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FINAL REPORT OF AN AUDIT
CARRIED OUT IN
PORTUGAL
FROM 01 DECEMBER 2014 TO 05 DECEMBER 2014
IN ORDER TO
EVALUATE THE ERADICATION PROGRAMME FOR SHEEP AND GOAT
BRUCELLOSIS

In response to information provided by the Competent Authority, any factual error noted in the draft report has been corrected; any clarification appears in the form of a footnote.

Executive Summary

The report describes the outcome of an audit carried out by the Food and Veterinary office in Portugal from 1 to 5 December 2014.

The objectives of the audit were:

- i. to determine whether eradication measures are in compliance with planned arrangements, implemented effectively and suitable in achieving objectives; and*
- ii. to evaluate whether prior epidemiological information, knowledge and experience in implementation of the programme, have been used effectively in setting objectives and targets of the next year programme.*

*The Central Competent Authority implements measures to eradicate brucellosis (*B. melitensis*) which are in compliance with the *Brucella melitensis* Eradication Programme. Since the previous audit in 2004, considerable progress has been made as regards animal identification and registration, control of animal movements, sampling and testing to classify and maintain the status of sheep and goats' holdings, timely slaughter of positive animals and frequency of technical audits. As a result prevalence of *B. melitensis* in the country continuously decreases. According to the epidemiological indicators (in particular prevalence of the disease) the eradication measures are effective in major parts of the country and suitable to achieve the objectives. However, lack of effective controls of all animal movements to common pastures combined with insufficient vaccination coverage in the area of Trás-os-Montes, allow for persistence of infection in this area with high disease prevalence.*

The Central Authority monitors, evaluates and compares epidemiological and performance indicators (prevalence and incidence) as well as basic activity indicators (for example proportion of holdings/animals included in the programme, time between diagnosis and slaughter, vaccination coverage, time needed for compensation) over time. This allows measurement of the progress and identification of strengths and weaknesses in the implementation of the programme and it is used in setting targets and objectives in subsequent programmes.

The current collection and analysis of epidemiological data, analysis of vaccination coverage, analysis of factors that prevent bigger impact of vaccination on reduction of the disease prevalence as well as existing traceability of animals are not sufficient to accelerate the eradication of brucellosis in areas with high disease prevalence.

*The report includes six recommendations to the Portuguese Competent Authorities, to improve completeness, quality and effectiveness of specific *B. melitensis* control and eradication measures.*

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ANNEX 1

ABBREVIATIONS AND DEFINITIONS USED IN THIS REPORT

Abbreviation	Explanation
AI	Animal Identification
ASP	Annual Sanitary Plan
BMEP	<i>Brucella melitensis</i> Eradication Programme approved by Commission Implementing Decision 2013/722/EU
BMF	<i>Brucella melitensis</i> Free in accordance with Council Directive 91/68/EEC
BMFS	<i>BMF Suspended</i>
BMNF (B2 and B2.1)	<i>Brucella melitensis</i> Non Free in accordance with Council Directive 91/68/EEC. According to the Portuguese classification BMNF is considered B2 if <i>B.melitensis</i> is not isolated in a positive animal otherwise it is B2.1
BMOF	<i>Brucella melitensis</i> Officially Free in accordance with Council Directive 91/68/EEC
BMOFS	BMOF suspended
BRUCELLOSIS	Brucellosis caused with <i>Brucella melitensis</i>
CCA	Central Competent Authority
CFT	Complement Fixation Test
COMMON PASTURES	Grazing areas, communal or other, used by animals from different holdings
DGAV	Directorate-General for Food and Veterinary Services
DG(SANTE)	Health and Food Safety Directorate General
DSAVR	The Regional Directorates for Food and Veterinary Services
EURL	European Union Reference Laboratory
FVO	Food and Veterinary Office
NRL	National Reference Laboratory
OPP	Livestock producers organisation
PISA.NET	Animal Health Database, contains information on implementation of animal sanitary health measures. It also contains information on a holding's health status and communicates this information to SNIRA
RBT	Rose Bengal Test
SNIRA	Central Holding Register and Animal Movements Database
SMARTDOCS	Document and Procedure Management Tool used in the DSAVR North

1. INTRODUCTION

This audit took place in Portugal from 1 to 5 December, 2014. It was undertaken as part of the FVO (Food and Veterinary Office) planned audit programme. The audit team comprised three auditors from the FVO. The team was accompanied throughout the audit by representatives of the Directorate General Food and Veterinary Services (DGAV) which is the Central Competent Authority (CCA) within the scope of this audit in Portugal.

An opening meeting with the CCA was held on 1 December, 2014. During the opening meeting the audit objectives and itinerary were confirmed. In addition, CCA provided a summary of the activities as regards eradication of brucellosis (*B. melitensis*) in Portugal.

2. OBJECTIVES

The objectives of the audit were:

- i. To determine whether eradication measures are in compliance with planned arrangements, implemented effectively and suitable in achieving objectives; and
- ii. To evaluate whether prior epidemiological information, knowledge and experience in implementation of the programme, have been used effectively in setting objectives and targets of the next year programme.

In pursuit of this objective, the following sites were visited:

MEETINGS / VISITS		no.	COMMENTS
Competent Authorities	Central	1	
	Regional	2	Regions North and Alentejo
Sheep/goat holdings		3	
Laboratories		1	Regional
Livestock producers' organisations		2	
Dealer's premises		1	

3. LEGAL BASIS

The audit was carried out under the general provisions of EU legislation and, in particular:

- Article 45 of Regulation (EC) No 882/2004 of the European Parliament and of the Council of 29 April 2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules;
- Article 37(a) of Regulation (EU) No 652/2014 of 15 May 2014 laying down provisions for the management of expenditure relating to the food chain, animal health and animal welfare;

- Article 13(1) of Council Decision 90/242/EEC of 21 May 1990 introducing Community financial measures for the eradication of brucellosis in sheep and goats; and
- Article 11(1) of the Council Directive 91/68/EEC of 28 January 1991 on animal health conditions governing intra-Community trade in ovine and caprine animals.

