EUROPEAN COMMISSION

DIRECTORATE-GENERAL FOR HEALTH AND FOOD SAFETY

Food chain, stakeholder and international relations

Unit D4 - Food safety programmes, Emergency funding

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"

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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	Sheep And Goat Brucellosis
Species :	Sheep and goats
This program is multi annual :	no
Request of Community co-financing for year :	2019

1. Contact data

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Submission Date	Submission Number
28/09/2018 13:39:31	1538138373132-14785

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) :

Brucellosis is a notifiable disease since 1953, according with national Decree-Law No 39:209 of 13 May. Measures to combat brucellosis in small ruminants in Portugal have been introduced since that date, with campaigns to control brucellosis in goats and later extended to cohabitant sheep.
In 1980, a new stage in disease control began with the application of the "Programme bases for organising the actions to combat animal brucellosis", produced as a consequence of the WHO recommendations to the countries of the Mediterranean basin.

In 1991, following Portugal's entry into the European Community, the eradication programme for brucellosis in small ruminants (SRBEP) in mainland was approved for co-financing for a period of three years and subjected to annual approval thereafter. The programme, with the necessary adaptations over time is still in force.

The Autonomous Region of Azores is officially free of Brucella melitensis with a surveillance programme in place.

The Autonomous Region of Madeira (RAM), started to be envolved in the national SRBEP in 2018. Some testing was implemented since 2002 with a serology applied to several herds (Rose Bengal test) in a non-representative sample of herds with no evidence of this disease so far.

Along with the policy of serological survey with Rose Bengal (RB) and Complement Fixation (CF) tests and slaughter of positive animals carried out for the eradication, vaccination of young animals with Rev1 vaccine is applied in certain areas of continental territoryal territoryal territory of Portugal with higher prevalence, namely in Trás-os-Montes in the Directorate for Food and Veterinary of the Norte Region (DSAVRN), in the entire Algarve Region (DSAVRAlg) and in some units of Centro Region (DSAVRC) and Lisboa e Vale do Tejo Region (DSAVRLVT).

Briefly, the small ruminants brucellosis eradication programme (SRBEP) started with 12% herd prevalence in 1993 (2 years after the beginning of the programme, when a good coverage was reached), with 1202 human reported cases (almost all due to B. melitensis). Small ruminant's brucellosis became under control over time, with sighificant differences between regions with diferente production systems and rate of contacts between herds and exposure to contaminated environment. In 2017 only 16 human cases were notified.

In the past 6 years, the percentage of positive herds decreased from 1.21% in 2012 to 0.73% in 2017. The decrease in % of positive animals was from 0.323% in 2012 to 0.105% in 2017.

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

The SRBEP was implemented in 2017 as foreseen, reaching a herd coverage of 97.04%, varying from 92.39% in Lisboa e Vale do Tejo Region to 99.69% in the Centro Region.

The SRBEP carried out in 2017 for the non-officially free region of Portugal (the 5 regions of the continental territoryal territoryal terrirory) resulted in a slight increase of the epidemiological indicators, compared to the previous year.
Herd apparent prevalence (herds with at least one serologically positive animal) varied from 0.57% in 2016 to 0.73% in 2017, while the same variation on tendency was observed in the herd incidence (from 0.46% to 0.63 %) and in the percentage of positive animals (from 0.08% to 0.105%). All regions except Norte, are now below 1% herd prevalence.
The variation of apparent herd prevalence by region, from 2016 to 2017, was the following:

- Norte – increase 57% (from 1.43% to 2.25%)
- Centro – decrease 40% (from 0.15% to 0.09%)
- LVT – decrease 19% (from 0.46% to 0.37%)
- Alentejo – decrease 56% (from 0.37% to 0.16%)
- Algarve – increase 16.25% (from 0.80% to 0.93%)

There were 396 herds with at least one positive animal and 341 were new positive (86.11%).
Positive animals are subjected to sanitary slaughter and those coming from newly infected herds were subjected to organ collection for bacteriology. A total of 1.420 animals were slaughtered. By the end of 2017, there were 52 herds with infected status.
There were 804 bacteriological tests performed and 94 had isolates of B. melitensis (related to 30 herds).
The 94 isolates were distributed as follows:

- 72 from the Norte (21 herds),
- 6 from LVT (4 herds),
- 4 from Alentejo (1 herd),
- 12 from Algarve (4 herds).

DEPOPULATION (total slaughter) was implemented in 3 herds (1 from Norte and 2 from Lisboa e Vale do Tejo), following the identification of infection and the difficulties in progressing the status of the herd.
The geographical distribution of infected herds (B2.1), and distribution of herds and animals with isolation of B. melitensis is presented in annex.
By the end of 2017, only 2 counties had more than 3 infected herds. The confirmed presence of B. melitensis can be observed in a main cluster in the Norte region and more dispersedly in other regions.

The percentage of free (B3) and officially free (B4) herds are 97.77%. Suspended herds are 2.02%. The main reasons for attributing a suspended status are detected irregularities on animal movement (56.2%), followed by delays in regular sampling (21.4%) and non-negative serology (17.2%). Brucellosis suspicion accounts for only 5.2% of the suspensions of free or officially-free status.
At the 31st December 2017, 52 herds had an infected status in 4 regions: Norte (82.7%), LVT (7.7%) and Algarve (9.6%).

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

- Norte (DSAVRN) – 14.619 herds tested, 92 non-officially free herds (B2) and 328 suspended herds (B4/B3).
- Centro (DSAVRC) - 24.615 tested herds, no non-officially free herds (B2) and 303 suspended herd (B4/B3).
- Lisboa e Vale do Tejo (DSAVRLVT) – 6.217 tested herds, 13 non-officially free herd and 211 suspended herds (B3/B4).

- Alentejo (DSAVRALT) – 8.018 tested herds, 2 non-officially free herd and 259 suspended herds (B3/ B4).
- Algarve (DSAVRAlg) – 1.081 tested herds, 12 non-officially free herd and 33 suspended herds (B3/B4).

Vaccination with subconjuntival Rev1 was applied in 2.790 herds (34.151 animals).

The S&GBEP foresee 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 farms (trace-back and trace-forward) and characterize possible risk factors and sources of infection.
There were 888 epidemiological inquiries in infected herds. The main probable reasons are identified, in order of importance:

- other contacts (56.3%),
- introduction of animals (51.7%),
- contacts at pastures (29.9%),
- re-occurrence (19.5%).

Technical difficulties in the implementation SRBEP are mainly related to the effective control of animal movement and the management of single positive reactions in B4 herds and in B3 herds. RB positive results with low CF titers in vaccinated animals, with no other evidence of Brucella infection, are difficult to manage. Other problems are those related to the difficulties in the testing of very small herds in marginal areas where access is difficult.

Regarding abortions tested for Brucellosis, 17 samples (4 sheep and 13 goats) were submitted to the NRL, all with negative results.

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

Maps and graphs in annex represent the evolution over time of epidemiological indicators and number of positive herds and animals, epidemiological inquiries results, as well as vaccinated herds and animals.

