



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.

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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.
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- 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 : 00351213239650

Email : secdspa@dgav.pt

Your job type within the CA : Head of Animal Protection Unit

Submission Date

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Submission Number

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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 Directive 64/432/EEC of 26 June and its amendments and Decrees-Laws 244/2000 and 79/2011 of 8 November and 20 June.

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 started to be used as a tool to accelerate eradication in certain island of Azores 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 Autonomous Region of Azores (RAA) 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 mainland, was also recognized as officially free of bovine brucellosis.

In the past 5 years the percentage of positive holding decreased from 0.43% in 2011 to 0.24% in 2015, in the 4 regions and the 3 islands of Azores under the program (44.2% reduction). The decrease in % of positive animals was from 0.078 to 0.048%. The number of animals with bacteriological isolation also decreased from 114 to 56, from 2011 to 2015.

From 2014 to 2015, the reduction in the % of positive holdings was of 14.3% (from 0.28 to 0.24%).

The % of positive holdings indicator reflects different situations in the 4 mainland regions under the programme and the 3 Islands of Azores (S. Miguel, Terceira and S. Jorge), and the differences between 2014 and 2015 were the following:

- Norte: from 0.23% to 0.19%
- Centro: from 0.06% to 0.03%
- LVT: from 0.0% to 0.29% (3 new holdings with positive animals, without bacterial isolation)
- Alentejo: from 0.60% to 0.54%
- 3 islands of from 0.69% to 0.47%
 - S. Miguel: from 0.69% to 1.06% (increase)
 - Terceira and S. Jorge: no positive herds in 2014 and 2015.

BB Programme in 2015 covered more than 94% of bovine herds under the programme and herd prevalence was 0.24% and by the end of 2015, there were 43 non indemne B2 (non-indemne) herds and bacterial isolation was possible in 27 holdings (17 in Norte and 10 in Alentejo). In the remaining regions (Centro and LVT) there was no isolation in the positive animals at serology, slaughtered and tested.

Data on herds health status by region by end of 2015, were as following :

- Norte (DSAVRN/ 16358 tested herds): 28 non-officially free herds and 43 B4/B3 suspended herds. The

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bovine production is characterized by small production units, averaging 12 bovines over 12 months of age tested per herd.

- Centro (DSAVRC/ 6012 tested herds): no non-officially free herds and 26 B4/B3 suspended herd. This region also presents a majority of small holding, averaging 16 bovines over 12 months of age tested per herd.

- Lisboa e Vale do Tejo (DSAVRLVT/ 1045 tested herds): 1 non-officially free herd and 38 B3/B4 suspended herds. This region has an average of 61 animals over 12 months of age tested per herd.

- Alentejo (DSAVRALT/ 4240 tested herds): 14 non-officially free herd and 19 B3/B4 suspended herds. Alentejo has a production system, with larger herds, most reared in extensive systems, where farms have their own land without much contact between herds. Herds had an average of 104 bovines over 12 months tested under the programme.

- Three islands (S. Miguel, Terceira and S. Jorge / 2953 tested herds): no non-brucellosis free herds or B3/B4 suspended. The herd average size of tested animals over 12 months of age was 40 bovines. There were 14 positive herds (13 new positive herds), all from S. Miguel, with no *B. abortus* isolation. 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.

In 2015, 36 epidemiological enquiries were carried out in which 26.6% of which the suspected source could not be identified. In 46.8% there was indication of possible contacts with animals from other herds or flocks and 37.3% indicated the possibility of introduction of an infected animal.

Compulsory pre-movement testing has been applied to avoid the entrance of bovine in B3 /B4 herds, with the following data registered at 2015:

	Mainland	Azores
- herds -	16258	208
- animals -	60961	1387

Vaccination programme with RB51 covered 2564 holdings (519 in the Continent and 2045 in the Azores). 34131 animals were vaccinated (2205 in the Continent and 31926 in the Azores).

Algarve and the brucellosis officially free islands of Azores carry out the surveillance for brucellosis-free regions in accordance with Article 8 of Directive 64/432/EEC of 26 June 1964.

The BBEP shows a steady progress over the years and at this phase the main difficulties are related to single reactors appearing in herds where epidemiological evaluation indicates no infection and therefore there is a suspicion of being false-positive.

(please see attached graphs of BB epidemiological evolution, vaccination and epidemiological enquiries).

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

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The objective of the current programme is to achieve in the medium term disease-free status for all regions in Portugal, to reduce the levels of infection and to maintain the status of herds which have already obtained disease-free or officially disease-free status – it is therefore necessary to ensure the coverage of tested population, the rapid elimination of animals identified as positive or reactors, the monitoring of compliance with schedules for re-inspecting infected herds and the control of animal identification and movement.

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.

Regarding mainland, BBEP will be implemented throughout the territory except in the Algarve region (officially disease-free). In the Autonomous Region of the Azores, the programme will continue to be implemented in three islands and vaccination with RB 51 will be carried out at S. Miguel.

BBEP programme covers herds with breeding animals and all male and female bovines over 12 months old, with the exception of males for fattening from officially disease-free herds, provided that they are not used for breeding and are taken directly for slaughter.

Activities

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

Data regarding herds, animal and actions regarding the programme are inserted and managed at a computerized information system PISA.Net, connecting OPP (producers associations with protocols to carry out field activities), DSAVR (regional veterinary services), laboratories and DSPA (central veterinary services). Data are analysed for the implementation of the programme and for evaluation and reporting.

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

In line with the objective, the serological diagnosis is part of (1) the surveillance activities for maintenance of sanitary 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 a breeding herd.

In dairy herds and under the conditions defined in the current programme Milk ELISA test is also a diagnostic test.

Bacteriological diagnosis is applied in serological positive animals from herds without confirmation of brucellosis (B3/B4 herds) after sanitary slaughtered. Organs are collected by official veterinarians.

A brucellosis positive bovine is an animal positive to RBT and with CFT ≥ 20 IU/mL in indemne and non-indemne herds, while it is an animal positive to RBT and/or CFT in B2 (infected with last test negative) and B2.1 herds (infected). A brucellosis infected animal is the one with bacterial isolation or the one with positive serological results when belonging to a B2 or B2.1 holding.

An infected herd is the one where infection was confirmed, either through bacteriological tests, 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 will be carried out according with the manual of the protocol to investigate the possible false-positive serological reactions. The herds where it was not possible to conduct the investigations to discard brucellosis will be considered as infected. Data on infected herds will be communicated according with article 4 and annex III of Decision 2014/288/UE. Details of sampling and testing scheme are provided in point 4.4.6.

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Classification of herds: following the serologic surveillance, holdings covered by the programme have a health status attributed in accordance with Directive 64/432/EEC of 26 June and 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) and non-disease free, including herds which are undergoing health measures (B2) and infected (B2.1 – with isolation of *B. abortus* or *B. melitensis*). The classification is schematized in the attached document. The dynamic assignment, maintenance and change of health status defined in the programme are described in point 4.4.4.