Full legal references to EU legal acts quoted in this report are provided in Annex 1 and refer, where applicable, to the last amended version.

4. BACKGROUND

4.1. PREVIOUS FVO REPORTS

The previous FVO audit on this subject in Portugal was carried out in July 2004 (ref. DG(SANCO)/7246/2004). The report of this audit is available on the Health and Food Safety Directorate General website at:

http://ec.europa.eu/food/fvo/rep_details_en.cfm?rep_id=1211#

Following the audit recommendations, the CCA has provided and largely implemented a suitable plan of measures aimed to overcome identified deficiencies.

4.2. APPROVAL OF THE ERADICATION PROGRAMME

The country programme for the eradication of brucellosis (*B. melitensis*) in 2014 has been approved by Commission Implementing Decision 2013/722/EU. The objectives of the programme are to reduce the disease frequency and finally to achieve disease free status in the whole country, in a medium term¹.

4.3. PROGRESS OF CONTROL AND ERADICATION OF BRUCELLOSIS OVER TIME

Control of brucellosis (*B. melitensis*) in Portugal began with campaigns to control the disease in caprine animals in 1953. Coordinated eradication programmes of the disease in sheep and goats, approved and financially supported by the European Commission, has been in place since 1992. The programmes were based on test and slaughter policy, using Rose Bengal Test (RBT) and Complement Fixation Test (CFT) until 2001. From 2001 to 2004, this strategy was complemented by conjunctival vaccination of all animals in a flock with the live *B. melitensis* reversion 1 strain vaccine (Rev.1). Since 2004 only young replacement animals have been vaccinated in areas with higher herd prevalence. This applies in particular to areas where holding prevalence was higher than 2.5%, for example area of Trás-os-Montes, region of Algarve and other “hot-spots” distributed along the mainland of the country.

At country level, holding prevalence is decreasing constantly. From 2007 to 2014 (by October 31), prevalence of positive holdings in the country decreased from 1.6% to 0.91% respectively. The infection pressure remains relatively high (holding prevalence 6.35% in

¹ The expression "medium term" is included in different sections of the Portuguese *B. melitensis* eradication programme. This was interpreted by the FVO audit team as a period between five and ten years.

2014 by October 31) in the area of Trás-os-Montes, although there has been a constant decrease of disease prevalence among holdings from 2009 onwards (9.6% in 2009). In Algarve region, during the same period, holding prevalence decreased from 4.71% to 1.84%. Good progress has been made in the region of Alentejo. As a result, from 2015, the vaccination will be discontinued in this region. Only test and slaughter policy will be applied to speed up eradication of brucellosis.

Animal level prevalence in the country decreased from 0.52% in 2007 to 0.21% in 2014 (by October 31). The percentage of positive animals has been continuously decreasing since 2011. The same trend is observed when the data are grouped at regional or area level.

Although evolution of the epidemiological situation is slow in some of the vaccination areas, the number of these areas is continuously decreasing. This means that the area size of the territory of the country approaching the final stage of eradication of brucellosis is constantly increasing.

5. FINDINGS AND CONCLUSION

5.1. COMPETENT AUTHORITIES (SETTING OBJECTIVES, PLANNING)

Legal Requirements

Commission Implementing Decision 2013/722/EU - Point 4.2 of the *Brucella melitensis* Eradication Programme (BMEP).

Findings

1. Management of the programme is in place as mentioned in Point 4.2 of the BMEP.
2. DGAV is the CCA responsible for setting the brucellosis policy objectives. DGAV drafts the national BMEP, coordinate its implementation, evaluate effectiveness at national level and communicate the results of the implementation of the programme to relevant stakeholders. Regional Directorates for Food and Veterinary Services (DSAVR) propose specific measures to be implemented to address the epidemiological situation in a region. Any change or amendment to the programme at a regional level is communicated and approved by the DGAV. DSAVRs coordinate, monitor and supervise the implementation of the programme at regional level.
3. BMEP is implemented through the Livestock producers' organisation (OPP). The role of OPP is set by national Ordinance No 178/2007, amended by Ordinance No 1004/2010 and Ordinance 96/2011. OPPs are constituted by farmers and managed by the management board. OPPs are required to draft the Annual sanitary plan (ASP) of implementation of the BMEP measures such as vaccination, sampling, animal identification (AI) and checks over AI, data entering into the Animal Health Database (PISA.NET). ASP is subject to evaluation and approval by the DSAVR. DSAVR's approval of the ASP ensures agreement with the OPP about holdings where the programme measures are to be implemented. It also confirms additional controls to be

implemented on *B. melitensis* Non Free (BMNF), *B. melitensis* Free Suspended (BMFS) and *B. melitensis* Officially Free Suspended (BMOFS) holdings, deadlines for sampling, vaccination and animal identification. Finally it confirms the rules to be obeyed by OPPs over holdings under restriction. OPPs implement BMEP on the holdings of their members and 99% of farmers are members of OPPs. The programme measures on 1% of holdings are implemented by DSAVR.

4. Both DGAV and DSAVRs promote implementation of the necessary actions to collect and collate information on implementing the programme measures by using PISA.NET (See paragraphs 4 and 32) .
5. DSAVR and its sub-regional units also evaluate the laboratory results, classify sheep and goat holdings as regards brucellosis status and control animal movements. Furthermore, DSAVR organises transport and slaughter of animals from BMNF holdings to the slaughterhouse.
6. OPP veterinarians are the key source of information to farmers on animal health issues and preventive biosecurity measures. They also provide advice and support on registration of animal movements and issuing of movement documents. In one OPP visited, the coordinating veterinarian informed the audit team that the BMEP is acknowledged among farmers. They see the benefits of the programme in terms of trade, which maintains their commitment. The OPP veterinarian also informed that an increased level of participation and interest in implementing vaccination has been observed among farmers in recent years. He explained that this is because the majority of farmers understand the effects of vaccination which they see as a reduction in the number of positives, so fewer animals are slaughtered or under restriction.
7. DGAV has authorised 10 laboratories to carry out brucellosis testing. The list of laboratories is provided to the audit team. The CCA informed that these laboratories have sufficient capacity for testing according to the BMEP requirements.