Regarding Norte Region (DSAVRN), the sheep and goat production is characterized by small production units. There was an increase of herd apparent prevalence from 2016 to 2017, from 1.82% to 2.25% (25.27%).
Trás-os-Montes is a mountainous area of the Norte Region and one of the most problematic areas of the country that represents 16% of small ruminants population. In 1991, 26.7% of the herds tested positive and although vaccination of young females was foreseen for infected herds, it was difficult to implement. By 2000, the region presented a herd prevalence of 43.0% and an animal prevalence of 8.9% with 40% of animals slaughtered at national level, resulting in heavy losses for the farmers, and a high cost for the Government.
Under these circumstances an especial mass vaccination campaign was carried out. Vaccination of adult and young animals with conjunctival Rev1 took place for 3 years, starting in February 2001. In the first year of activity 67% of population was covered. From 2004, till the present, only young animals are

vaccinated (vaccination of adult animals stopped) along with test and slaughter.
The increase of the apparent prevalence influenced several indicators. At the end of 2017, DSAVRN had 92 non-officially free herds compared with 76 by the end of 2016 and 328 B4/B3 suspended herds compared with 241 by the end of 2016, from a universe of 15.318 herds under the programme. However the number of B. melitensis isolates decreased from 134 in 2016 to 72 in 2017. The increase of the prevalence was not related with a reverse in the progress of the programme but to the modification of a procedure carried out in 2015-2016 to manage the occurrence of positive serological results in vaccinated animals not related to Brucella infection.
In 2017, like in previous years, the percentage of positive herds with only one positive animal was 60.3% and the percentage of herds where only vaccinated animals were positive was 64.4% (204/317) – in these 204, only 1 had a B. melitensis isolate. It is therefore re-confirmed that a relevant part of positive seorology (and herd apparent prevalence) in this Region is due to interferences in the diagnosis and not to circulation of field strain of B. melitensis. This interference is among other factors related to certain vaccination practices (animals older than 6 months, difficultiers in separating vaccinated animals from the herd). This problem is being addressed by:
- reinforcement of farmers information through local meetings and
- the application of a investigation protocol (false-positive and non-specific positive reactions) that allows the retesting of positive animals when an evaluation directs to low risk of infection.

Centro Region (DSAVRC) presents a good evolution of the SRBEP. Production systems in this area have also small size herds with a considerable area dedicated to cheese production. From 2012 to 2017, the region decreased the herd prevalence from 0.15% to 0.09%. By the end of 2017, this region had no non-officially free holding compared with 8 in the end of 2016, and 303 B4/B3 suspended herds (401 in 2016) from a population of 24.691 herds under the programme.

Herd prevalence at Lisboa e Vale do Tejo Region (DSAVRLVT) over the last 6 years, from 2012 to 2017, decreased from 0.85% to 0.37%. In recent years an outbreak of brucellosis occurred in a defined area and in 2015 a special vaccination programme including the vaccination of adult animals was implemented to control the outbreak, which achieved good results. By the end of 2017 this region had 9 non-officially free herd (21 in 2016) and 211 B3/B4 suspended herds (195 in 2016) from a universe of 6.729 herds under the programme.

In Alentejo Region (DSAVRALT) from 2012 to 2017, the region decreased the herd prevalence from 0.78% to 0.16%. By the end of 2017 this region had 2 non-officially free herd (same number in 2016) and 259 B3/B4 suspended herds (281 in 2016) from a universe of 8.387 herds under the programme.

Algarve Region (DSAVRVALG) is another problematic area with very small landless herds intended for self or local markets consumption. Only in 2005 systematic subconjuntival Rev1 vaccination of young animals was implemented in the most affected municipalities, along with test and slaughter. In DSAVRAlgarve from 2012 to 2017, the region decreased the herd prevalence from 6.39% to 0.93%. By the end of 2017 this region had 12 non-officially free herd (19 in 2016) and 33 B3/B4 suspended herds (41 in 2016) from a universe of 1.091 herds under the programme.

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) :

The programme will be implemented throughout continental territory of Portugal, for a period of one year, with the objective of achieving a gradual and sustained decrease of prevalence and incidence of disease in order to allow the country to achieve disease-free status in medium term. For the first time in 2018, the two islands (Madeira and Porto Santo) of the Autonomous Region of Madeira (RAM), started to be involved in the national SRBEP, screening of all sheep and goats are in accordance to the national eradication programme, in order to achieve the officially disease-free status of the disease for RAM.

The programme is applied to all sheep and goats over 6 months old (or over 3 months if vaccinated) on the holdings covered, with the exception of fattening animals from officially disease-free herds, provided that they are not used for breeding and are taken directly for slaughter.

The programme is based on a regular annual survey of all breeding herds with RBT and CFT used as a confirmatory test. Some regions have already achieved a favourable epidemiological situation allowing that sample is selected in accordance with Council Directive 91/68/EEC. Regular surveys are carried out by private veterinarians of producers associations (OPP) and samples submitted for analysis to local approved laboratories. Data is introduced in the informatic system PISA.Net and the official veterinary services (DSAVR) attribute the health classification according with test results. PISA.Net allows the exchange of information necessary to the sequential activities of the programme, the maintenance of updated herds classification and the reporting of results.

A brucellosis positive small ruminant is an animal with a positive result 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 (infected) herds.
A brucellosis infected animal is the one with bacteriological isolation or the one with positive serological results when belonging to a B2 or B2.1 holding.

A herd is infected of brucellosis whenever infection is confirmed either through bacteriological tests or through epidemiological evidence or when the repetition of tests with positive results does not allow discarding the presence of brucellosis.

When false-positive serological reactions (FPSR) or reactions not related to the circulation of field strain of B. melitensis are suspected, a specific investigation to clarify if brucellosis infection can be discarded is carried out using the repetition of official tests, the application of complementary diagnostic tests and a through epidemiological investigation.

Bacteriology of organs, lymph nodes (and milk) from slaughtered positive animals are also tools used in the programme, for brucellosis confirmation.

Point 4.4.6. describes tests, sampling schemes and classification of holdings.

When there are positive results, a series of measures are taken in order to control the suspected outbreak and confirm brucellosis including the suspension of health status and the movement's restriction of animals and products (sequestration), 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 holding regains the qualification. These measures are explained in point 4.4.9.

Vaccination with Rev1 is also used under the programme in some regions/areas and is described in point 4.4.7.

Measures regarding animal movement are also importante for the success of SRBEP and are described at point 4.4.5.

Regarding the Autonomous Region of Madeira (RAM), the eradication programme foressen for 2019 includes the continuation of the testing scheme based on two tests applied to all animals over 6 months of age with 6 months interval in order to classify herds and the application of annual survey in herds with attributed indemne status.

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

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

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 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: with 0.58% in 2018 and 0.40% in 2020;
- herd incidence: with 0.43% in 2018 and 0.30% 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 from 0.73% herd apparent prevalence achieved in 2017.

The Autonomous Region of Azores is officially free and maintained its status.

The Autonomous Region of Madeira will continue the classification according to results obtained in 2018. It will achieve the free health status in 4/5 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) :

The indicators achieved so far, even though serological results from 2017 showed an increase of positive herds, revealed a steady progress of this programme towardseradication, being these last steps more difficult to manage and to achieve relevant results.
At the moment and taken into consideration results from the previous years, expected foreseen timeline for eradication will be as follow:

- 2018 - 0.58% herd prev and 0.43% herd inc.
- 2019 - 0.52% herd prev and 0.35% herd inc.
- 2020 - 0.40% herd prev and 0.30% herd inc
- 2021 - 0.20% herd prev and 0.15% herd inc
- 2022 - 0.10% herd prev and 0.05% herd inc
- 2023 - 0.05% herd prev and 0.0% herd inc
- 2024 - 0.0% herd prev and 0.0% herd inc

Regarding the Autonomous Region of Madeira, the foreseen timeline is now difficult to determine but if absence of B. melitensis is confirmed it will take 4/5 years to achieve the indemne status.