Measures in case of positive holdings include the suspension of status and the restriction of movements of animals and products (sequestro), the epidemiological investigation and the procedures for determination of infection, 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.

4. *Measures of the submitted programme*

4.1 *Summary of measures under the programme*

Duration of the programme: 2017

First year :

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

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4.1.1 Timeline for the eradication

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

According to Working Document SANCO/10181/2014/rev7, updated for 2017, the expected results (targets) will be in 2017 as follows:

- 0.21 % herd prevalence (% positive holdings)
- 0.18 % herd incidence (% new positive holdings).

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 from 0.24% achieved in 2015 to 0.21% or less in 2017.

The evolution of indicators at the Autonomous Region of Azores (RAA), suggests that brucellosis have been eradicated in 2010 on Terceira Island and in 2012 in S. Jorge, remaining only in S. Miguel, but without infected animals since October 2014.

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 Mainland, there are regional differences in the epidemiological situation of bovine brucellosis, a good and stable situation in Centro and LVT, with no isolation of Brucella in 2015, needing the consolidation of these results. Good progress is also achieved at the Norte and Alentejo and measures to identify and control weak points are being applied.

Algarve Region is officially free and maintains its status.

Regarding the Autonomous Region of Azores, in 2016, there was an interruption of vaccination in Terceira and S. Jorge in order to obtain the status of "Islands officially brucellosis-free bovine" in 2018 (three years after cessation of vaccination as Community legislation). S. Miguel will have to wait until 3-4 years without infected cases and will continue with vaccination.

It will be difficult to eradicate the bovine brucellosis in the next few years, but best efforts to achieve this objective 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 by 2022.

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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) :

Mainland:

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

Four Regional Directorates of 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 herd status 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 submit an annual sanitary programme to be approved by the official services. There is one veterinary co-ordinator per OPP. Each OPP is assisted by several veterinarians. The OPP is responsible for: animal identification, animal vaccination, blood sampling, computerization of the data in Pisa.Net and communication to the regional veterinary services of all irregularities.

The collection of samples from holdings which is carried out by OPP in around 99% of herds and by the DSAVRs or veterinarians employed by them in 1% of herds to be checked. The entity that collects the samples is also responsible for submitting them to the laboratory. Sampling during slaughter on health grounds is carried out by the health inspection service of the DSAVRs.

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

Regarding the activities implemented by the NRL to effectively monitor and control the technical competence of such laboratories, in September 2010 a questionnaire was sent by Quality Assurance Office (QAO), to each laboratory performing analysis for Brucellosis Eradication Programmes, requesting their laboratories codes, to monitor their performances on Proficiency Tests, organized by VETQAS PT0015 "Brucella abortus CFT", PT0020 "Brucella abortus RBT and PT0018 "Brucella abortus milk ELISA". Participations on the mentioned Proficiency Tests were advised by QAO of INIAV.

VETQAS is Animal and Plant Health Agency's independent, accredited by UKAS, under ISO17043 for proficiency testing (PT) based in Leicestershire. It is the international market leader in proficiency testing (PT) for veterinary laboratories, with over 30 years' experience.

The National Institute for Agrarian and Veterinary Research (Instituto Nacional de Investigação Agrária e Veterinária, I.P., hereinafter - INIAV, I.P.) serves as the national reference laboratory for food safety, animal and plant health matters in particular. INIAV, I.P., is the reference laboratory for brucellosis and is responsible for the coordination and technical supervision of the regional diagnostic laboratories and the standardisation and certification of the diagnosis methods used. As well as routine laboratory testing

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for brucellosis, it also carries out bacteriological examinations, with the results communicated electronically to DGAV.

NRL provides to official Labs the Positive and Negative Serum for RBT and CFT techniques.

NRL provides to official laboratories staff, technical training either for initial qualification or requalification on RBT, CFT and ELISA techniques.

The regional diagnostic Laboratories at mainland are the following:

- SEGALAB – Laboratório de Sanidade Animal e Segurança Alimentar (Animal Health and Food Safety Laboratory), SA (private)
- PROLEITE – Cooperativa Agrícola de Produtores de Leite, C.R.L. (Dairy producers' cooperative) (private)
- The Union of ADS (Health Protection Groups) Laboratory in Viseu District (private)
- LMV - Laboratory of Veterinary Medicine (private)
- ASSISVET (private)
- COPRAPEC - Veterinary laboratory of Montemor-o-Novo (private)
- ACOS – Association of sheep farmers in southern Portugal (private)

Laboratories carry out diagnostic tests and issue serological results registering them in PISA.Net where they are available at the DSAVRs.

The holders have the responsibility to provide access and the means to implement measures on animals, to comply with the rules on identification and movement of animals, to permit the loading and transport for slaughter on health grounds and to comply with the movement restrictions and the depopulation periods imposed following total slaughter. They have the right to compensation for slaughter on health grounds provided they assume their responsibilities pursuant to the laws that apply.

Autonomous Region of the 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 are those private veterinarians that perform the blood tests 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.

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 eradication programme will be implemented on the entire territory of mainland Portugal with the exception of the Algarve, which has officially disease-free status.

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The area covered by the Regional Directorate Food and Veterinary of Algarve (DSAVRALG), corresponding to the geographical area of the district of Faro, is therefore excluded.

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

- Regional Directorate Food and Veterinary of Norte (DSAVRN),
- Regional Directorate Food and Veterinary of Centro (DSAVRC),
- Regional Directorate Food and Veterinary of Lisboa e Vale do Tejo (DSAVRLVT),
- Regional Directorate Food and Veterinary of Alentejo (DSAVRALT).

In the Autonomous Region of the Azores (RAA) the programme will be implemented in three of the nine islands of the Azores: S. Miguel, Terceira and S. Jorge.

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

Laboratories approved by DGAV to perform diagnostic tests have to notify veterinary services, using PISA.Net, and serological results are available at the DSAVRs.

Notification of abortions is under Article 7 of Decree-Law No 244/2000 of 27 September 2000, where owners of animals are required to notify abortions occurring in female bovine, ovine and caprine animals. The notification must give rise to an epidemiological investigation and the collection of material for bacteriological diagnosis.

Article 11(d) of Ministerial Implementing Order 178/2007, as amended by Ministerial Implementing Order 1004/2010 and by Ministerial Implementing Order 96/2011 of 8 March 2011, also requires producers to report abortions occurring in females of the bovine, ovine and caprine species on their holdings to the OPP veterinarian. The veterinarian is responsible for identifying risks and informing 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.

Information as regards the number of notified abortions in 2015 and the number of cases submitted to bacteriologically are in the attached document.

INIAV, as the body that executes the programme (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 carried out on the holding of origin in response to any positive results on testing for Brucella.

Health classification of a herd is suspended following notification of a positive serology or a positive result in investigation of abortions and appropriate measures are carried out. These procedures are described in the guidelines for bovine brucellosis, named as "Manual de apoio às estratégias de controlo

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da brucelose bovina”, which is published on 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 stop of movements between holdings.