Conclusions on Competent Authorities

8. The CCA has the power, competences, veterinary services, stakeholders' support, clear division of responsibilities as well as adequate resources to ensure the implementation of the BMEP. Organisation of veterinary services and other supporting services like OPPs and diagnostic laboratories, farmers' involvement and financial resources are adequate to achieve the programme objectives. The level of acceptance of the programme by the stakeholders is good. There is a public and private co-responsibility for implementation of the programme. OPPs, playing a key role in the implementation of the core programme measures, have the biggest influence on the achievement of the overall objectives of the programme.
9. The existing top-down element in the planning process, steering the regional plans

and setting objectives ensures coordination the common direction at a national level. It also allows for consideration of regional epidemiological situation. Good exchange of information (between regional services and OPPs, OPPs and farmers) helps farmers to understand and engage with the programme objectives and measures.

5.2. SYSTEM FOR IDENTIFICATION AND REGISTRATION OF ANIMALS

Legal Requirements

Commission Implementing Decision 2013/722/EU - Point 4.4.3 of the BMEP; Articles 2, 4, 7 and 8 of the Regulation (EC) No 21/2004.

Findings

5.2.1. Holding registration

10. PISA.NET database provides for baseline information on holdings, for the purpose of ruminant disease eradication programmes as described in Point 4.4.3 of the BMEP. It contains sheep and goat holdings subject to implementation of BMEP.
11. PISA.NET ensures baseline information on all sheep and goats holdings in the country. It is used for planning and monitoring the implementation of animal health programmes.
12. Not all sheep and goat holdings have been registered in the Central Holding Register and Animal Movements database (SNIRA) used for implementation of Article 2 of Regulation (EC) No 1505/2006 as regards checks on animal identification and registration as provided for in Regulation (EC) No 21/2004.
13. According to the CCA, SNIRA contains information on all sheep and goats holdings which move animals. Since June 2013, the CCA requires that all movement documents must be issued electronically from SNIRA. This decision increased the number of holdings registered in SNIRA and favoured synchronisation of information on holdings kept in this database with the one in PISA.NET. For example, on 5 December 2014 there were 47.362 holdings registered in SNIRA which included around 78% of sheep and goat holdings in PISA.NET. This is a significant difference when compared to 54% of sheep and goat holdings registered in SNIRA in 2013.
14. SNIRA database is used to plan checks on identification and registration in the ovine and caprine sector, in accordance with the Regulation (EC) No 1505/2006, but the information available is incomplete as not all sheep and goat holdings are registered. The CCA informed the audit team that SNIRA is in the process of being further updated in order to contain information on all sheep and goat holdings in the country, both commercial and non-commercial.
15. The audit team observed an increase in registration of new holdings (i.e. which had not been registered in either database before). For example, in 2014 there was an average increase of 3.5% (range 2.3% to 4.7% among the regions) in registration of new holdings,

compared to 2013. The CCA pointed out that this is a result of good communication with traffic police and private veterinarians. They notify to the DSAVR animals found without movement documents or when they detect an unregistered holding. In one region visited, up to 0.2% of animals checked annually during movement, were from unregistered holdings.

16. The CCA has initiated the process of registration of grazing areas, communal or other pastures, used by animals from different holdings (called in this report “common pastures”), in order to allow for registration and control of movements for disease control and eradication purposes as required in Point 5 of the Annex of the Council Decision 2008/340/EEC and considering the definition of a holding from Article 2 of the Regulation (EC) No 21/2004.
17. The extent of use of common pastures was different in two regions visited. In the region with low prevalence of brucellosis (<1%) among holdings, use of such pastures is not a frequent farming practice. In the region with high prevalence of brucellosis (>5%), the use of common pastures is a widespread practice. According to the CCA, 90% of sheep and goat keepers are fully dependent on common pastures on a daily basis.
18. The CCA and DSAVR North informed the audit team that the registration of common pastures in this region has been initiated. An example of the requirement for registration of common pastures for cattle was provided to the audit team. The CCA explained that the requirement applies to all common pastures including those used by sheep.
19. At the time of audit there were 142 common pastures registered in SNIRA. Out of that number, 133 are situated in the DSAVR North.
20. A majority of keepers provide information on the annual inventory of animals on holdings, as required according to the Article 7 of the Regulation (EC) No 21/2004. In 2013, 79.3 % of sheep and goat keepers registered in SNIRA, provided information on the annual inventory of animals on a holding.
21. The update of information on animals on holdings registered in PISA.NET is carried out by OPPs, after carrying out checks on AI or other measures according to the BMEP.
22. OPPs provide service to farmers, by up-dating and maintaining a holding register electronically. Following the update the farmer gets the holding register in paper format. The CCA informed the audit team that this is of particular relevance to older farmers who have difficulties in keeping an updated farm register.

5.2.2. Animal identification

23. Identification of sheep and goats is carried out according to Article 4 of Regulation (EC) No 21/2004. This includes identification of sheep and goats by at least one electronic identifier, since 1.1.2010. Small ruminants raised in an extensive system or on free-range farming are identified within nine months, as required in Article 4(2) of Regulation (EC) No 21/2004.

24. Sheep and goats must be identified by a ruminal bolus (containing a microchip) and by one ear-tag in addition, or, alternatively, by two ear-tags (one of them containing a microchip). Animals seen were identified.
25. Animals younger than 12 months intended for slaughter within the country, moved directly or via an assembly centre or dealer's premises, are identified by one ear tag showing the identification code of the holding of birth.
26. In one area visited, vaccinated animals were, additionally, tattooed. The CCA explained that this approach ensures better follow up of vaccinated animals, prevents substitution of infected animals as well as other possible fraudulent practices. Also, all animals on infected holdings are identified by a ruminal bolus.

