of animals expected to be slaughtered	Expected % coverage at animal level	% positive animals (Expected animal prevalence)	
DSAVR_N	Bovine	304 700	168 200	212 900	168 200	108	108	179	126,576	0,051	X
DSAVR_C	Bovine	159 500	86 950	111 450	86 950	1	1	1	128,177	0,001	X
DSAVR_LVT	Bovine	183 700	75 750	90 750	75 750	1	1	149	119,802	0,001	X
DSAVR_ALT	Bovine	704 600	480 900	488 350	480 900	100	100	100	101,549	0,020	X
RA Madeira	Bovine	3 940	3 940	3 940	3 940	7	7	7	100,000	0,178	X

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

RA Açores (3 Islands)	Bovine	210 940	135 000	135 000	133 750	10	10	14	100,000	0,007	X
Total		1 567 380	950 740	1 042 390	949 490	227	227	450	109,640	0,022	
								Add a new row			
Total number of animals expected to be slaughtered or culled : BOVINES								450			
Total number of animals expected to be slaughtered or culled : BUFFALO								0			
Total number of animals expected to be tested								1 042 390			

7.2 Targets on qualification of herds and animals

7.2 Targets on qualification of herds and animals for year : **2019**

		Targets on the status of herds and animals under the programme																
		Total number of herds and animals under the programme		Expected unknown		Expected not free or not free from disease		Last check positive		Last check negative		Expected free or officially free from disease status suspended		Expected free from disease		Expected officially free from disease		
Region	Animal species	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	
DSAVR_N	Bovines	13 040	168 200	0	0	2	41	13	268	35	725	1 306	20 541	11 684	146 617			X
DSAVR_C	Bovines	4 850	86 950	0	0	0	0	1	30	14	421	3	32	4 833	86 498			X
DSAVR_LVT	Bovines	1 100	75 750	0	0	0	0	1	99	22	2 142	1	5	1 077	73 504			X

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

DSAVR_ALT	Bovines	4 350	480 900	0	0	2	306	7	1 071	18	2 788	14	8 529	4 308	468 206	X
RA Madeira	Bovines	770	3 940	0	0	0	0	0	0	1	5	0	0	769	3 935	X
RA Açores (3 Islands)	Bovines	3 440	135 000	0	0	0	0	0	0	3	171	1 556	80 549	1 881	53 034	X
Total		27 550	950 740	0	0	4	347	22	1 468	93	6 252	2 880	109 656	24 552	831 794	
															Add a new row	

7.3 Targets on vaccination or treatment

7.3.1 Targets on vaccination or treatment for year : **2019**

Region	Animal species	Targets on vaccination or treatment programme									
		Total number of herds in vaccination or treatment programme	Total number of animals in vaccination or treatment programme	Number of herds in vaccination or treatment programme	Number of herds expected to be vaccinated or treated	Number of animals expected to be vaccinated or treated	Number of doses of vaccine or treatment expected to be administered	Number of adults expected to be vaccinated	Number of young animals expected to be vaccinated		
DSAVR_N	Bovines	350	8 250	333	333	1 700	1 960	400	1 300	X	
DSAVR_ALT	Bovines	20	1 100	6	6	250	290	40	210	X	
RA Açores (S. Miguel)	Bovines	1 555	16 550	1 555	1 550	16 500	18 975	1 000	15 500	X	
Total		1 925	25 900	1 894	1 889	18 450	21 225	1 440	17 010		
										Add a new row	

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

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
	PT_BB2019_attachment.pdf	PT_BB2019_attachment.pdf	811 kb
		Total size of attachments :	811 kb