4.4.2 Target animals and animal population

(max. 32000 chars) :

BBEP programme covers all male and female bovines over 12 months old on breeding holdings, rearing and finishing holdings with breeding cattle and holdings at risk, with the exception of males for fattening from officially disease-free herds, provided that they are not used for breeding and are taken directly for slaughter.

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

In officially disease-free herds the age of the bovines to be checked is determined depending on the epidemiological indicators of the region and the respective risk assessment.

Animal population for the BBProgramme 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 on the island of S. Miguel and on Terceira and S. Jorge.

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;
- Existences registration and movements updated at each holding;
- National Data Base (SNIRA) with holding registration and each animal movement.

All bovine holdings are identified with a holding code (ME), an officially attributed, and are recorded in SNIRA database. This thus contains all cattle holders and their holdings and animals.

All bovines are identified with a unique number affixed to the animal in two ear tags, one in each ear. Ear tags are attributed to the holdings, officially authorized, and the respective owner (holder) 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 up to 20 days old. Following the identification and birth registration, the competent authority (DGAV) issues the respective bovine individual passport within 14 days, through the SNIRA database.

The bovine passport (PB) always follows the animal in all movements, including if intended for the

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slaughter, and the holder is responsible for owning all PB of his holding. 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.

The owner/holder has the responsibility to keep a register (RED) of the animals and their movements, with the identification and the number of animals on the holding, registration of inputs and outputs and respective animal identification.

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 Directive 64/432/EEC of 26 June 1964 and Decree-Law No 244/2000 of 8 November 2000.

This health classification is maintained or changed, according to the criteria set out at the legislation and guidelines ("Manual of procedures for health classification").

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.

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 or a higher health 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 health statuses are suspended (B3S, B4S) in the following situations:

- a) Following a positive serological test.
- b) As a result of the detection of brucellosis following an abortion notification.
- c) If the Epidemiological Inquire (EI) reveals the possibility of infection.
- d) When there are no conditions for the herd to be classified as free or officially disease-free (whenever the plan is not being fulfilled).
- e) 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.

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B3 and B4 health status are withdrawn wherever the presence of Brucella is confirmed through 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 (B2.1) are considered non disease-free, 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.

The method for attributing, maintaining and altering the health status set out in the programme is presented in the attached document (flowchart on sanitary classification).

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):

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

When cattle are transferred from one holding to another, or when they are sent for slaughter they must be accompanied of the respective bovine passport (PB) and a movement document (Declaration of Movements) currently issued from the SNIRA database according to health classification or the health status of holdings involved.

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

The Declaration of Movement documents can therefore be obtained directly from the online system by the animal owner or at the information collection points located at the SVO or at Agricultural Confederations reception desks.

Despite the emission of the Declaration of Movement ensures the movement's registration on the SNIRA database, the owner of the holding of destination must notify the 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

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of SNIRA database and all infractions are subjected to administrative offense.

With a view to supporting the maintenance of the health status of cattle holdings that are classified as B3 and B4 for the purposes of conducting the tests to be carried out beforehand on bovines destined for such holdings, a manual for the implementation of pre-movement tests on national territory is published. DGAV has defined the combination of the RBT and CFT as the official serological tests for pre-movement diagnosis of brucellosis.

In what regards the movement controls for the herds due to contacts or epidemiological links with the infected holdings, there are several controls in place, such as:

- Whenever links are identified, related holdings are subject to restrictions (or even considered the same epidemiological unit if contacts are regular).
- Restricted holdings are blocked in the electronic database that issues movement permits, therefore animals are not authorized to move, except directly to slaughter.
- As contact herds are investigated by serology, data on field work is entered by OPP on PISA.net, allowing DSAVR to control the compliance with the rules through the registered checking's and verify the number and identification of animals present in the holdings.

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 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 all 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 Divisions) have at least 99.8% of cattle herds free and officially free of brucellosis over the past 4 years (Aveiro, Viana do Castelo, Viseu, Porto, Alentejo Litoral, Castelo Branco, Coimbra, Guarda, Setúbal, Alentejo Central, Braga, Bragança, Leiria and Oeste).

a) 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 following:

1- In B4 and B3 herds:

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

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- 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).

Regarding Azores, in the Islands at the pre-eradication stage were 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 moved;
- Sera from animals to be moved undergo testing with RBT and CFT.

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:

- Following slaughter of a positive animal;
- As a test for the purposes of withdrawal of suspension;
- 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.

- 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).
- 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).
- 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.

c) ELISA test in milk 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 serum sample

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collection is compulsory.

- In municipalities subject to serological checks in order to maintain the region's status as EBL-free.

In the Continent, 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 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 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 milk cows related with each milk container.

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

Regarding 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.

d) 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 Azores, bacteriological investigation is carried out in all cases of sanitary slaughter.

e) 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

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(max. 32000 chars) :

Vaccination is considered a useful tool for brucellosis control as it increases herd immunity and decreases environmental contamination. Vaccination with RB51 can only be introduced in a farm after signing of a written document (protocol) named as "single sanitarian plan", established between the official veterinary services (DSAVR) and the farmer with the participation of the private veterinarians of the OPP, where measures to be developed are laid down in order to control the Brucella infection in the herd. The protocol includes the vaccination strategy of young and / or adult animals 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".

Commercialization and vaccine application against bovine brucellosis at national territory is under DGAV authorisation.

Vaccination consists on the administration of 2 ml dose of vaccine (corresponding to 10 - 34 x 10⁹ UFC of RB51 micro-organisms), by subcutaneous via, in the side of the neck. Male bovines are not vaccinated.

Vaccination is exclusively carried out in the epidemiological units defined in the special vaccination programmes. 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 animals) 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: islands of São Miguel;
- DSAVR Norte: Counties of Montalegre and of Ribeira de Pena and contiguous parishes;
- DSAVR Alentejo.

(please see graphs of BB vaccination at the attached document).

1. Vaccination at the DSAVR Norte:

1.1 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:

- Association of Bons e Valentes, Mútua de Basto, Vieira do Minho, under the supervision of DAV of Vila Real;
- Coopbarroso Douro Sul, under the supervision of DAV of Chaves-Mirandela and of Braga.

A sanitary individual programme (PIS) is established between the veterinarians (coordinator and executors) of OPP and the owners and approved by the veterinary service. In PIS measures are established in order to control brucellosis infection, to prevent the infection of other herds and to prevent its reintroduction after eradication.

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

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necessary in order to ensure the preservation of genetic heritage.

Schedule of vaccination:

- Vaccine will be performed annually and until determination of DGAV, to all young replacement females, born in the farms classified as disease-free of brucellosis (B3), aged between 4 and 12 months, with the exception of females born on farms that, at the date of 1st January 2017, were classified as brucellosis disease-free for at least 2 years.

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

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.

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

Vaccination will be registered in Pisa.Net and in all bovine passports, with the annotation of date of vaccination and, in the case of adult animals, also a red stamp will also be placed on the 1st page with the inscription "vaccinated herd".

1.2. 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, Vila Pouca de Aguiar e Mútua de Basto, under the supervision of DAV of Vila Real and Douro Sul, Chaves-Mirandela and Braga.