5.2.3. Animal movement controls

27. SNIRA provides for registration of movements of animals within the territory of the country as required by Article 8 of Regulation (EC) No 21/2004.
28. Movements of sheep and goats are registered in SNIRA. This applies to all movements including locations where animals gather (markets, fairs, auctions, exhibitions) except movements to common pastures.
29. Since June 2014, all movement documents are issued electronically from SNIRA. The database PISA.NET provides SNIRA with information on the health status of a holding. The health status of a holding of origin and a holding of destination as regards brucellosis are checked prior to issuing an electronic movement document in SNIRA.

5.2.4. Controls on common pastures and transhumance

30. Movements of sheep and goats on common pastures are not always registered as movement between holdings. Consequently, registration and control of movements for disease control and eradication purposes is not fully in place.
31. The CCA explained that the reason for the above is that it is not compulsory (i.e. there is no legal requirement) to register a movement of sheep and goats to common pastures and back to a holding if it takes place within one day. For that reason day-to-day movements of sheep and goats are not registered. The CCA explained that there are difficulties to control all movements of animals to common pastures in the area with high disease prevalence where 90% of farmers are dependent on such a husbandry practices (i.e moving animals to pastures and back on the same day).
32. It is compulsory to register seasonal movements to common pastures. However, according to the CCA, they no longer take place (transhumance is disappearing).

Conclusions on system for identification and registration of animals

33. Holding registration, animal identification and movement registration system, supports the implementation of the BMEP. However, lack of registration and controls of movements of animals to common pastures compromises traceability of all movements of sheep and goats for disease control and eradication purposes. This is of particular relevance in epidemiological settings where the infection pressure is high and mixing of animals on pasture is common practice. Lack of such controls compromises the eradication efforts, in particular considering the fact that common pastures have been identified as an important risk factor for new brucellosis outbreaks in the country.
34. PISA.NET provide for reliable data required for planning, monitoring of implementation and evaluation of the effectiveness of the BMEP. Individual identification of animals facilitates the adequate follow-up at animal level. Electronic issuing of movement documents allows for better controls and prevents movements of sheep and goats between holdings of different/lower health status, and supports the management of movement restrictions (except movements to common pastures). It also facilitates detection of unregistered holdings and animals, which results in an increased level of compliance with animal movement rules.
35. Progress has been made in order to update the SNIRA database. However, the database still does not ensure that all sheep and goat holdings in the country are taken into account when planning checks on identification and registration of sheep and goats.

5.3. IMPLEMENTATION OF THE ERADICATION MEASURES

The BMEP has been drawn up for a period of one year, with the objective of achieving a reduction in the prevalence and incidence of brucellosis in the country. The final objective is to achieve disease-free status in the medium term. The programme is implemented throughout mainland Portugal.

Legal Requirements

Commission Implementing Decision 2013/722/EC, Annex A and C to Council Directive 91/68/EC and Council Decision 90/242/EC.

Findings

5.3.1. Vaccination

36. In the area of Trás-os-Montes, on a significant number of positive holdings where vaccination coverage was investigated, animals have not been vaccinated as required by Point 4.4.7 of the BMEP.
37. The audit team checked the data on vaccination coverage (on 86 holdings in 2013 and 161 holdings in 2014) provided by DSAVR North. Vaccination coverage on many positive holdings was much lower than expected. For example in 27% (in 2013) and 41% (in 2014) of holdings checked, less than 25% of animals were vaccinated, instead of at

least 70% to 80% as expected taking into account the replacement rate and that vaccination has been in place since 2004. In 21% (in 2013) and 17% (in 2014) of holdings, more than 70% of animals were vaccinated.

38. The CCA explained that there were practical difficulties in managing vaccination in areas where the mating season takes place on common pastures all through the year. In addition, an OPP veterinarian mentioned that it is not always possible to vaccinate young replacement as some farmers do not present animals for vaccination at an eligible age. The CCA pointed out that vaccination coverage on other than positive holdings, is higher. No additional information to support this claim was provided to the audit team.

5.3.2. Classification and maintenance of a herd health status

39. Sheep and goats holdings have been classified as *B. melitensis* Free (BMF) and *B. melitensis* Officially Free (BMOF), according to the criteria set out in Annex A of Council Directive 91/68/EC and Point 4.4.6 of the BMEP. The same applies to testing in order to maintain or upgrade the holding health status.
40. Detailed procedures to implement sampling and testing for the purpose of classification and maintenance of a holding status as regards brucellosis, are established in the Manual of procedures for health classification. Sampling is implemented in accordance with an OPP's ASP. Serological testing for maintenance of a holding status applies to non-vaccinated ovine and caprine animals older than 6 months and to those vaccinated older than 18 months.
41. The audit team verified the process of testing (frequency, time and number of samples) to upgrade and maintain the holding health status. In one region visited, the audit team also verified that regional officials, based on the results of testing, maintain, upgrade or downgrade a holding health status in the PISA.NET.
42. The audit team identified that according to BMEP, non-castrated male animals over 6 months of age, all animals brought into a holding since the previous test and 25% of the females of reproductive age are subject to annual serological testing, regardless of the number females of reproductive age in a herd. The CCA explained that serological testing, aimed to maintain BMF or BMOF status, applies to all females on holdings with less than 50 female animals of reproductive age, as required by Annex A, Chapter 1, Point B(2) and Chapter 2, Point B of Council Directive 91/68/EC. This was verified by the audit team in the Manuals of procedures (issued in May 2012) provided by the CCA. In addition, annual testing to maintain the holding health status was checked by the audit team in PISA.NET and also verified during the visits to OPPs and farms.
43. In the regions visited there were high number of suspended holdings (BMFS and BMOFS). The CCA explained that the number of suspended holdings was not exclusively associated with detection of positive animals. The status BMFS or BMOFS is also assigned if deadlines for annual testing have not been respected.