PORTUGAL
BOVINE BRUCELLOSIS 2019
PROGRAMME FOR ERADICATION
EPIDEMIOLOGICAL EVOLUTION
VACCINATION PROGRAMME

CAMPO GRANDE, N.º 50 1700-093 LISBOA TELEF. 21 323 95 00 FAX. 21 346 35 18

1

Bovine Brucellosis - Population under the programme

2017

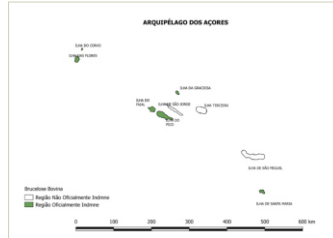
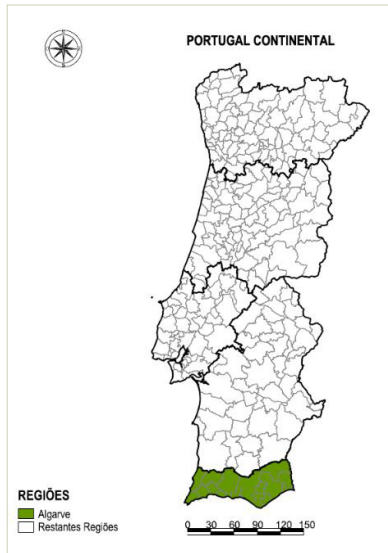
Herds - 32.011
Animals - 833.861



Area:

Mainland (except Algarve Region - Dec. 2012/204/EU)
RA Azores – S. Miguel, Terceira and S. Jorge

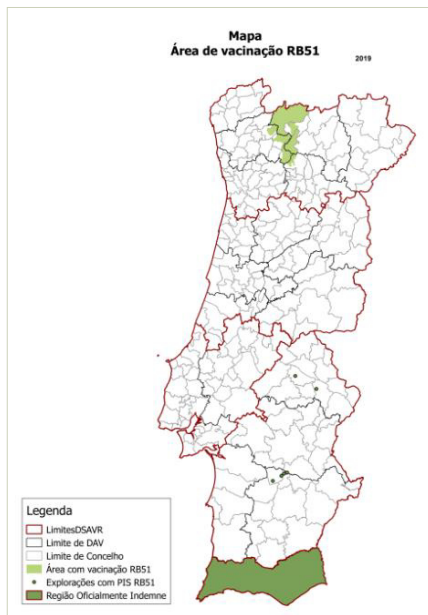
Bovine Brucellosis – regions under the eradication programme



(Algarve and 6 islands of RA Azores are officially free of *Brucella Abortus*)

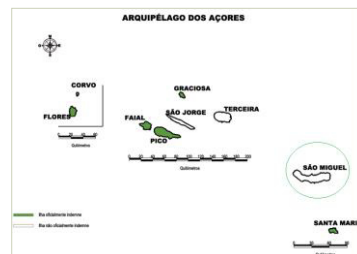
3

Bovine Brucellosis – Regions with vaccination with RB51



Vaccination will continue at:

- ✓ Montalegre and Vieira do Minho (DSAVR Norte)
- ✓ Ribeira de Pena (DSAVR Norte)
- ✓ Alentejo (DSAVR ALT)
- ✓ S. Miguel (RA Azores)



4

Bovine Brucellosis – sanitary classification



DSAVR attributes and maintains the sanitary classification to all holdings in accordance with compliance with regular surveys and laboratory results

B3/B4 status maintenance

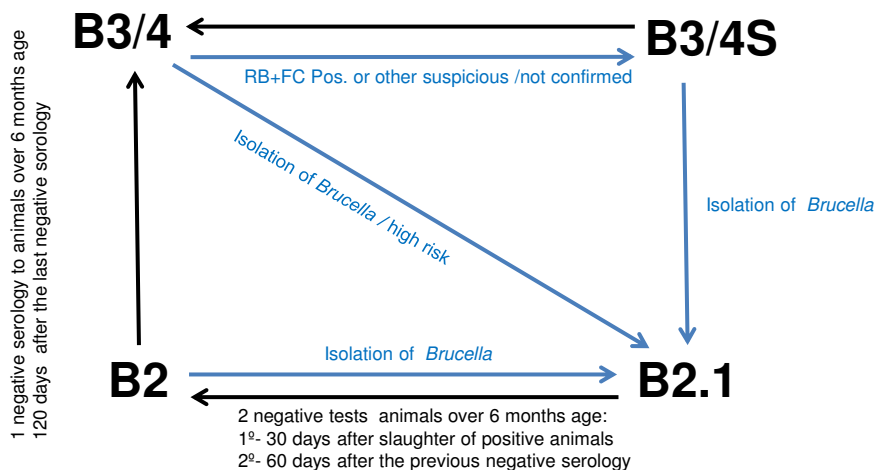
- Since most regions of the country have been declared as officially free of Enzootic bovine leukosis (EBL):