A sanitary individual programme (PIS) is established between the veterinarians (coordinator and executors) of OPP and the owners and approved by the veterinary service. In PIS measures are established in order to control brucellosis infection, to prevent the infection of other herds and to prevent its reintroduction after eradication.

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).

Schedule of vaccination:

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,

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independently of their state of pregnancy.

In the holdings with animal health classification being free disease-free (B3), vaccination will be performed to all replacement females, between 4 and 12 months age.

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.

2. Vaccination at Alentejo Region

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.

At the Cuba and Alvito municipalities, the programme initially involved a set of 10 holdings located these two municipalities, all owned by the same company and integrated in sanitary terms as an epidemiological unit. Existing cattle in the epidemiological unit is mainly from crossbreeding of autochthonous breeds with exotic breeds.

3. Vaccination at RA Azores

In the RA Azores, vaccination began in 2001, in all females of the holdings from, the three islands. After all effective vaccinated, only replacement females from 4 months old are vaccinated at S. Miguel island. Terceira and S. Jorge islands stopped vaccination at the end of 2015, almost 10 and 7 years after the last case of infection in Terceira and S. Jorge, respectively. In S. Miguel island, as already described, its planned to stop vaccination 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 enquiries, holders 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 "sequestro" 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

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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, the therapeutic or preventive treatment chosen, a procedure for the restocking with healthy animals of holdings which have been depopulated by slaughter and the creation of a surveillance zone around infected holding). 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 B4 and B3 herds, DSAVR applies the suspension of health status and proceed with notification of owners of the results obtained and the imposition of restrictions on movement (sequestro). 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 do not apply, DSAVR sets procedures (*) such as marking of animals intended for sanitary slaughter, and transport and slaughter are undertaken under official responsibility. Owners are compensated.

In B4S, B3S, B2 or B2.1 herds , the farmers are informed of the results obtained, the animals intended for sanitary slaughter are marked, transported and slaughtered under their responsibility. After 30 days following sanitary slaughter all animals over 6 months of age are sampled. The results of serology and the results of the bacteriological examinations of the samples collected from slaughtered animals determine the implementation and frequency of subsequent checks, as well as whether the status is maintained or amended.

(*) For the purposes of eradicating the disease, and as mentioned above, description with more details of the 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 sequestro).

b) Compulsory slaughter (sanitary slaughter) of all animals testing positive under the supervision of the official services and with appropriate compensation for their owners; animals are slaughtered no later than 30 days following official notification of the owner. For 2017, 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 the slaughtered animal's data in PISA.Net and inform the OPPs so that these may assist with the subsequent checks.

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

d) 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).

e) Payment of compensation for sanitary slaughter of animals.

f) On imposition the sanitary sequestro, the herd owner is instructed to clean and disinfect sheds and annexes, loading areas and places, materials or substances derived from the animals or that have been in contact with them, and the containers, utensils and other objects used by the animals.

In herds confirmed as infected, the owners are instructed 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.

g) An epidemiological investigation carried out systematically wherever the presence of Brucella is confirmed through isolation thereof in a bacteriological examination. This is identified as one of the main tools in the eradication of brucellosis and efforts are being done in order to increase capacities of regional official veterinarians, namely through training on epidemiology.

As efforts are directed to reach conclusions on possible sources/spread of infection, positive herds 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 being involved in epidemiological evaluation of holdings.

The programme's objective is that this survey be carried out within 15 days of the result being made available. 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 enquiry 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

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herds that have contacts with the herd in question.

Non-compliances identified are subjected to penalties and contact herds have to be controlled.

h) In addition to these measures, and following the epidemiological surveys carried out by the DSAVR, any herds 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;

i) The follow up of positive herds starts 30 days following sanitary slaughter - all cattle in the herd over 6 months of age undergo a serological check. The result of this check 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.

j) The use of total slaughter/depopulation of outbreaks, when necessary, is laid down in article 12th of Decree-Law 244/2000 of 27 September. DGAV may determine this measure 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 official veterinary regional services (DSAVR), is always followed with two documents:

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

Owners are committed to perform cleaning and disinfection of holdings and equipment, in accordance with the 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 will 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".

Total slaughter/depopulation is an important strategy for the areas not covered by the special programmes. Bearing in mind the financial restrictions Portugal is currently facing, however, any decision to order total depopulation/slaughter is increasingly weighed up in cost/benefit terms. It should be emphasised that, in certain regions of the mainland where large herds of cattle exist (Alentejo) and regions where indigenous breeds of cattle are concentrated, efforts have been made to implement strategies as the special vaccination programmes, since otherwise the total slaughter/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 2017 herds depopulation were based on data related to the previous years and in areas with low prevalence this will be considered case by case.

Expenditure related to total slaughter, as described at point 8, indent 5, includes: slaughter, average cost

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per km travelled between the holding and the slaughterhouses, costs of destruction of carcasses, cleaning and disinfection of vehicles.

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 the slaughter of animals is awarded in accordance with the provisions of regional legislation of the Regional Secretariat of Agriculture and Environment of the Regional Government, published annually.

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 bodies intervening in the programme have well defined profiles in PISA.Net and their entries on the database make for systematic assessment and monitoring of the measures taken by the DSAVRs.

With regard to monitoring implementation of the programme's rules, the services of the DGAV implement supervision and control measures at various levels (regional and local and private vet), 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. Those control measures are defined at «multiannual control plan 2015-2017» 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 definition of the information circuits and respective destinations also monitors and standardises the quality of the information produced.

OPP are therefore controlled by DSAVR:

1. At the beginning of each annual programme, when the proposal is analysed to verify if it contains all associated farmers;
2. During the implementation of the programme through:
 - the monitoring of the samples sent to the laboratories and the data inserted in PISA.net

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database;

- official on-the-spot controls to some OPP, including checks to their field work;

3. At the end of the year, with the final detailed verification and evaluation of the work carried out by each OPP.

The local veterinary services are checked and supervised at central and regional level through the monitoring of PISA.Net data, and working meetings to evaluate the progress of the programme.

The sample to be monitored is defined in light of the resources available and the risk assessment and the checks in question are carried out with pre-determined targets.

The supervisory measures aim to promote compliance with the deadlines for slaughter while identifying areas for improvement.

Control measures envisage compliance with the deadlines for re-inspection in infected herds and identify different degrees of non-compliance and positive findings.

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

Checks are also carried out in movements of herds subject to restrictions on movement (quarantined). Those checks are carried out in situ when and as decided by the DSAVRs or by the SNIRA database at a determined frequency.

Special control teams have also been established by IFAP and DRAP to perform checks on 3% of holdings for the purposes of checking proper identification of animals, supporting documentary evidence of purchase or sale of animals and conformity of the records in stock books and SNIRA databases, in order to verify cross compliance and other controls to the holdings that have applied for premium payments. Any instances of non-compliance identified are subject to penalties.