44. There are formal procedures to be followed in case of downgrading a holding health status due to non-compliance with deadlines for testing for maintenance of the herd health status. This includes official communication to the OPP and to the farmer concerned. The OPP is required to carry out sampling on the holdings concerned, within 3 months. The farmer is informed that the holding is placed under movement restrictions. The audit team verified the correct implementation of procedures for downgrading a holding health status. In one case checked the new deadline set to test animals (within 3 months) had not been observed and the herd remained under restrictions. The CCA explained that more than 90% of holdings respect deadlines for testing and correctly maintain the health status.
45. BMNF holdings are classified as BMNF-B2 in case where bacteriological testing of seropositive animals is negative. In case of isolation of *B. melitensis* a holding is classified as BMNF-B2.1. This classification is implemented according to Point 4.4.4 of the BMEP.
46. Newly detected holdings are subject to sampling and testing according to the Annex A of the Council Directive 91/68/EC, in order to be objectively classified. Official investigation of the origin of newly detected animals is initiated only in case of positive test results. Where an empty, non-classified holding receives animals, it is by default assigned the category of the holding of origin.

5.3.3. Measures in case of positive results

5.3.3.1. Case definition

47. Case definition is mainly applied according to Points 4.4.6 and 4.4.9 of the BMEP. National rule (Decree-Law No 244/2000) refers to testing schemes in Annex of the Council Decision 90/242/EEC when classifying a holding as positive. These testing schemes comply with the requirements in Annex C of Council Directive 91/68/EEC.
48. In the area of Trás-os-Montes, case definition and slaughter of any positive animal is not implemented as required in Point 4.4.6 and 4.4.9 of the BMEP and Annex C to Council Directive 91/68/EC.
49. Since June 2014, in the area of Trás-os-Montes, CFT positive vaccinated animals are not subject to slaughter within 30 days following the date of official notification of the owner. Instead, retesting of CFT positive vaccinated animals has been implemented 3 months later. Additional testing of CFT positive vaccinated animals applies to all holdings, including *B. melitensis* Non Free (BMNF) holdings in this area. The CCA explained that this measure is introduced due to strong suspicion that, when presented for vaccination, some animals were older than 6 months which resulted in a more persistent serological response due to late vaccination. The approach however, does not consider the fact that Rev1 immunised animals living in an infected environment can produce serological response after having contact with *B. melitensis* infected material.

50. The CCA provided data on frequency of the disease in this area adjusted for "false positive vaccinated animals". Adjusted holding prevalence of the disease in this area in 2014 (by October 30) was 5.5 % (compared to that of 6.4 % when all positive holdings are included in the calculation of prevalence). The CCA explained that reduction in the number of *B. melitensis* isolates was also taken into account when introducing retesting of CFT positive vaccinated animals, 3 months later. In addition, the CCA explained that movement restrictions are in place all along the testing process.

5.3.3.2. *Movement restrictions*

51. Movement restrictions are largely applied according to Point 4.4.9 of the BMEP. However, full control and enforcement of movement restrictions of animals from BMNF herds to common pastures is not implemented in areas where 90% of holdings are dependent on common pastures on a daily basis.

52. In order to enforce the implementation of the eradication measures on infected holdings, DSAVR issues a Decree on measures to be implemented on such holdings. The Decrees checked by the audit team included a ban on the movement of animals of species susceptible to brucellosis from or to the holding, except when the animals are destined for immediate slaughter.

53. In one regional office visited, the audit team was informed that veterinary officials check the restrictions on movements when visiting holdings. There are no defined criteria for frequency of such visits. According to the regional officials, such visits are carried out mainly during official supervision of sending positive animals for slaughter. The CCA informed about a common practice that an OPP veterinarian, when visiting holdings to check animal identification, also checks if movement restrictions have been complied with. In case of irregularities, the OPP informs the DSAVR, which initiates the respective health-infringement procedures. The audit team did not obtain information on the frequency of such checks and on any irregularities found. In two OPPs visited, the audit team was informed that no major irregularities were detected recently and no written communication of non-compliances to DSAVR, had been initiated recently.

54. Although there is a ban on movements from and to BMNF holdings, seronegative animals from B2.1 holdings, destined for immediate slaughter or for a collection centre may be moved under official supervision, provided these have first been issued with an animal health movement certificate by the DSAVR as envisaged in the BMEP. These movements to collection centres are not in line with Article 3, Point 13(a) of Council Decision 90/242/EC. According to the data provided by the CCA, the audit team verified that this is not done or is a very rare practice. It only applies to seronegative animals and is a subject to approval by the DSAVR.

55. In an area with high disease prevalence where 90% of holdings are dependent on common pastures, it is difficult to implement prohibition of use of pasture for 180 days, as required according to Point 4.4.9. of the BMEP. The CCA does not have reliable information on frequency of movements of sheep and goats to common pastures. Also, there are no

procedures for official controls of such movements as they are not considered as movements to other holdings.

5.3.3.3. *Slaughter of positive animals and depopulation*

56. When considered positive animals are slaughtered as required in Point 4.4.9 of the BMEP.
57. DSAVRs organise and supervise collection and transport of animals destined for the slaughterhouse. In 2013, 98% of animals considered positive, were slaughtered within 30 days.
58. Samples for bacteriological diagnosis from positive animals are only taken at the slaughterhouse, when required by DSAVR. Samples are not required to be taken from positive animals from a BMNF holding where *B. melitensis* has already been isolated.
59. Based on case by case assessment of a holding health status over the previous 12 months, level of biosecurity in place, history of isolation of *Brucella spp.* and geographical area, the DSAVR may decide to send to slaughter all animals on a positive holding. According to the CCA, this decision is applied less frequently than in the past. For example in 2014 (by October 30) depopulation of sheep and goats was implemented on 10 holdings in the country, which is more than 3 times less than in 2011.