Area	Description	Bovine eligible in B3 /B4 herds
BB - A	Councils not subject for Leucosis serological sampling	All bovines older then 12 months undergo for serological tests (with the possibility to perform Elisa milk test)*
BB - B	Councils subject for Leucosis serological sampling	All bovines older then 12 months undergo for serological tests (with the possibility of Elisa milk test)
BB - C	99,8% of B3/B4 herds during the last 4 years and surveillance - officially free regions (rotation of counties to be sampled)	All bovines older then 24 months undergo for serological tests Na RA Azores: Elisa milk test *
* Holdings subject to screening tests for leucosis ⇒ maintaine of health status only through serology		

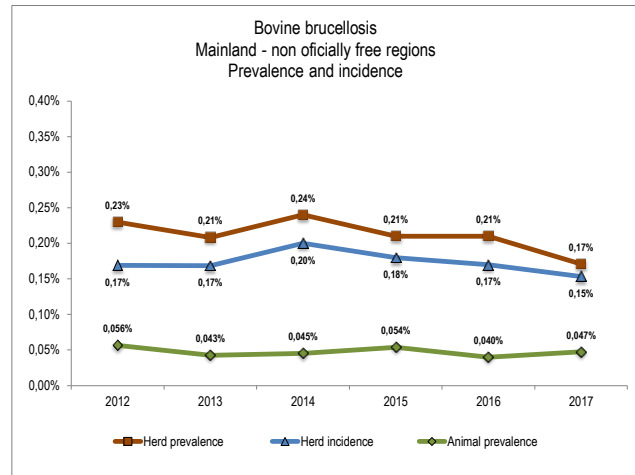
Bovine Brucellosis – testing schemes



No isolation
2 negative serology to animals over 12 months age:
1^o- 30 days after slaughter of positive animals
2^o- 60 days after the previous negative serology

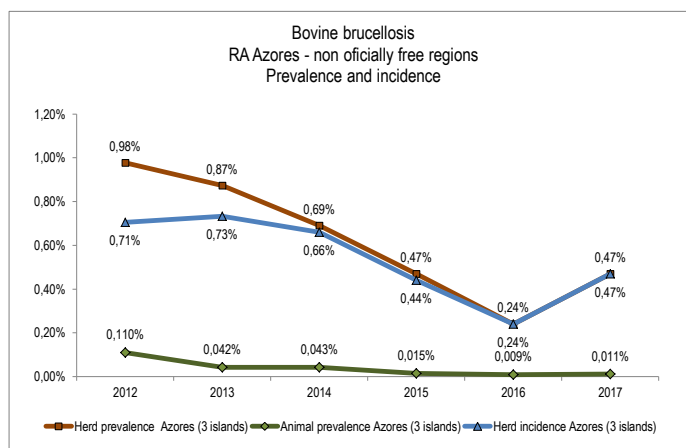


Evolution of bovine brucellosis epidemiological indicators



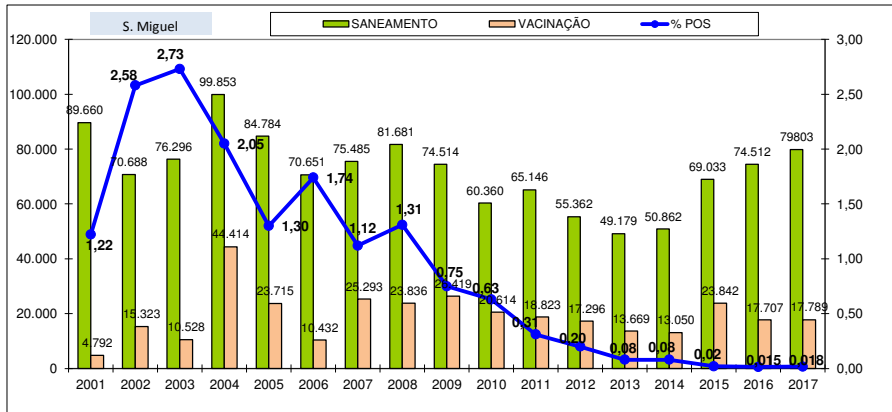
7

Evolution of bovine brucellosis epidemiological indicators RA Azores (3 islands)