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

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

Describe the authorities in charge of supervising and coordinating the departments responsible for implementing the programme and the different operators involved. Describe the responsabilities of all involved stakeholders. Explain which actions are taken to actively involve the stakeholders in the implementation of the programme.

(max. 32000 chars) :

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

Five Regional Directorates for Food and Veterinary (DSAVR), decentralised services of DGAV (Norte, Centro, Lisboa e Vale do Tejo, Alentejo and Algarve), 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 DSAVR 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 results are electronically communicated to DGAV.

In the continental territoryal 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 and CFT) and issue the results in PISA.Net.

Brucella bacteriological examination and typing of brucella are only performed at NRL at central level and the results are communicated electronically to DGAV. NRL provides to official laboratories staff, technical training either for initial qualification or requalification on RBT and CFT techniques. NRL provides to official Labs a Positive Control Serum for RBT and CFT techniques.

Testing methods used are harmonized following guidelines supplied by EURL and according with OIE Manual. Since 2014, there are two delegations of INIAV performing official samples for brucellosis serology.

VETQAS s APHA's independent, accredited, proficiency testing (PT) 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 PT schemes for veterinary laboratories.It is the international market leader in proficiency testing (PT) for veterinary laboratories, with over 30 years' experience.

In the Autonomous Region of Madeira:
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.I.P. (Instituto Nacional de Investigação Agrária e Veterinária, I.P.).

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

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 continue to be implemented throughout the whole continental territory of Portugal. 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).

- Directorate for Food and Veterinary of the Algarve Region (DSAVRAlg).

In the Autonomous Region of Madeira (RAM) the programme will be implemented in two islands: Madeira and 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 by national Decree Law No 39:209 of 1953. The requirement to notify is reinforced by national Decree-Law No 244/2000 of 27 September 2000. Disease treatment is explicitly prohibited.

Laboratories approved by DGAV to perform diagnostic tests notify 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, 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.

Health classification of a herd is suspended following notification of a positive serology or a positive result in investigation of abortions, movements are suspended in SNIRA and appropriate measures are carried out.

4.4.2 Target animals and animal population

(max. 32000 chars) :

The target population of the programme are sheep and goats over 6 months of age in all herds of continental territory and Madeira Islands (unless being vaccinated which can be from 3 months old). The number of estimated herds and animals are on point 7.

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) :

Measures for the identification, registration and movement of sheep and goats (small ruminants) are described in national Decree-Law No. 142/2006 of 27 July 2006 with its the amendments, setting up the National System for the Identification and Registration of Animals (SNIRA). This sets out the rules for the identification, registration and movement of animals, the legal arrangements for assembly centres, traders and transporters, the regulations for the functioning of the Carcass Collection System for Fallen Stock on Holdings (SIRCA).

The system for the identification and registration of animals comprises the following elements:
a) means of identification to identify each animal: one ear tag and electronic identification (bolus or eartag);
b) movement documents;
c) a central national database which monitors the issue of the movement documents according to the health status of the holdings concerned.

Each animal Keeper must supply DGAV, with all information concerning the origin, identification and the destination of the animals which the Keeper has owned, kept, transported, marketed or slaughtered.

In accordance with Council Regulation EC 21/2004 of 17 December, all animals are identified within six months of birth and, in any case, before the animal leaves the holding on which it was born. For animals kept in extensive or free range farming, the time limit may be extended but not exceeding nine months.

Before living the holding, animals of small size or those under six months of age that are sanitary sampled, have to be identified with a kit that consists of [convencional eartag and an electronic tag (this applied to the left ear)], both in yelow colour. Kits used for early-vaccinated animals are green eartags. Animals are thus definitively identified, dispensing a second visit to the holding in a remote area.

For animals intended to be transported directly for slaughter or via an approved assembly centre in order to be fattened for subsequente slaughter before the age of 12 months, on national territory, they may be identified with an eartag with the code of the holding of birth (ME), which is acquired by the keeper and applied to the left ear.
When animals go for slaughter through a rearing and finishing Centro, they must keep the code of the holding of birth (ME), and being once again marked before living, with the rearing and finishing holding code or with an individual code that allows it to identify the origin of the movement.

Provisional identification with red eartag, with the individual code in Portugal, occurs when there is movement or sanitary actions in young animals still with no corpulence to receive the application of a bolus of 70 grams. When the animals reach the final size, the definitive identification shall be applied.

It is mandatory for each keeper to:
- carry out annual declaration of existences of their sheep and goats;
- provide information of the holding register at the Central Holding Register and Animal Movement database (SNIRA).

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) :

Qualification of animals and herds is carried out in accordance with Council Directive 91/68/ECC, national Decree-Law nº 244/2000, the Manual of classification and their adaptations.

Under the brucellosis programme, all sheep and goats herds are classified and health classification is maintained or changed, according to the criteria set out at national legislation and established written procedures ("Manual of procedures for herd classification regarding Brucellosis, tuberculosis and leukosis"), which include the reasons for suspending and lower the classification and the testing regime to be applied to improve herd classification.
Classification of areas is based on the minimum area of a Food and Veterinary Intervention Division (DAV), and is the decisive strategic objective for the implementation of the programme.

The existing health classifications are the following:
- B2: non brucellosis free;
- B3: brucellosis free;
- B4: officially brucellosis free.

In addition, the following statuses are also attributed under the programme:
- B2.1: used whenever the presence of infected animals in which bacteria of the genus Brucella have been isolated and identified;
- B3S: used whenever disease-free classification is suspended;
- B4S: used whenever officially free classification is suspended.

The notification of all abortions occurring in females is compulsory.

Rules for the maintenance, suspension, withdrawal and upgrading of herds health status are the following:
- B3 and B4 herds: if all animals (sheep and goats) have been free from clinical symptoms or any other signs of brucellosis for at least 12 months and have completed the established programme of tests.
- B3S and B4S herds: the classification is suspended whenever a plan is not being complied with, when brucellosis is suspected in at least one animal or if the epidemiological survey indicates that infection is a possibility or if there are positive results to serological tests (the suspension may be withdrawn only by official services after a negative serologic control (RBT and FCT) with an interval of 3 months after removal of the positive animal) or whenever the implementation of the protocolo of serological false reactions investigation concludes that there is no brucellosis.
- B2.1 infected herds: free and officially disease-free health statuses are withdrawn to infected wherever the presence of Brucella is confirmed though its isolation in a bacteriological examination of samples taken from sanitary slaughter or living suspect animals.
- B2 non-free herd: is a herd undergoing health measures that upgraded from B2.1 status after 2 negative results in two successive serological tests carried out to all sheep and goats 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.

The method for attributing, maintaining and altering the health status set out in the programme is presented in the attached document.

B2 herds regain disease-free or officially disease-free (B3, B4) status if they obtain negative results in two

successive serological tests, with a minimum interval of 3 months, performed to all sheep and goats over six months of age.

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 N.o 142/2006 of 27 July 2006 and its amendments lays down measures for the identification, registration and monitoring of movement of sheep and goats.

For the purposes of any movements, in addition to the mandatory identification, sheep and goats must be accompanied by a movement permit provided for in the above-mentioned Decree-Law. The documents are issued by IDigital/SNIRA by request of the producer of origin, according to the health status of the holdings concerned, and it is then up to the destination to confirm the arrival of the animals within 7 days.
The animal health database Pisa.Net which contains information on implementation of animal sanitary health measures have information on a holding's health status and communicates this information to SNIRA.