5.3.3.4. *Cleansing and disinfection*

60. Cleaning and disinfection of barns or other accommodation, equipment and utensils which may have been in contact with the slaughtered animals is not always implemented under official supervision and in accordance with instructions given by the official veterinarian as required by Article 5 of Council Decision 90/242/EEC.
61. The Decree on measures to be implemented on a holding where brucellosis was confirmed, includes order for cleaning and disinfection of the barns, accommodation, equipment and other utensils used by the slaughtered animals. Cleaning and disinfection is implemented by an owner and based on instruction of an OPP veterinarian. In one region visited procedures to verify implementation of this measure on the spot had not been established.
62. Cleaning and disinfection on a holding where depopulation of sheep and goats is implemented, is supervised by the DSAVR officials.

5.3.3.5. *Controls on milk*

63. The DSAVR issues an Official decree on measures to be implemented on an infected holding, as required in Point 4.4.9 of the BMEP.
64. Official means to stipulate heat treatment of milk from infected animals on an infected holding as well as heat treatment of milk from negative animals intended for cheese production on such holding, or milk from negative animals to be used in a milk

processing plant, have been established. The audit team verified means of enforcement of these measures. In one regional office, the audit team was also presented the procedures and evidence of communication to the milk industry of lists of sheep and goat holdings under restrictions due to brucellosis.

65. Official procedures have been developed specifying the milk hygiene measures to be implemented based on the sanitary status of holdings (as defined in Point 6.6.3 of the Official Milk Control Plan). The CCA informed that risk of human infection is also considered when deciding on holdings to be included in this control plan. The CCA also pointed out that DASVR officials and OPP veterinarians regularly advise farmers to use only heat treated milk.

5.3.3.6. Restocking after depopulation

66. Restocking after slaughtering of all animals on a positive holding is carried out according to Point 4.4.9. of the BMEP.
67. Animals for restocking arrive from BMF or BMOF holdings, subject to pre-movement testing if they have not been vaccinated.
68. When a depopulated holding shares pastures with infected herds, or if the DSAVR so decides, animals for restocking must be vaccinated.
69. After restocking, the holding is classified as BMF or BMOF dependant on the status of the holding of origin of the animals.

5.3.3.7. Epidemiological investigation

70. Epidemiological investigations are not carried out on all newly positive holdings, contrary to Points 4.4.8 and 4.4.9 of the BMEP.
71. Epidemiological investigations are carried out by regional veterinary officials, according to the predefined questionnaire. In one regional office visited, the audit team verified that epidemiological investigation covers relevant risks factors for introduction and spread of the infection. In the example discussed, the source of infection remained uncertain. No further investigation was carried out in order to establish the source of infection in this particular case.
72. According to the data provided by the CCA, 42% and 37% of new brucellosis outbreaks were investigated in 2013 and 2014, respectively. There is a regional variation in frequency of implementation of the epidemiological investigations. In one region with a high prevalence of the disease, epidemiological investigation was carried out on 32% of newly infected holdings in 2013 and on 24% of such holdings in 2014. In another region with high prevalence of infected holdings, epidemiological investigation was carried out on 98% of newly infected holdings in 2013 and on 38% of such holdings in 2014.
73. In 2014, direct contact with ruminants from other flocks is attributed as a source of infection for 24% of new outbreaks. The direct contact between ruminants from different

holdings mainly occurs on communal pastures and this practice has been identified as a risk factor in 33% and 23% of new outbreaks of brucellosis in 2013 and 2014, respectively. Around 37% of new outbreaks were explained by the introduction of new animals into a holding. This is surprising, in particular when considering that conditions for introduction of animals to BMF or BMOF are applied according to the BMEP.

74. Although descriptive statistics on disease frequency and main risk factors are regularly produced, comprehensive epidemiological analysis of data on *B. melitensis* outbreaks has not been carried out recently.

Conclusions on implementation of the eradication measures

75. The low vaccination coverage on positive holdings in the area of Trás-os-Montes, compromise the overall effectiveness of vaccination in this area. As a consequence the disease frequently occurs in non-immunised animals.
76. Sampling and testing for the classification and maintenance of holdings' health status ensures reliable and comparable information, relevant to evaluate the achievement of the programme objectives and to measure the progress of eradication over years.
77. The limited epidemiological investigations reduce the reliability of inferences about the risk factors for introduction and spread of the infection among holdings. The lack of critical analysis of factors or practices that contribute to the introduction of infection (with newly introduced animals) into brucellosis free and officially free holdings, makes it difficult to identify and justify additional measures or interventions to minimise such risks. This is of particular relevance in areas with high disease prevalence.
78. The high percentage of positive animals slaughtered in a timely manner is important for mitigation/elimination of the risk of possible persistence and spread of the infection.
79. The introduction of additional testing of seropositive vaccinated animals in Trás-os-Montes, resulted in administrative correction of both prevalence and incidence between holdings in this area. However, additional testing of CFT positive vaccinated animals compromises some general eradication principles such as implementation of as sensitive testing schemes as possible as well as strict interpretation of serological test results, in order to accelerate the eradication of a disease or infection. This is in particular important for BMNF holdings, as in the infected environment, prolonged sero-positivity in vaccinated animals may be a result of a repeated field infection with *B. melitensis*.
80. Lack of reliable information on all locations where animals are kept on a permanent or temporary basis prevents full traceability of animals, as well as enforcement and verification of movement restrictions. As not all common pastures are registered, the enforcement of movement restrictions and verification of their effectiveness cannot be fully ensured. Although tracing of movements of animals to common pastures is part of an epidemiological investigation, this information is of limited value because not all new brucellosis outbreaks have been investigated. Failure to fully enforce the movement

restrictions and traceability favours the spread and persistence of infections in areas with high disease prevalence, where common pastures have a high impact on disease spread.

5.4. DIAGNOSTIC SUPPORT

Legal Requirements

Article 4(2)c and 12 of the Regulation (EC) No 882/2004 and Annex C to Council Directive 91/68/EEC.