At RA Azores, the Veterinary Services Directorate quarterly prepares Activities Technical Report which contains data on the Region Health Program, informing the various islands; Half-yearly meetings are held with all Agrarian Development Services Island to discuss and evaluate the rates of the programs; technical reports are submitted to the National Veterinary Authority each semester. In S. Miguel Island, regarding monitoring implementation of the program rules, Official Services have a regular supervision of the measures executed by private vets according to protocolled programs with Farmer Association.

Actions proposed to recommendations (rec) from the last FVO audit 2016/8773 relating to bovine brucellosis , namely rec. 2 , 3 and 4 of the report are the follow:

In what respect the control of cleaning and disinfection, it was formerly required prior to repopulation of herds, after a total slaughter but a new procedure is being implemented. Upon the imposing of restrictions in infected farms, specific recommendations for cleaning and disinfection are issued by the official veterinarians and OPP veterinarian will verify the compliance with these requests. Lifting of restrictions is conditioned to this control of cleaning and disinfection.

In Azores, following the Audit visit to the Autonomous Region, instructions have been given by the Region Competent Authority (letter ref 2849).

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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 to 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.
It should further be stated that 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 : **2017**

Region	Type of the test	Target population	Type of sample	Objective	Number of planned tests	
DSAVR - N (North)	RBT (Rose Bengal test)	Bovines	serum	Eradication	168 000	X
DSAVR - N	CFT (Complement fixation test)	Bovines	serum	Eradication	22 000	X
DSAVR - N	Elisa test	Bovines	milk	Eradication	1 700	X
DSAVR - N	Bacteriological test	Bovines	Organs,Lymph nodes	Eradication	85	X
DSAVR - C (Center)	RBT (Rose Bengal test)	Bovines	serum	Eradication	80 000	X
DSAVR - C	CFT (Complement fixation test)	Bovines	serum	Eradication	9 000	X
DSAVR - C	Elisa test	Bovines	milk	Eradication	1 000	X

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

DSAVR - C	Bacteriologia test	Bovines	Organs,Lymph nodes	Eradication	10	X
DSAVR - LVT (Lisboa and Vale do Tejo)	RBT (Rose Bengal test)	Bovines	serum	Eradication	59 100	X
DSAVR - LVT	CFT (Complement fixation test)	Bovines	serum	Eradication	8 200	X
DSAVR - LVT	Elisa test	Bovines	milk	Eradication	140	X
DSAVR - LVT	Bacteriologia test	Bovines	Organs,Lymph nodes	Eradication	10	X
DSAVR - ALT (Alentejo)	RBT (Rose Bengal test)	Bovines	serum	Eradication	473 000	X
DSAVR - ALT	CFT (Complement fixation test)	Bovines	serum	Eradication	71 000	X
DSAVR - ALT	Elisa test	Bovines	milk	Eradication	31	X
DSAVR - ALT	Bacteriologia test	Bovines	Organs,Lymph nodes	Eradication	75	X
RA Açores - (3 islands)	RBT (Rose Bengal test)	Bovines	serum	Eradication	136 000	X
RA Açores	CFT (Complement fixation test)	Bovines	serum	Eradication	15 000	X
RA Açores	Elisa test	Bovines	milk	Eradication	15 000	X
RA Açores	Bacteriologia test	Bovines	Organs,Lymph nodes	Eradication	80	X
Total					1 059 431	
Add a new row						

7.1.2 Targets on testing herds and animals

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

7.1.2.1 Targets on testing herds

7.1.2.1 Targets on the testing of herds for year : **2017**

Region	Animal species	Total number of herds	Total number of herds under the programme	Number of herds expected to be checked	Number of expected positive herds	Number of expected new positive herds	Number of herds expected to be depopulated	% positive herds expected to be depopulated	Target indicators			
									Expected % herd coverage	% positive herds Expected period herd prevalence	% new positive herds Expected herd incidence	
DSAVR - N	Bovines	21 000	17 000	16 500	21	17	2	9,52	97,06	0,13	0,1	X
DSAVR - C	Bovines	8 500	6 000	5 900	2	2	0	0	98,33	0,03	0,03	X
DSAVR - LVT	Bovines	2 200	1 100	1 000	2	2	0	0	90,91	0,2	0,2	X
DSAVR - ALT	Bovines	4 500	4 400	4 300	18	15	0	0	97,73	0,42	0,35	X
RA Açores	Bovines	5 000	3 960	3 959	13	11	0	0	99,97	0,33	0,28	X
Total		41 200	32 460	31 659	56	47	2	3	97,53	0,18	0,15	
									Add a new row			

7.1.2.2 Targets on testing animals

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

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

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	327 000	302 000	205 000	160 000	50	50	100	67,88	0,02	X
DSAVR - C	Bovine	155 000	145 000	109 000	76 000	2	2	2	75,17	0	X
DSAVR - LVT	Bovine	158 000	100 000	65 000	56 100	3	3	5	65	0	X
DSAVR - ALT	Bovine	665 000	655 000	490 000	448 500	250	250	250	74,81	0,05	X
RA Açores	Bovine	209 246	136 657	140 000	136 000	15	15	20	102,45	0,01	X
Total		1 514 246	1 338 657	1 009 000	876 600	320	320	377	75,37	0,03	
								Add a new row			

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

7.2 *Targets on qualification of herds and animals*

Targets on qualification of herds and animals

7.2 *Targets on qualification of herds and animals for year :* **2017**

		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	17 000	302 000	0	0	3	48	25	400	30	480	1 200	18 000	15 742	185 550			X
DSAVR - C	Bovines	6 000	145 000	0	0	0	0	2	36	20	360	10	460	5 968	144 190			X
DSAVR - LVT	Bovines	1 100	100 000	0	0	0	0	3	204	29	1 972	0	0	1 068	97 823			X
DSAVR - ALT	Bovines	4 400	655 000	0	0	4	396	14	1 386	19	1 881	18	9 000	4 345	641 950			X
RA Açores	Bovines	3 960	136 657	0	0	0	0	0	0	10	400	3 890	134 257	60	2 000			X
Total		32 460	1 338 657	0	0	7	444	44	2 026	108	5 093	5 118	161 717	27 183	1 071 513			

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

7.3.2 *Targets on vaccination or treatment of wildlife for year :* **2017**

Region	Square km	Targets on vaccination or treatment programme			
		Number of doses of vaccine or treatments expected to be administered in the campaign	Expected number of campaigns	Total number of doses of vaccine or treatment expected to be administered	
Not applicable	0	0	0	0	X
Total		0		0	
			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_BB2017_set16_attachments.pptx.pdf	PT_BB2017_set16_attachmentspptx.pdf	1023 kb
		Total size of attachments :	1023 kb