Movements are not permitted from holdings if health classification is "non-brucellosis free" (B2).
Only animals from B3 and B4 herds, not subject to any health restrictions, may be moved without restrictions. However movements of vaccinated animals less than 3 years before the movement from B3 to B4 herds imply the change of classification of B4 herd into B3. Whenever the health status brucellosis - free or officially free holdings are suspended (B3S and B4S), animal movement are not allowed.

There is a ban on movements from and to B2.1 holdings, except for seronegative animals destined for immediate slaughter.

The updating of health status on Pisa.Net is undertaken by the veterinary services that validate the maintenance and record the suspension or alteration of herds' status.

The movement of sheep and goats from their holdings of origin to pastures for a set period and the transhumance of sheep and goats are permitted only when these animals come from herds that are disease-free or officially brucellosis-free.
Such movement is subject to compliance with the rules and standards set out in health regulations produced by the veterinary services of the regions where this practice is more widespread and it is ensured that the following rules are observed:

- sheep and goats are identified in accordance with the laws in force;
- animals moved present no evident symptoms of infectious contagious disease;
- animals come only from holdings and areas that are not subject to any health restriction;
- animals must come from holdings with officially brucellosis-free or brucellosis-free status, and the holding must have undergone serological testing within 6 months or, when possible, undergo pre-

movement testing within the 30 days before the movement in question. The pre-movement tests are mandatory in the event of restocking of holdings following total slaughter (depopulation).

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

- Data on field work is entered by OPP on a data base (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.
- Systematic trace back is carried out and contact herds are serological investigated. Whenever contacts between herds are regular, they are considered as the same epidemiological unit and all related holdings are subject to restrictions.

The DSAVRs check the restrictions on movements by visiting holdings when required, when OPPs visit holdings from their areas while checking the number of animals in the herds. If any irregularities are detected the OPP informs the DSAVR, which initiates the respective health-infringement procedures.

Movement controls are also carried out in transit by the National Guard.

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) :

SEROLOGICAL TESTING

Screening is obligatory for all sheep and goats over 6 months of age, or 18 months after been vaccinated with Rev1, and is regulated by Decree-Law No 244/2000 of 27 September 2000.

The Rose Bengal (RBT) and Complement Fixation Tests (CFT) are used, with the following methodology:

- The RBT is carried out on all tested animals, over 6 months of age (or 3 months when vaccinated);

- The CFT is carried out in the following cases:
  a) On RBT-positive animals, in herds that B4 and B3;
  b) On all animals vaccinated with Rev1 that are RBT-positive, irrespective of the herd's health status;
  c) On all samples from B3 and B4 herds if, after performance of the RBT, more than 5% of the samples were RB positive;
  d) On all samples from B3 and B4 herds, upon decision of DSAVR, if at least one sample was RB and CF positive;
  e) On RBT-negative animals B3 and B4 herds if, after performance of the CF test, at least one animal shows a positive reaction to this test;
  f) On RBT-negative animals in herds infected with Brucellosis (B2.1), irrespective of the existence or otherwise of RBT-positive animals;
  g) To lift the suspension of B4S or B3S herds (RBT and CFT are conducted in parallel) except under the

FPRS protocol where they are conducted in series;
h) For classification of a B2 herd as B3 or B4;
i) In pre-movement tests for restocking (the pre-movement tests are mandatory in the event of restocking of holdings following total slaughter).

The criterion of a positive animal to CFT is equal or more than 20 IU/ml.

As already mentioned, methods to be used in the serological testing vary according to the herds' health classification.

The serological testing of infected herds (B2.1), until they achieve disease-free status (B3) or officially disease-free status (B4) will be carried out as following:
a) The serological test is carried out on all animals 30 days after slaughter of the positive animal(s);
b) Following serological testing of all the animals with negative results, a further serological test will be carried out on all the animals 60 days later;
c) If all the results of the serological test referred above are negative, the herd will cease to be regarded as infected (B2.1) and will from then on be regarded as not brucellosis-free (B2) and as undergoing rehabilitation;
d) A further serological test will be carried out on all the animals 3 months later;
e) If all the results in the serological test referred above are negative, a further serological test will be carried out on all the animals 6 months later. If all the animals test negative, the herd will be classified as brucellosis-free (B3) or officially brucellosis-free (B4);
f) If any of the above serological tests produce a positive result, the methodology referred to in a) will be followed.

In free (B3) and officially free (B4) herds there is an annual check on all animals of more than six months of age.
If at least 99.8% of the herds in an epidemiological unit, parish or set of parishes, municipality or set of municipalities are B3 or B4, serological testing must be carried out once a year on all the herds, but in B4 herds it can be carried out by sampling of a representative fraction of the animals over 6 months of age (non-castrated male animals over 6 months of age, all animals brought into the herd since the last test and 25% of the females of reproductive age).

Whenever sampling reveals that at least one animal has reacted positively for brucellosis, it is slaughtered and the whole herd is tested 30 days later for the purposes of rehabilitation.

If a false positive serological reaction is suspected in B3 or B4 herds (there is no clinical signs, the epidemiological investigation failed in establishing a probable source of infection and the CFT titres are low in few animals) the classification is suspended and the positive animals will be retested. All seropositive animals (RBT and CFT>=20 IU/ml) in the second test are slaughtered, and subjected to bacteriology.

If in the second test the animal(s) is(are) negative the suspension is lifted and the herd is not accounted as positive.

BACTERIOLOGY
Bacteriology is an important tool used in the decision process to define the status of the holdings and is applied routinely to sanitary slaughtered animals from holdings where infection is not yet confirmed according with procedures that have been established for collection and sending of material for

identification of Brucella, by INIAV and DGAV.

Samples of limph nodes, other organs and milk are systematically collected at the slaughterhouse by meat inspectors from positive slaughtered animals, except those comming from herds were infection was already stablished (B2.1).
Material for bacteriological examination is collected by sampling 10% of the animals sent for compulsory slaughter from each herd, with a minimum of 5 animals per herd.

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) :

The importance of the vaccination as a strategy for controlling the disease under the sheep and goats brucellosis eradication programme is emphatized in certain areas, given that it allows the animals to be protected from infection, reduces shedding of Brucella into the environment and at the same time reduces the number of abortions and the number of animals slaughtered on health grounds.

The areas where vaccination is carried out are the Norte Region (specifically Trás-os-Montes), the Algarve Region, the LVT Region - in infected herds from certain counties, and the Centro Region - in some herds with history of infection.
The vaccination of sheep and goats, with the Rev1 strain of Brucella melitensis, will be carried out strictly by the conjunctival route, full doses. Subcutaneous vaccination is prohibited.
The decision to proceed with or cease vaccination will at all times be subject to authorisation from the DGAV.

As a rule, vaccination is carried out in young animals, between 3 and 6 months of age, from infected or non-infected herds, that are well developed, shown no evident signs of a debilitating condition (parasitic infestation, excessively thin etc.) or sexual activity, and are serologically negative for brucellosis (blood samples are collected at the same time of vaccination). Vaccination of adult animals is allowed under conditions defined by DGAV.

All vaccinated animals shall be subject to electronic identification, which, as an alternative to the classic method (a ruminal bolus and a green tag) may use a conventional ear tag and an electronic one. This electronic identification may optionally be supplemented by a tattoo in the ear or in the left inguinal fold.