Findings

81. The CCA has an adequate laboratory capacity as required by Article 4 of the Regulation (EC) No 882/2004. Eight out of ten laboratories carrying out brucellosis testing are accredited as required by Article 12 of the Regulation (EC) No 882/2004.
82. Out of 10 laboratories involved in brucellosis testing, eight are assessed and accredited in accordance with EN ISO/IEC 17025 on “General requirements for the competence of testing and calibration laboratories”. The CCA informed that two remaining laboratories are expected to be accredited in 2015.
83. The CCA explained that prior to approval, laboratories involved in brucellosis testing must be recognised by the National reference laboratory (NRL) for brucellosis. The technical recognition by the NRL, including two visits in order to evaluate a sample processing and testing, training of staff, use of PISA.NET, follow-up of questionable results, was presented to the audit team. The NRL recognition confirms that a laboratory is fit to perform brucellosis serological testing.
84. The NRL explained their role and process of coordination of methods and standards used in other laboratories (both public and private) involved in brucellosis diagnostics. NRL provided its SOPs to other laboratories to enable all laboratories to apply the same test protocols and to ensure the highest level of harmonisation of the technical procedures.
85. The NRL controls commercially available reagents batches for RBT and CFT. NRL also informs all laboratories in the network which reagents are to be used.
86. The NRL provided technical and scientific assistance to other laboratories in the national brucellosis diagnostic network. This included distribution of standardised protocols and positive internal controls, confirmation of positive internal control titres, collaboration in quality control and advice on technical questions. From 2010 to 2014 the NRL organised seven training sessions for laboratory technicians from other laboratories involved in brucellosis diagnostics, ensuring dissemination of information supplied from European Union Reference Laboratory (EURL) and continuous improvement.
87. The NRL participates in annual workshops and has participated in EURL-organised inter laboratory proficiency tests regarding performance of serological, bacteriological and molecular methods, with satisfactory results.

88. A CFT national standard serum was sent for control for the dedicated trial organized by the EURL in 2011-2012 and was considered to be satisfactory (1000 ICFTU/ml). No controls of diagnostic antigen were requested from the EURL. Antigen batches are controlled by the NRL and only antigen batches certified by the EURL may be used.
89. The NRL does not organise comparative (proficiency) tests for the other laboratories involved in brucellosis testing. NRL has explained that it has access to performance results (in prescribed serological tests used within the eradication programme) of laboratories participating in an external proficiency testing scheme (a laboratory code need to be provided to the NRL). According to the information provided for the period 2012 to 2014, laboratories participating in this external proficiency testing scheme (PT0015 and PT0020) achieved satisfactory results for serological methods (CFT, RBT).
90. Laboratory tests used within the programme were presented in the NRL. The tests used are as those stipulated in Annex C to Council Directive 91/68/EEC.

Conclusions on diagnostic support

91. The CCA has sufficient laboratory capacities to support implementation of the programme. The NRL delivers results at the required qualitative standards and ensures that other laboratories in the network also produce satisfactory results. Organisation of proficiency testing for other national laboratories involved in the implementation of the BMEP is required to allow for more active involvement of the NRL in supervision of the quality of their work.
92. The NRL ensures that laboratory tests used within the programme are those laid down in Community legislation and are able to deliver results whose quality is acceptable to the EURL

5.5. VERIFICATION, EVALUATION OF THE RESULTS AND FOLLOW-UP ACTIONS

Legal requirements

Commission Implementing Decision 2013/722/EU.

Findings

93. The CCA has established mechanisms to monitor implementation of the BMEP as described in the Point 4.4.11 of the BMEP.
94. Desk-top monitoring and controls are carried out by using PISA.NET. In the North region, an additional document and procedure management tool (SMARTDOCS profiles) to allow for planning of farm visits, testing as well as follow-up of implementation of measures on infected holdings. PISA.NET collate information on checks carried out, testing results, compulsory slaughter and holding health status as regards *B. melitensis*.

95. A list of holdings, where deadlines for implementation of the BMEP measures have not been observed by the OPPs, is generated every three months from PISA.NET. In this case a DSAVR issue a requirement, to the OPP coordinators, for an immediate implementation of measures. According to the CCA, implementation of measures is satisfactory as regards the majority of OPPs.
96. Additionally, post approval desk-top evaluation of implementation of the OPP's ASP is also carried out by the DSAVR. Findings and conclusions of these evaluations were documented and available to the audit team. A report (minutes) on evaluation of an ASP included information on the level of implementation of the plan and identified elements to be improved (such as vaccination, sampling, animal identification, observation of deadlines). In another report available to the audit team, the DSAVR has communicated to the OPP concerned, identified shortcomings regarding the implementation of the programme in 2013. This included information on farms that were not checked. Also on some farms, animals were not vaccinated at an appropriate age because the OPP had visited farms at the time when animals were between 8 and 12 months of age. The report also mentions that on some farms, animals eligible for vaccination had not been vaccinated in 2013. Considering these findings, DSAVR issued a notice requiring the OPP to comply with expected deadlines of implementation of the measures and to increase efforts in achieving higher vaccination coverage. Results of evaluation of implementation of the BMEP measures, are taken into account when the decision on payment to OPPs is made.
97. There is a lack of procedures to verify on-the-spot implementation of certain control and eradication measures (for example sampling, vaccination, cleaning and disinfection) in order to evaluate their quality, completeness and effectiveness as well as to ensure corrective actions when needed. Thus, the CA cannot demonstrate that activities and measures are implemented as described in the approved programme contrary to the requirement in Article 15.1(a) of Commission Implementing Decision 2013/722/EU.
98. On-the-spot official controls over the work of OPPs are less frequent than in the past. In one region with high disease prevalence, on-the-spot inspection of the work of OPPs had not been implemented since 2012. This practice is not in line with Point 4.4.11 of the BMEP. The DSAVR explained that increased desk-top evaluation of implementation of the BMEP resulted in a reduced number of on-the-spot controls of both OPP's work and implementation of eradication measures on infected holdings. In another region visited one report on on-the-spot official control of an OPP in 2012, was provided to the audit team. According to the report, no major non-compliances have been detected. The DSAVR informed that no such controls of OPPs have been carried out by this regional office in 2013. The CCA also informed that in 2014, on-the-spot official controls of the work of four OPPs have been carried out. At the moment of the audit, the related reports had not yet been finalised.
99. In one area visited no official procedures are established in order to verify on-the-spot, that eradication measures on infected holdings are implemented as ordered. The DSAVR

explained that implementation of measures on infected holdings is monitored via SMARTDOC tool. Although this document management tool allows for tracking the implementation of measures on infected holdings, for example slaughter dates, screening dates and results, evolution of sanitary status, it does not allow for evaluation of implementation of all measures on infected holdings such as cleaning and disinfection, movement restrictions, heat treatment of milk at a farm level.