REPÚBLICA PORTUGUESA

AGRICULTURA, FLORESTAS E DESENVOLVIMENTO RURAL



dgav

PORTUGAL

BOVINE BRUCELLOSIS

EPIDEMIOLOGICAL EVOLUTION

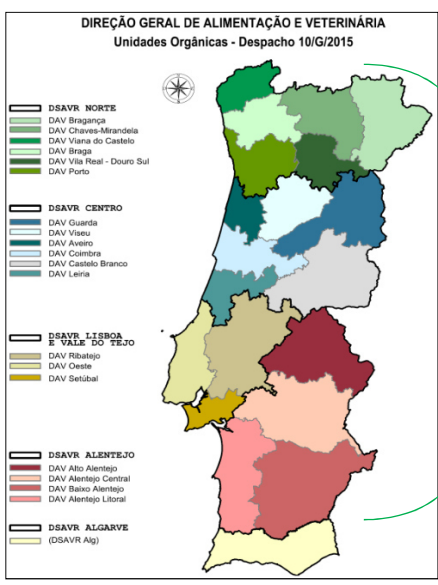
VACCINATION PROGRAMME

CAMPO GRANDE, Nº 50 1700-093 LISBOA TELEF. 21 323 95 00 FAX. 21 346 35 18


1

Bovine Brucellosis – regions under the eradication programme

DIREÇÃO GERAL DE ALIMENTAÇÃO E VETERINÁRIA
Unidades Orgânicas - Despacho 10/G/2015



- DSAVR NORTE**
 - DAV Bragança
 - DAV Trás-os-Montes
 - DAV Vila Real - Douro Sul
 - DAV Porto
- DSAVR CENTRO**
 - DAV Guarda
 - DAV Viseu
 - DAV Aveiro
 - DAV Coimbra
 - DAV Castelo Branco
 - DAV Leiria
- DSAVR LISBOA E VALE DO TEJO**
 - DAV Ribatejo
 - DAV Oeste
 - DAV Setúbal
- DSAVR ALENTEJO**
 - DAV Alentejo
 - DAV Alentejo Central
 - DAV Baixo Alentejo
 - DAV Alentejo Litoral
- DSAVR ALGARVE**
 - (DSAVR Alg)

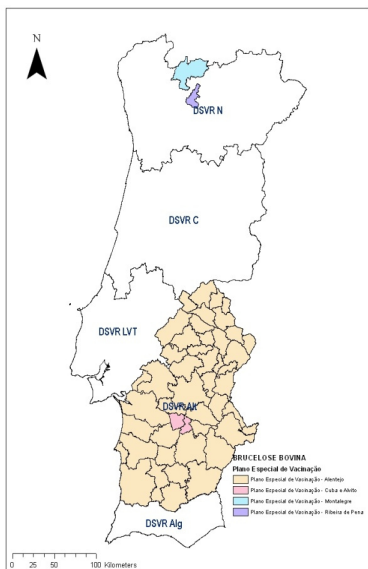


© 1997 Pierre de Sousa Lima

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

2

Bovine Brucellosis – regions with vaccination



- Vaccination** (with RB51 for 2017)
- ✓ Montalegre e Vieira do Minho (DSAVRN)
 - ✓ Ribeira de Pena (DSAVRN)
 - ✓ Cuba e Alito (DSAVRALT)
 - ✓ S. Miguel



3

Bovine Brucellosis –sanitary classification

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

CLASSIFICATION OF HOLDINGS

B3/B4 status maintenance

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

Methodology of control (1)	Municipalities under sampling for LBE	Municipalities subject to serological checks (in order to maintain the region's status as EBL-free)	
		Dairy herds	Not dairy herds
Annual serological to all animals older than 12 months of age	v		v
Two Milk Elisa tests carried out each year (2)		v (3)	

(1) Frequency, type of test, age of animals to test.
 (2) The two ELISA tests are separated by at least 3 months of interval; the first sampling is also performed serological checks on all breeding males and all females who are not lactating.
 3) Where the DSAVR has previously determined that the conditions for the collection of milk samples are not met.

CLASSIFICATION OF HOLDINGS

B3/B4 → B3S/B4S

- B3/ B4 with any positive serology (positive animal are slaughtered)

Requalification to B3/B4

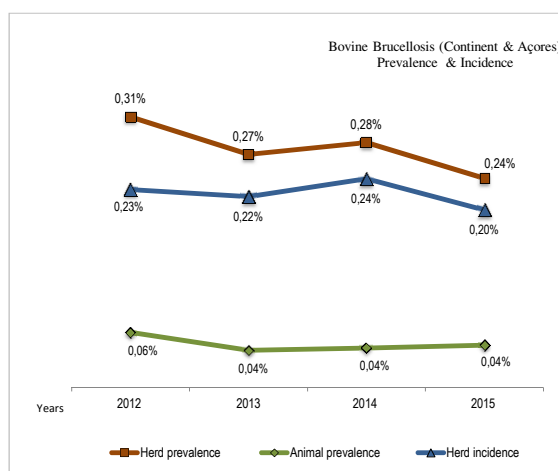
- 1 negative serology 30 days after slaughter+ + 1 negative serology 60 days after the first

B3S/B4S → B2.1

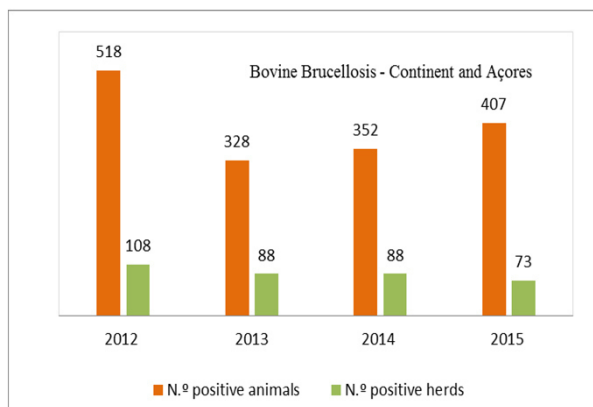
- Isolation of *Brucella*

- Serology to all animals over 6 months age 30 days after slaughter of positive. If negative results:
 - 60 days after - new serology after the first. If neg results → **B2**
 - 3 months after - new serology to all animals over 6 months age. If neg results
 - 3 months after - new serology to all animals over 6 months age → **B3/B4**

Bovine Brucellosis – epidemiological evolution

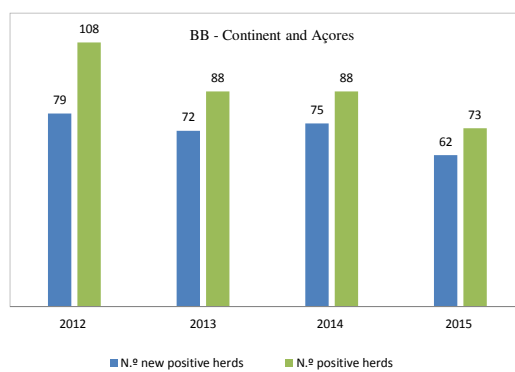


Bovine Brucellosis – epidemiological evolution



7

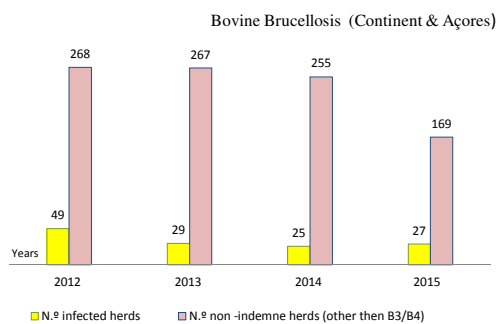
Bovine Brucellosis – epidemiological evolution