In vaccination areas DGAV may give permission for certain herds not to be vaccinated on request of the owner and if the epidemiological assessment of the herd and the biosafety of the holding does not support vaccination.

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

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

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) :

To avoid the disease spreading between herds, a series of measures are being taken with the aim of maintaining biosecurity standards.

Whenever possible structures must exist which permit animals to be effectively isolated from the introduction of brucellosis infection into the herd (e.g.: fences and/or walls, wheel dips, foot baths, appropriate footwear and clothing, etc.).

It is advised that herds follow strict rule for entries and departures of animals, with compliance with herd classification restrictions. Farmers of small ruminants are required to electronically identify animals born on their holdings after 1 January 2010 (Regulation EC 21/2004 of 17 December 2003). Older animals must be duly identified in accordance with the legislation in force (one or two eartags).

In infected farms, the entry of persons and other animals will have to be restricted so as to avoid the disease being introduced by that route.

Mixing of herds in common pastures is also frequent in certain areas and a group of herds can be considered as the same epidemiological unit in certain case and have the same restrictive measurs. Common pastures are registered in SNIRA and associated with the holding marks of herds using the pastures.

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

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 animals. In the course of the epidemiological investigations on farms, farmers are asked a series of questions which, in assessing biosafety and management methods, clarify matters for farmers and are educational.

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.

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.

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

(max. 32000 chars) :

Whenever a herd is considered to be positive or infected, pursuant to the provisions of national Decree-Law No 244/2000 of 27 September 2000, the DSAVR establishes the following procedures:

- holdings are quarantined, with ban the movement of animals of susceptible species to brucellosis from or to the holding except when animals are destined for immediate slaughter;
- owners are notoified of the following requirements:
  . the milk from positive animals in infected herds may only be used for animals on the same holding following appropriate heat treatment in accordance with Regulation (EC) No 853/2004 of 29 April 2004;
  . milk from negative animals in infected herds may not leave the holding unless it undergoes to appropriate heat treatment in accordance with Regulation (EC) No 853/2004 of 29 April 2004;
  . cleaning and disinfection of the barns, accommodation, equipment and other utensils used by the slaughtered animals;
  . destruction of foetuses, stillborn, placentas and animals that have died, unless if they are destined for laboratory analysis,
  . destruction by incineration or burial, of straw, bedding and any other materials or substances that have been in contact with infected animals or placentas, after treatment with officially approved disinfectant solution;
  . ban of the use of manure from infected barns or any other accommodation used by the animals without appropriate treatment;
  . when possible, isolation opf positive animals.

- whenever the pattern of positive results in B3 and B4 herds are not compatible with infection (single reactors, low CFT titres, etc.), DSAVR decide for a specific investigation of a possible false positive serological reactions.

Regarding the positive animals, DSAVR sets the following standard procedures:

- positive animals are marked and, in certain occasions, also other animals in the same holding destined for compulsory slaughter and collected and transported to the slaughterhouse;
- collection and transport under official supervision of the animals destined for compulsory slaughter within 30 days following the date of official notification of the owner; Animals subject to compulsory slaughter are sent to processing industry (not for human consumption);
- collection of material for laboratory diagnosis, except for animals from an infected herd;
- preparation of a dossier for the payment of compensation in accordance with official criteria – please see point 4.4.10.

FOLLOW-UP AND ELIMINATION OF INFECTION

The remaining animals are subjected to serological test within a period of 30 days following the removal of the last positive animal for slaughter. The requalification scheme was presented in point 4.4.4.

EPIDEMIOLOGICAL INVESTIGATION

Epidemiological investigation 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 herds where single serological reactions occurred, with no furtherer 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.

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

Since 2017 new procedures with additional measures for management of False Positive Serological Reactions were adopted.

INVESTIGATION OF POSSIBLE FALSE-POSITIVE SEROLOGIC REACTIONS
Following positive serology (>=20 UI/mL), all herds are suspended and put under restriction. The risk of Brucella infection is assessed and false positive reactions are suspected if:

- Small number of positive animals are detected (1 to 5);
- Low titles of FC (all below 107 UI/ml);
- Only vaccinated animals in the holding are positive;
- Compliance with the eradication programme and movement rules;
- Epidemiological investigation does not identify risk factors that support the presence of Brucella, including biosecurity and contacts.

Herds in this situation undergo the following procedures, with the commitment of the owner:

- The positive animals are kept separated and blood samples are collected by the official veterinary services 30 days after isolation;
- RB, FC and complementary tests are carried out by the reference laboratory;
- If positive results to both official tests are identified, animals are slaughtered and submitted to bacteriological examination;
- Holding is kept under restriction if all tests are positive;
- Status is lower to infected if Brucella is isolated.

DEPOPULATION OF HERDS
The use of depopulation (total slaughter) of outbreaks 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.

Animal Keepers 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). In situations of depopulation, farms remained without animals for a minimum period of 6 months up to a maximum term to be determined by the DSAVR.

Details on procedures applied to small ruminants are the same as bovines, as legislation is common to both species with regards to brucellosis, and are laid down on guidelines “procedimentos de trabalho PT/BB07 – serologia positiva/suspeita de infeção/abate total do efetivo”.

The expenditure relating to depopulation (total slaughter) referred to at 8 (5) includes: slaughter,
- Average cost per km from the holding to the slaughterhouse(s);
- The cost of disposing of carcasses;
- Cleaning and disinfection of vehicles.

Expenditure related to depopulation, as described at point 8, indent 5, includes: slaughter, average cost per km travelled between the holding and the slaughterhouses, costs of destruction of carcasses, cleaning and disinfection of vehicles.

Forecasts made for 2019 herd's depopulation were based on data related to the previous years. Taken into consideration that there were 3 depopulated herds in 2017 within those positive, it is expected to increase the number of depopulated herds in 2019, evaluating the situation case by case.

CLEANING AND DISINFECTION
Cleaning and disinfection of means of transport after animals from an infected holding have been loaded are undertaken with officially approved disinfectants in line with the codes of good practice defined in the manual of procedures for authorisation to operate means of cleaning and disinfecting of transport for carrying live animals.
Upon the imposing of restrictions in infected farms, holdings have to be disinfected by their owners, under the technical supervision of the OPP. 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.
In the event of depopulation, the (initial and final) disinfection of the holding and the equipment will be the responsibility of the owner, who will first clean them by washing and removing all material, feed and manure, also with technical support from the OPP and under DSAVR supervision.
As mentioned above, pastures where infected animals have been kept may not be used for at least 30-60 days.

RESTOCKING
A protocol will be agreed between the DSAVR and the producer, setting out the rules for restocking and the health procedures to be followed after all of the animals have been slaughtered. Before the introduction of the new herd, the barn or other accommodation, equipment and utensils which may have been in contact with the slaughtered animals must be thoroughly cleaned and disinfected.

The holding must be restocked with animals from free or officially free herds, following performance of the pre-movement test.
This restocking must be carried out with vaccinated animals whenever they do not have their own properly isolated pastures and there are infected herds in the epidemiological unit concerned, or if the DSAVR so decides. This practice is compulsory in Trás-os-Montes.

After restocking, the herd will be classified as free, if such restocking has been carried out with vaccinated animals from holdings with free status, or officially free status if the new animals come from an officially free holding, provided that they are accompanied by a movement certificate and a veterinary health certificate proving that the pre-movement tests have been carried out.

4.4.10 Compensation scheme for owners of slaughtered and killed animals

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

(max. 32000 chars) :

The compensation granted is under Order No 205/2000 of 5 April 2005 and is laid down in Joint Order No 530/2000 of 16 May 2000, of the Finance Ministry and the Agriculture, Rural Development and Fisheries Minister.