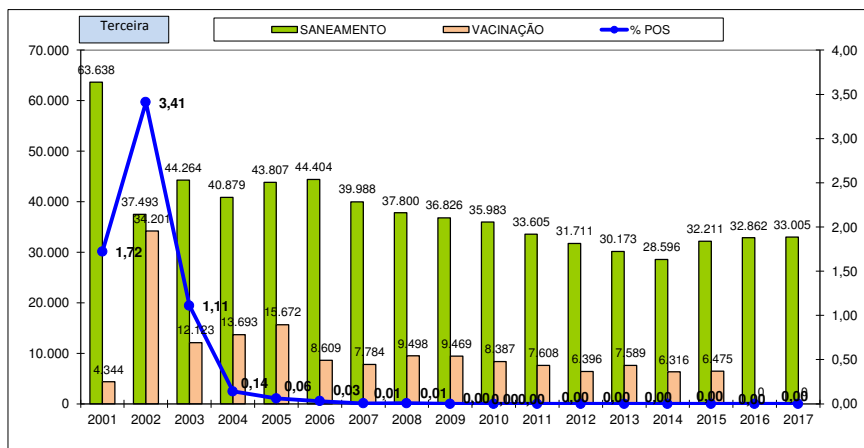
8

Evolution of bovine brucellosis epidemiological indicators S. Miguel - RA Azores



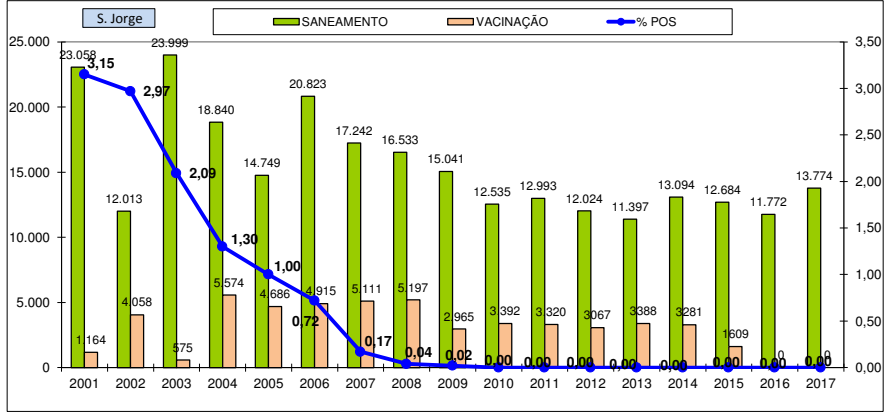
9

Evolution of bovine brucellosis epidemiological indicators Terceira - RA Azores



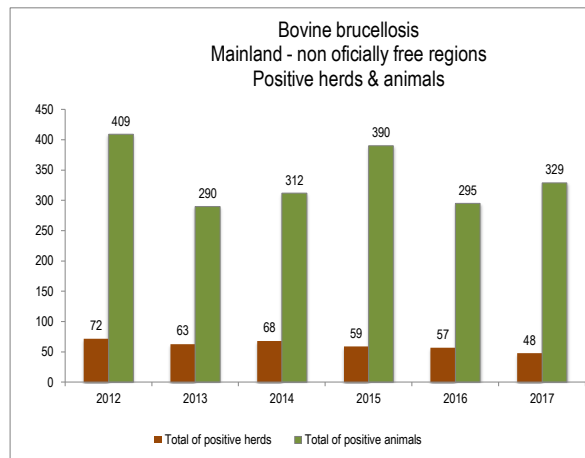
10

Evolution of bovine brucellosis epidemiological indicators S. Jorge - RA Azores



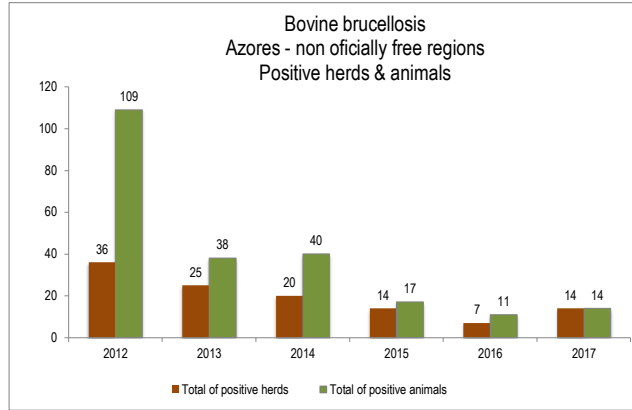
11

Evolution of bovine brucellosis – Mainland positive herds and animals



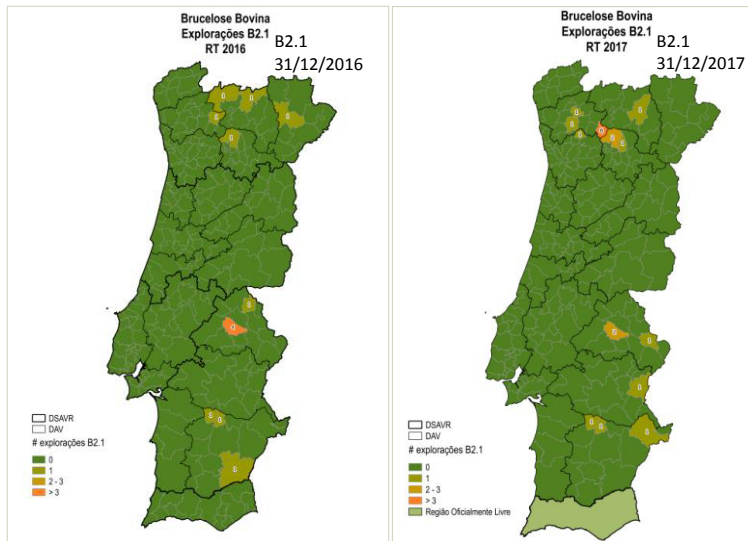
12

Evolution of bovine brucellosis – RA Azores positive herds and animals



13

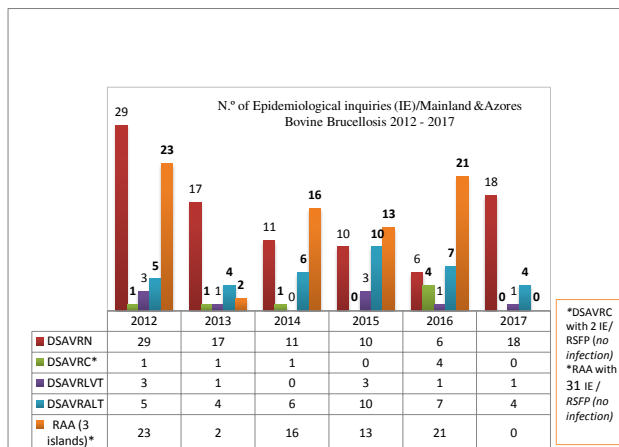
Bovine Brucellosis – Geographical distribution of B2.1 herds



(Infected herds at Alentejo and Norte Region)

14

Bovine Brucellosis – sources of infection Epidemiological inquiries carried out by Region



15

Bovine Brucellosis – sources of infection Epidemiological inquiries carried out by Region



Total n.º of Epidemiological inquiries (Mainland and RAAzores)

BB -possible source of infection (Mainland + Azores)	2012	2013	2014	2015	2016	2017
Total n.º of Epidemiological inquiries	61	27	34	36	39	23
Direct contact with ruminants from other holding	6	16	25	27	3	18
Contact with holdings from the same owner	3	1	3	2	1	6
Introduction of animals	17	18	7	17	8	14
Non conformity of pre-movement tests	8	10	1	3	3	1
transumance	11	11	7	18	7	1
Re- occurrence	6	1	2	2	7	1
Other origins	15	5	3	19	27	7

16

Bovine Brucellosis – 2017 Mainland and RAA

Regions	No Positive herds	No new positive herds	% positive herds	% new positive herds
Norte	31	31	0.19	0.19
Centro	0	0	0.00	0.00
LVT	1	1	0.08	0.08
Alentejo	16	11	0.37	0.25
RA Azores	14	14	0,47	0.47
TOTAL	62	57	0.20	0.18