8

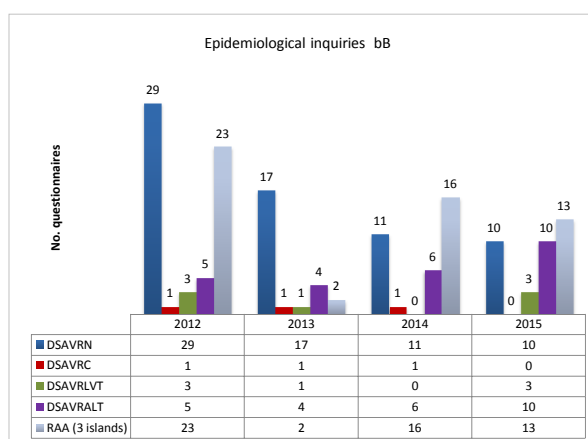
Bovine Brucellosis – epidemiological information on infection

Evolution of the number of infected herds (with *B. abortus* or *B. melitensis* isolates) and the number of non-indemne herds (others status than B3):



9

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



10

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

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

BB -possible source of infection (Mainland and Açores)	2012	2013	2014	2015	%
Total n.º of Epidemiological inquiries	61	27	34	36	(N=178)
Direct contact with ruminants from other holding	6	16	25	27	46.8%
Contact with holdings from the same owner	3	1	3	2	5.7%
Introduction of animals	17	18	7	17	37.3%
Non conformity of pre-movement tests	8	10	1	3	13.9%
Common pastures	11	11	7	18	29.7%
Re- ocorrente	6	1	2	2	7.0%
Other origins	15	5	3	19	26.6%

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Bovine Brucellosis – Isolation of Brucella from positive slaughtered animals

Region (BB - 2015)	Nº positive animals slaughtered	N.º animals sampled to bacteriology*	<i>B. abortus</i>	<i>B. melitensis</i>
DSAVR Norte	58	39	10	0
DSAVR Centro	3	3	0	0
DSAVR LVT	4	4	0	0
DSAVR Alentejo	241	99	46	1
RAA S. Miguel	17	21	0	0
RAA Terceira	0	0	0	0
RAA S. Jorge	0	0	0	0
TOTAL	323	166	55	1

* Not carried out when *Brucella* isolation was previously obtained in the herd

12

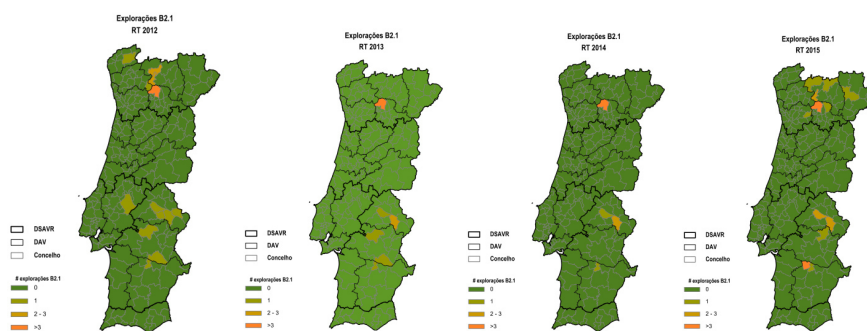
Bovine Brucellosis
Abortions and cases submitted to bacteriology

N.º of notified abortions in 2015		
Regions	Total	Positive
DSAVRN	3	0
DSAVRC	1	0
S. Miguel	8 bov	0
Terceira	12 bov 2 goats	0

Number of cases submitted to bacteriology				
Regions	Type samples	Nº of samples	Animal species	Positive results to <i>Brucella</i>
DSAVRN	Fetus, stillborn	3	1 bo 1 sheep 1 goat	0
DSAVRC	Fetus, stillborn	1	bo	0
S. Miguel	Fetus, stillborn	33	bo	0
	Placenta	1	bo	0
Terceira	Fetus and stillborn	53	bo	0
		6	goat	0
	Placenta	1	goat	0

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Bovine Brucellosis – Geographical distribution of B2.1 herds



14

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)...Antidão 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

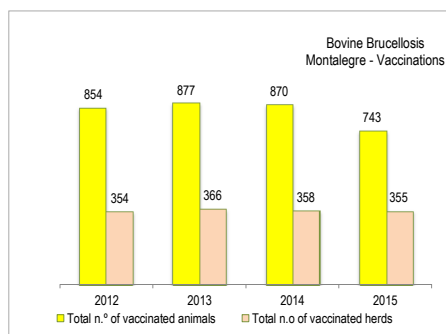
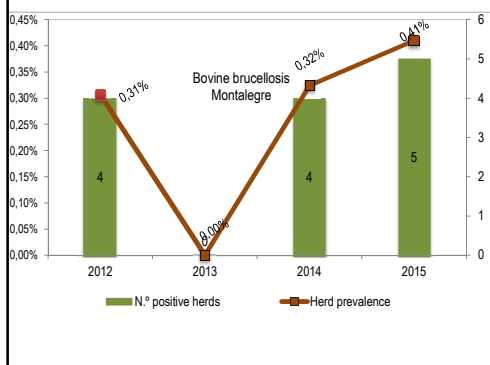
(*)...Certificação pelo médico veterinário/inspector sanitário

(**) Certificados emitidos pela DSAVRN, onde a carne tem uma utilização e a produção de trabalho