- Base value of 40% of the value quoted in the weekly bulletin issued by the Office of Planning and Policies (GPP) of the Ministry of Agriculture, Rural Development and Fisheries, for the purposes of payment of compensation for slaughter on health grounds;
- An additional compensatory amount based on the health classification of the herd – percentage value of the rate in the weekly bulletin issued by the GPP:
  . B3 and B4 herds – 50%;
  . Others – 25%.

The additional compensatory amount of 25% (referred above) will be withdrawn if there has been no improvement in the health classification after 12 months.

- A restocking grant of EUR 29.93 per animal acquired up to 12 months after the compulsory slaughter of the positive animals, limited to the number of animals slaughtered. The DSAVR for the holding of origin must certify that they are from B3 and B4 herds and that the legislation in force on the conditions governing the entry of animals into herds has been observed.

- A self-restocking grant of EUR 14.96, limited to the number of animals slaughtered over the 12 months following compulsory slaughter and provided that the legislation in force has been observed.

- A depopulation grant of EUR 9.98 per animal over 12 months of age present on the holding on the date of the decision to slaughter all animals.

Before compensation for compulsory slaughter is paid out, the respective DSAVR must make sure that the owner of the slaughtered animals has complied with the legal provisions relating to the eradication programmes and animal movement and the specific animal health measures imposed in the notification. If the aforementioned check reveals evidence of non-compliance by the holder, the DSAVR must immediately initiate the relevant penalty process, and payment of compensation will depend on the final decision in the case.

The compensation procedures must include a declaration issued by the DSAVR of compliance by the owner of the slaughtered animals with the legal provisions relating to the eradication programmes, animal movement and any specific animal health measures imposed in the notification.

Without prejudice to other legal penalties, compensation for compulsory slaughter on health grounds may not be granted if there is proof of fraud or failure to comply with the legislation in force.

In the case of sheep and goats, the amount of the compensation is directly related to the current market values of these species, and a maximum rate of 40% of this amount is used as the base compensation value.

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

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

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, enabeling the DSAVR to systematicaly 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 elegible 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 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 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

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

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) :

The general objective is to contribute to a high level of health for humans and animals and by eradicating this disease in a medium term period, ensuring a high level of protection for consumers.

In relation to the number of humans cases reported, regardless of the undernotification that might exist, a significant decrese of notified cases was observed reducing from 58 human cases in 2015 and 50 cases in 2016 to 16 cases in 2017.

In determining cost effectiveness, several factors must be considered as direct losses related to the disease (due to morbidity and reduced production) and indirect losses, which can include barriers to free trade, particularly as regards animals movement for the purposes of intra-Community trade. Eradication of brucellosis therefore tends to increase productivity (raising the revenue to farmers) and avoid costs inherent to the programme and related to trading constraints.

Furthermore, apart from the direct and immediate benefit of the reduction in the amount of compensation paid, a reduction in the number of animals slaughtered brings with it all the benefits of improving the genetic heritage and the socio-economic benefits resulting from the raising of the status of the herds, both at the level of the individual producer and at the level of the various regions of the country.

The incalculable benefits resulting from the reduction in the rates of infection in the animal population and the reduced probability of transmission of the disease to the population also deserve to be mentioned.

For these reasons, investment in a programme such as this is extremely positive, even if it is difficult to quantify.

The costs of this programme are presented at point 8.

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	Sheep and goat	blood	qualification	373 760	X
DSAVR_C	Rose Bengal test	Sheep and goat	blood	qualification	479 960	X
DSAVR_LVT	Rose Bengal test	Sheep and goat	blood	qualification	183 110	X
DSAVR_ALT	Rose Bengal test	Sheep and goat	blood	qualification	949 800	X
DSAVR_Algarve	Rose Bengal test	Sheep and goat	blood	qualification	51 780	X
RA_Madeira	Rose Bengal test	Sheep and goat	blood	qualification	830	X
DSAVR_N	complement fixation test	Sheep and goat	blood	qualification	91 190	X
DSAVR_C	complement fixation test	Sheep and goat	blood	qualification	26 490	X
DSAVR_LVT	complement fixation test	Sheep and goat	blood	qualification	23 870	X
DSAVR_ALT	complement fixation test	Sheep and goat	blood	qualification	83 010	X
DSAVR_Algarve	complement fixation test	Sheep and goat	blood	qualification	7 310	X
RA_Madeira	complement fixation test	Sheep and goat	blood	qualification	100	X

DSAVR_N	bacteriological test	Sheep and goat	organs, lymph nodes, foe	qualification	410	X
DSAVR_C	bacteriological test	Sheep and goat	organs, lymph nodes, foe	qualification	15	X
DSAVR_LVT	bacteriological test	Sheep and goat	organs, lymph nodes, foe	qualification	50	X
DSAVR_ALT	bacteriological test	Sheep and goat	organs, lymph nodes, foe	qualification	15	X
DSAVR_Algarve	bacteriological test	Sheep and goat	organs, lymph nodes, foe	qualification	180	X
RA_Madeira	bacteriological test	Sheep and goat	organs, lymph nodes, foe	qualification	10	X
				Total	2 271 890	
				Add a new row		

	Total number of tests
Total number of tests	2 271 890
Rose Bengal test	2 039 240
complement fixation test	231 970
bacteriological test	680
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	Sheep and goats	14 400	14 330	14 040	225	155	4	1,778	97,976	1,603	1,104	X
DSAVR_C	Sheep and goats	23 400	23 270	22 800	14	10	3	21,429	97,980	0,061	0,044	X
DSAVR_LVT	Sheep and goats	6 700	6 640	6 440	16	8	3	18,750	96,988	0,248	0,124	X
DSAVR_ALT	Sheep and goats	8 750	8 680	8 510	9	6	0	0,000	98,041	0,106	0,071	X
DSAVR_Algarve	Sheep and goats	1 050	1 030	1 010	7	3	2	28,571	98,058	0,693	0,297	X
RA_Madeira	Sheep and goats	84	84	84	3	3	0	0,000	100,000	3,571	3,571	X
Total		54 384	54 034	52 884	274	185	12	4,380	97,872	0,518	0,350	
									Add a new row			

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

							Slaughtering	Target indicators	

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	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	Sheep and goats	377 000	373 220	354 560	354 560	690	690	790	95,000	0,195	X
DSAVR_C	Sheep and goats	542 550	531 700	478 530	478 530	30	30	80	90,000	0,006	X
DSAVR_LVT	Sheep and goats	242 350	213 280	181 290	181 290	100	100	250	85,001	0,055	X
DSAVR_ALT	Sheep and goats	1 408 500	1 352 160	946 510	946 510	20	20	20	70,000	0,002	X
DSAVR_Algarve	Sheep and goats	54 850	53 200	50 540	50 540	310	310	380	95,000	0,613	X
RA_Madeira	Sheep and goats	780	780	780	780	3	3	3	100,000	0,385	X
Total		2 626 030	2 524 340	2 012 210	2 012 210	1 153	1 153	1 523	79,712	0,057	
								Add a new row			

Total number of animals expected to be slaughtered or culled : SHEEP AND GOAT	1 523
Total number of animals expected to be tested	2 012 210