371 slaughtered / 129 sampled (organs) - 44 with *B. abortus* and 1 with *B. melitensis*

17

Bovine Brucellosis – 2017 Autonomous Region of Madeira (RAM)*

Year	Total number of herds	Herds tested	% Herds tested	Total number of Animals	Animals tested	% Animals tested	N.º positive animals
2017	756	6	0,79	4.263	24	0,56	0

*The national brucellosis eradication programme started in the RAM in 2018

18

Bovine Brucellosis

Abortions and cases submitted to bacteriology



Number of cases submitted to bacteriology – 2017				
Regions	Type samples	Nº of samples	Animal species	Positive results to <i>Brucella</i>
Mainland	Foetuses, stillborn	0	bovine	-
RA Azores*	Foetuses, stillborn	27	bovine	0
RA Madeira	Foetuses, stillborn	0	bovine	-

*1 from S. Miguel and S. Jorge; 21 from Terceira

19

Bovine Brucellosis

Human cases reported



Region	N.º of Human cases - 2017
Mainland	16
Azores	0

Source: DGS

20

Bovine Brucellosis – Compensation (point 4.4.9)



Indemnização por abate sanitário de bovinos

a) Valor base (carne) – peso da carcaça, deduzido de 2% de enxugo multiplicado pelo valor da indemnização (1,96€/Kg).

b) Aditão da exploração (valor em €):

Categoria / aptidão	Leite	Carne / misto		
		Autóctone	Exótico	Cruzada
Vaca < 6 anos	698,32	748,20	548,68	299,28
Vaca >6 < 8 anos	349,16	498,80	374,10	224,46
Vaca >8 < 10 anos	-	498,80	274,34	149,64
Bovino de trabalho até 6 anos (**)	-	748,20	-	-
Novilho > 20 meses	149,64	174,52	149,64	149,64
Novilho 12 a 20 meses	174,52	199,52	174,52	174,52
Novilha > 12 < 18 meses	349,16	374,10	299,28	224,46
Novilha gestante (*)	423,98	448,92	374,10	299,28
Novilho 8 a 12 meses	199,52	224,46	199,52	199,52
Novilha 8 a 12 meses	249,40	274,34	224,46	224,46
Vitelo (a) 3 a 8 meses	124,70	149,64	124,70	124,70
Vitelo(a) até 3 meses	99,76	124,70	99,76	99,76

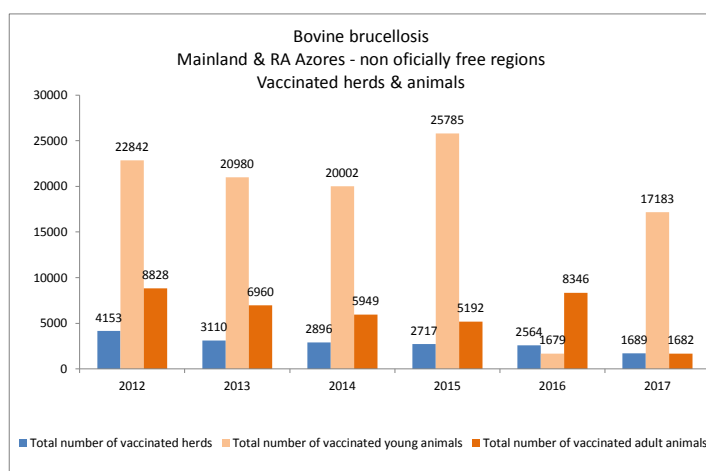
(*) Certificação pelo médico veterinário inspetor sanitário

(**) Certificados a emitir pela DSVR, onde a natureza única utilização é a produção de trabalho

c) Valor zootécnico – os animais inscritos em livro genealógico ou registo zootécnico recebem ainda uma majoração de 15% sobre o montante a que se refere a alínea b), mediante apresentação de documentação comprovativa emitida pela entidade reconhecida.

21

Evolution of vaccinated herds and animals



22

Bovine Brucellosis –Vaccination in 2017, by Region



2017	Total	DSAVRN	DSAVRALT	S. Miguel	Terceira	S. Jorge
N.º vaccinated herds	1.689	359	7	1.323	0	0
N.º vaccinated animals	18.865	752	324	17.789	0	0