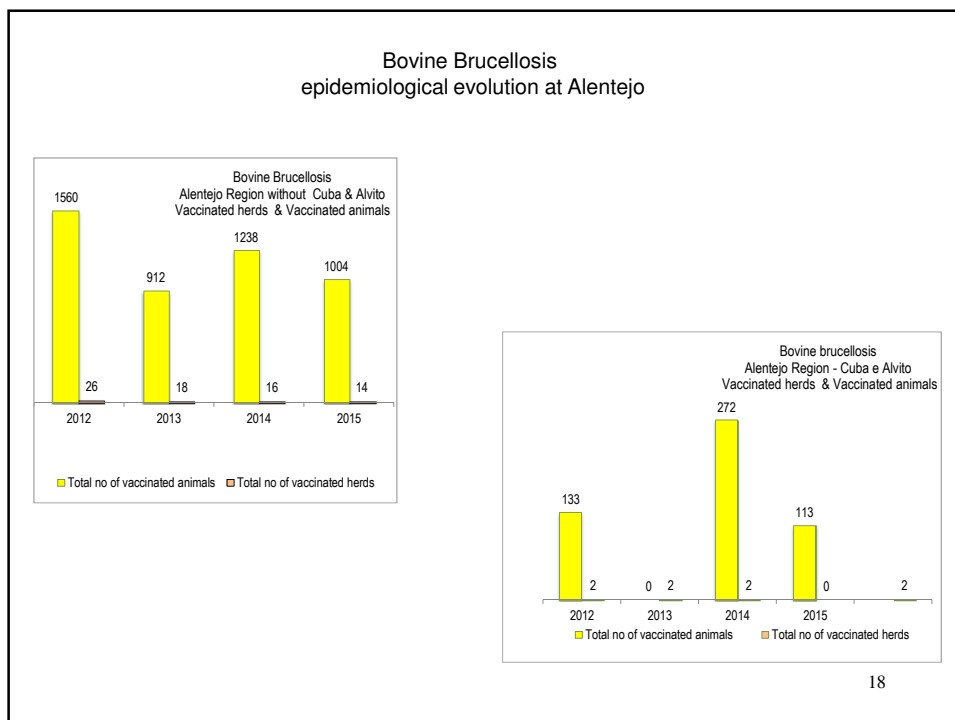
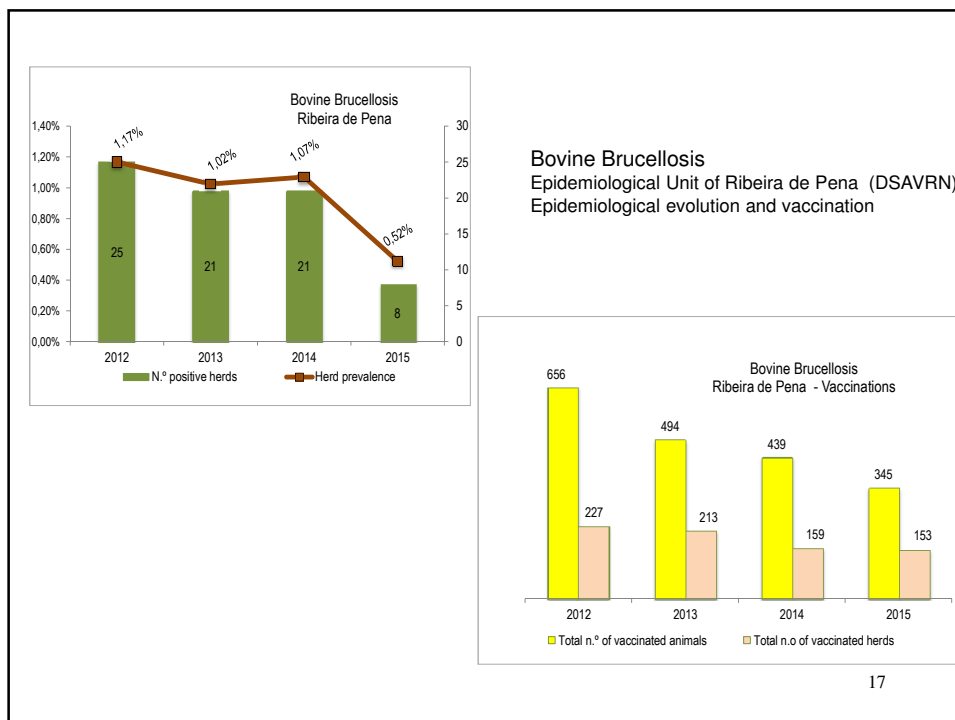
(*) Valor zootécnico – os animais inscritos em livro genealógico ou registo zootécnico recebem ainda uma majoração de 15% sobre o montante a que se refere a alínea b), mediante apresentação de documentação comprovativa emitida pela entidade reconhecida.

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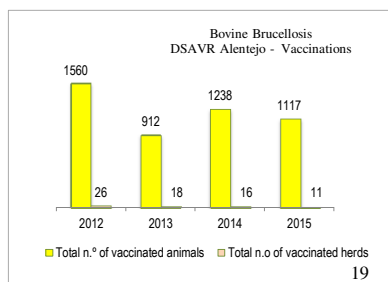
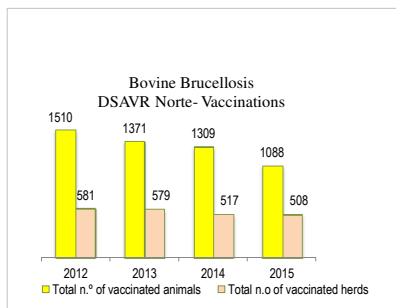
Bovine Brucellosis Epidemiological Unit of Montalegre (DSAVRN) Epidemiological evolution and vaccination



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Bovine Brucellosis – RB51 Special Vaccination



Bovine Brucellosis – RB51 Special Vaccination

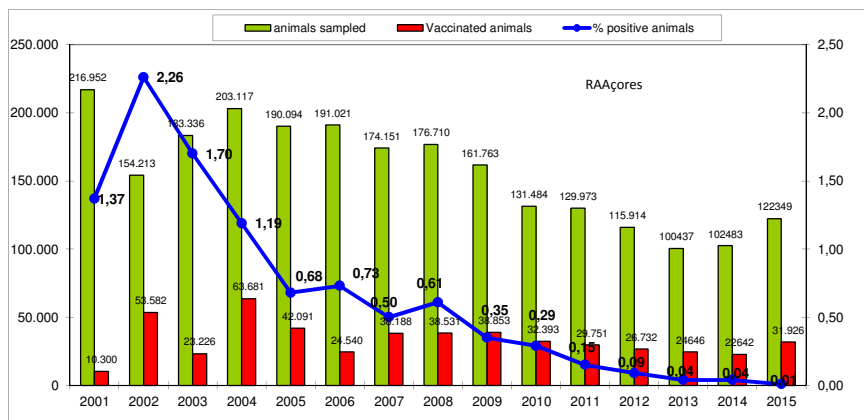


Autonomous Region of Açores:

- ✓ Terceira
- ✓ São Jorge
- ✓ São Miguel

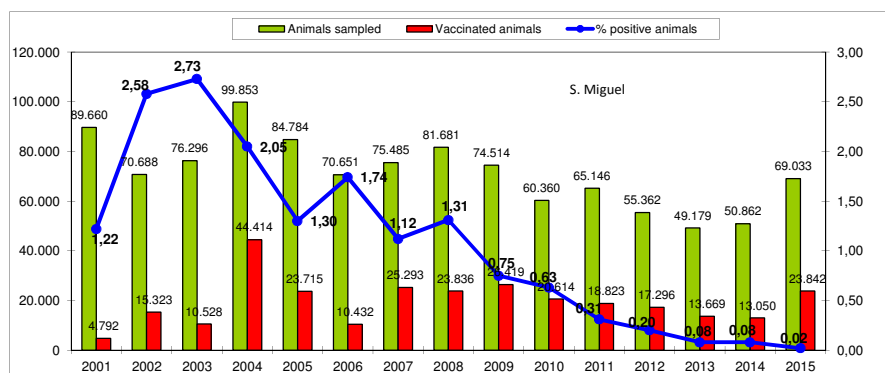
	2015	TOTAL	S. Miguel	Terceira	S. Jorge
N.º vaccinated herds		2564	1276	539	230
N.º vaccinated animals		34131	23842	6475	1609

Bovine Brucellosis – Autonomos Region of Açores



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Bovine Brucellosis – Autonomos Region of Açores – S. Miguel



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