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												
						Expected not free or not free from disease										
		Total number of herds and animals under the programme		Expected unknown		Last check positive		Last check negative		Expected free or officialy 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	
DSAVR_N	Sheep and goats	14 330	354 560	0	0	30	876	195	5 701	41	8 364	4 199	235 742	9 619	103 878	X
DSAVR_C	Sheep and goats	23 270	478 530	0	0	0	0	14	489	295	7 916	467	40 668	22 556	429 456	X
DSAVR_LVT	Sheep and goats	6 640	181 290	0	0	1	40	15	583	217	5 248	49	3 195	6 443	172 225	X
DSAVR_ALT	Sheep and goats	8 680	946 510	0	0	0	0	9	1 127	277	21 966	14	525	8 484	922 893	X
DSAVR_Algarve	Sheep and goats	1 030	50 540	0	0	5	310	2	115	56	2 557	416	18 072	566	29 485	X
RA_Madeira	Sheep and goats	84	780	0	0	0	0	0	0	1	10	0	0	83	770	X
Total		54 034	2 012 210	0	0	36	1 226	235	8 015	887	46 061	5 145	298 202	47 751	1 658 707	
												Add a new row				

7.3 Targets on vaccination or treatment

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

				Targets on vaccination or treatment programme						
Region	Animal species	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 treatmentexpected to be administered	Number of adults expected to be vaccinated	Number of young animals expected to be vaccinated	
DSAVR_N	Sheep and goats	2 500	72 959	3 000	3 000	35 000	35 525	0	35 000	X
DSAVR_C	Sheep and goats	245	8 335	300	300	4 400	5 060	0	4 400	X
DSAVR_LVT	Sheep and goats	5	198	7	7	80	92	0	80	X
DSAVR_Algarve	Sheep and goats	35	2 173	33	33	620	713	0	620	X
Total		2 785	83 665	3 340	3 340	40 100	41 390	0	40 100	
							Add a new row			

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_Bpr2019_attachments. pptx.pdf	PT_Bpr2019_attachmentspptx.pdf	793 kb
			Total size of attachments :	793 kb

REPÚBLICA PORTUGUESA | AGRICULTURA, FLORESTAS E DESENVOLVIMENTO RURAL

dgav Direcção Geral de Alimentação e Veterinária

PORTUGAL

SHEEP AND GOATS BRUCELLOSIS - 2019
ERADICATION PROGRAMME
EPIDEMIOLOGICAL EVOLUTION
VACCINATION PROGRAMME

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

dgav Direcção Geral de Alimentação e Veterinária

Sheep and Goats Brucellosis - Population under the programme

2017

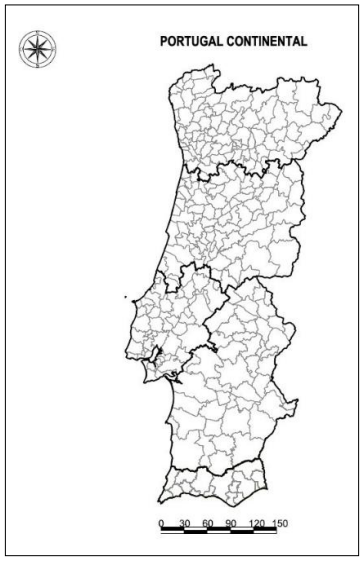
Herds - 56.216
Animals - 2.463.567

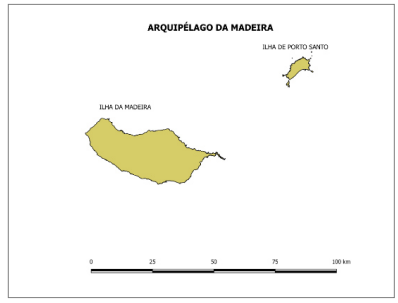
Area:

Continental territory
RA Madeira

Sheep and goats Brucellosis

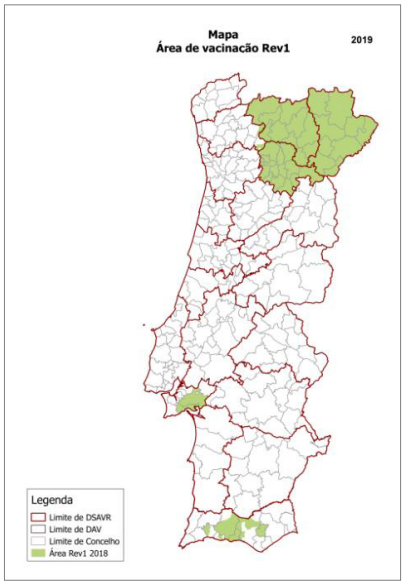
- 5 regions at the Continental territory
- Autonomous Region of Madeira





(RAAzores: oficially free of *Brucella melitensis)*

Sheep and Goats Brucellosis – regions with vaccination



Vaccination (with Rev 1)

- ✓ Trás os Montes (DSAVR Norte)
- ✓ Centro (certain units)
- ✓ Setúbal & Palmela (DSAVRLVT)
- ✓ Algarve

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Sheep and goat Brucellosis – sanitary classification

CLASSIFICATION OF HOLDINGS

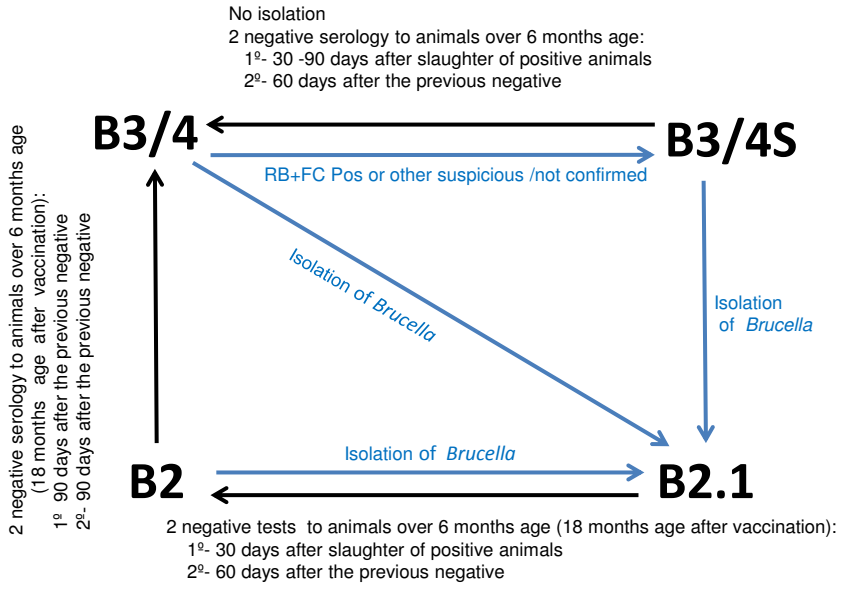
B3/B4 status maintenance

- annual serological test to all S&G over the age of 6 months
  → all with negative results
- in areas where 99.8% of S&G holdings are B3/B4, there may be authorization to control a representative fraction * of the population over the age of 6 months
  → all with negative results of:
  - all non-castrated male animals over six months old;
  - all animals brought onto the holding since the previous test;
  - females which have reached the age of reproduction:

Number of females of reproductive age	Number of females of reproductive age to be tested
0 - 50	all
51 - 201	50
> 201	25%

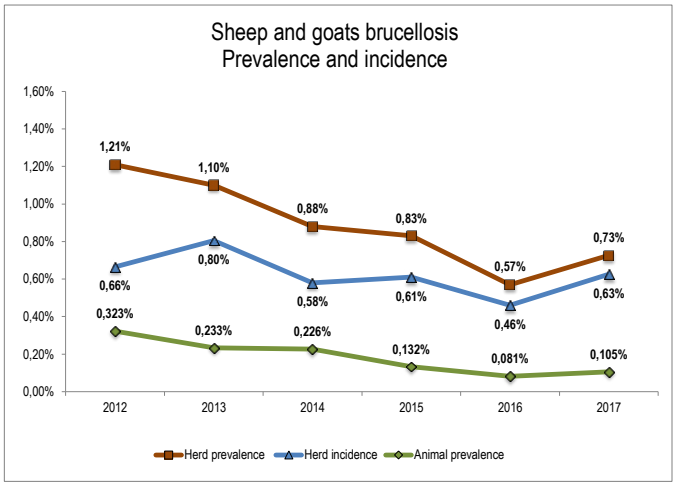
**animals over 6 months age not sampled on holdings where sampling is performed, remain under epidemiosurveillance*

Sheep and goat Brucellosis – testing schemes



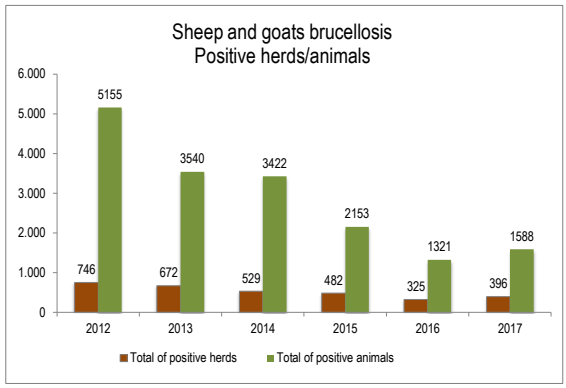
6

Evolution of sheep and goats brucellosis epidemiological indicators



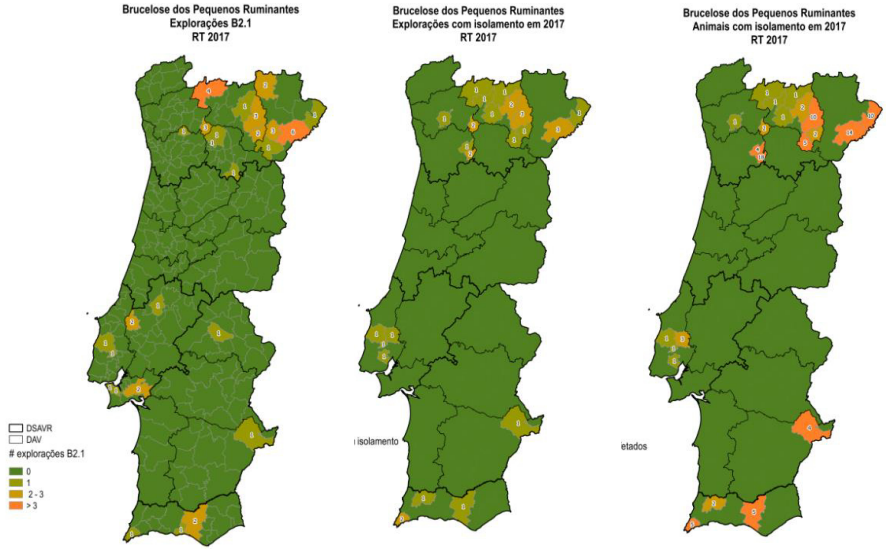
7

Evolution of sheep and goats brucellosis – positive herds and animals



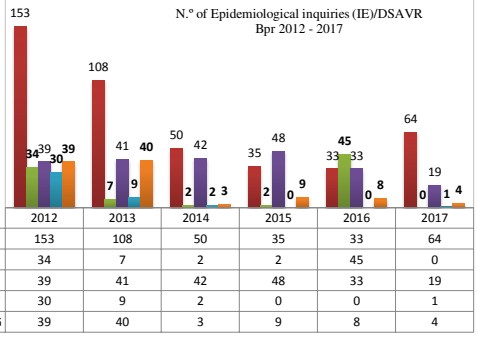
8

Sheep and Goat Brucellosis – Geographical distribution of B2.1 herds
Herds and animals with isolation of *Brucella*



9

Sheep and Goat Brucellosis – sources of infection
Epidemiological inquiries carried out by Region



	2012	2013	2014	2015	2016	2017
DSAVRN	153	108	50	35	33	64
DSAVRC*	34	7	2	2	45	0
DSAVRLVT	39	41	42	48	33	19
DSAVRALT	30	9	2	0	0	1
DSAVRALG	39	40	3	9	8	4

*DSAVRC: 10 IE with no infection

Sheep and Goats Brucellosis – Sources of infection Epidemiological inquiries

Sheep & Goat brucellosis (possible source of infection)	2012	2013	2014	2015	2016	2017
Total n.º of Epidemiological inquiries	295	205	99	94	119	88
Direct contact with ruminants from other holdings	116	76	33	27	15	10
Contact with holdings from the same owner	9	7	7	6	3	8
Introduction of animals	95	69	51	43	36	45
Common pastures	78	68	31	25	18	26
Transumance	13	8	6	7	5	8
Re- occurrence	65	51	26	25	13	17
Other origins	111	58	16	27	25	49

Sheep and Goat Brucellosis - 2017

Regions	No positive herds	No new positive herds	% positive herds	% new positive herds
Norte	329	285	2.25	1.95
Centro	21	20	0.09	0.08
LVT	23	17	0.37	0.27
Alentejo	13	12	0.16	0.15
Algarve	10	7	0,93	0.65
TOTAL	396	341	0.73	0.63

1.420 S&G slaughtered / 804 bacteriological tests /94 isolates of *B. melitensis*

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Sheep and Goat Brucellosis – RAM 2017*

RAM – S & G							
Year	Total number of herds	Total number of Animals	Herds tested	Animals tested	% Herds tested	% Animals tested	N.º positive animals
2017	76	750	26	312	34,2	41,6	0

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

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Sheep and Goat 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 *Brucella*
Continent	Fetus, stillborn	17	4 sheep 13 goats	0
RA Madeira	Fetus, stillborn	0	0	0

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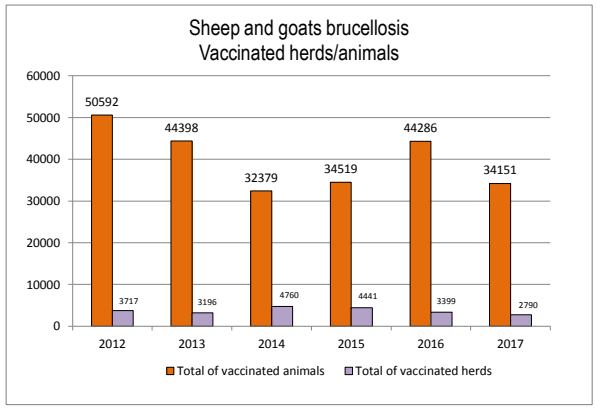
Sheep and Goat Brucellosis
Human cases reported

Region	N.º of Human cases - 2017
Continent	16

Source: DGS

15

Evolution of vaccinated herds and animals



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Sheep and goat brucellosis - Vaccination with Rev1 by Regions

S&G 2017	TOTAL	DSAVR Norte	DSAVR Centro	DSAVR LVT	DSAVR Alentejo	DSAVR Algarve
N.º vaccinated herds	2.790	2.500	247	9	0	34
N.º vaccinated animals	34.151	29.262	4.123	204	0	562