100. In one OPP visited, internal documented controls over the work of their field veterinarians and technicians have been established. This mainly applies to new teams involved in the implementation of the BMEP, as was the case of the report on such controls presented to the audit team.
101. The CCA implements administrative measures to keepers in case of non-compliances as regards implementation of BMEP. Administrative measures have been instituted in 44 situations in 2013 and in 12 situations in 2014 (Oct. 31, 2014). In more than 80% of cases, these measures, in both 2013 and 2014, refer to one region with a high prevalence of brucellosis. The audit team noted that, in one region no administrative measure has been instituted in 2013 or in 2014. The CA explained that in the case of minor non-compliances, immediate corrective actions had been implemented on the spot without further administrative actions.
102. Internal audits have been carried out as required by Articles 4(6) of Regulation (EC) No 882/2004.
103. Nine internal audits of implementation of the BMEP have been carried out in different regions of the country from 2010 to 2014 (Oct. 31, 2014), by DGAV internal audit unit. The objective of these audits was to assess planning, coordination and implementation of official controls over the BMEP.
104. Detected non-conformities described in summary information of two final audit reports (Report No 2/DGAV/NA/2013 and Report No 24/DGAV/NA/2013), included the following: "repeated non-compliance with vaccination programme, lack of written procedure for supervision of epidemiological inquiries, delays in compensations due to sanitary slaughter, lack of report templates for control visits to OPPs, lack of mechanisms for supervising/monitoring the collection of samples at a slaughterhouse, two laboratories do not have accredited tests and there is no information on inter-laboratory proficiency tests".
105. The audit report included relevant recommendations aimed to correct the deficiencies / non-compliances identified.
106. According to the audit reports provided, relevant central or regional Units proposed actions to correct identified non-compliances and shortcomings. At the time of audit one action plan was pending further documentation while others were satisfactory evaluated and closed.

107. The progress of implementation of the programme is evaluated by the CCA on efficiency and effectiveness of the measures. The evaluation of vaccination effectiveness and the implementation of on-the spot checks to verify quality and effectiveness of eradication measures are weak.
108. PISA.NET supports data analysis carried out by regional and central services, in order to evaluate effectiveness and efficiency of the programme measures.
109. At central level, analysis of implementation of the programme is carried out at least twice a year. This applies to calculation of disease frequency measures, such prevalence and incidence, frequency of vaccination, number of epidemiological investigations, bacteriological investigation, depopulation, frequency distribution of holdings by health status. Results of data analysis have been presented to the audit team at central and regional levels. There is no systematic evaluation of the quality of vaccination nor objective evaluation of the vaccination coverage.
110. Analysis of strengths and weakness, searching for feasible solutions for identified problems, is part of the CCA policy. The CCA has identified that in areas where the reduction of the disease pressure is slow, there is a need for further improvements in terms of the implementation of the programme including: reinforced vaccinations and epidemiological investigations and data analysis, animal movement controls, investigations of interference of vaccination in the serological diagnosis and improvement of the quality of the bacteriological investigations.
111. The CCA has also defined targets measured as percentage reduction of holding prevalence including 20% reduction in 2015 compared to that in 2012 and 10% reduction in 2017 compared to that in 2015.

Conclusions on verification, evaluation of the results and follow-up actions

112. The CCA has established information systems that support continuous monitoring and evaluation of implementation of the BMEP measures. Desk-top evaluations allow to monitor the indicators of the progress of implementation of the programme (such as number of animals sampled, tested, vaccinated, observation of deadlines). The absence of checks on-the-spot, to evaluate implementation of measures carried out by OPPs (such as sampling and vaccination) as well as lack of verification of implementation of measures such as movement restrictions and cleaning and disinfection on infected holding, preclude the CCA from evaluating the quality, completeness and effectiveness of the specific BMEP measures. This could jeopardise the financial contribution by the Union as the CA might have difficulties demonstrating that activities and measures are implemented as described in the approved programme.
113. Monitoring and review to identify strengths and weaknesses, adoption of corrective actions and quality management of current measures, ensures continuous improvement of the programme performance indicators such as prevalence, incidence and sanitary

classification of holdings. However, comprehensive analysis of epidemiological data as well as other factors (for example vaccination coverage) that have biggest influence on achievement of objectives and targets, are still lacking. This influences the sensitivity of decisions on possible corrective actions and additional control or eradication tools implemented to achieve the objectives.

114. Internal audits contribute to improvements of the implementation of the BMEP.

6. OVERALL CONCLUSIONS

The CCA implements measures to eradicate brucellosis (*B. melitensis*), which are in compliance with BMEP. Since the previous FVO audit in 2004, considerable progress has been made as regards animal identification and registration, control of animal movements, sampling and testing to classify and maintain the status of sheep and goats' holdings, timely slaughter of positive animals, frequency of technical audits. As a result prevalence of brucellosis (*B. melitensis*) in the country continuously decreases. According to the epidemiological indicators (in particular prevalence of the disease) the eradication measures are effective in major parts of the country and suitable to achieve the objectives. However, lack of effective controls of all animal movements to common pastures combined with insufficient vaccination coverage in the area of Trás-os-Montes, allow for persistence of infection in this area with high disease prevalence.

The CCA monitors, evaluates and compares epidemiological and performance indicators (prevalence and incidence) as well as basic activity indicators (for example proportion of holdings/animals included in the programme, time between diagnosis and slaughter, vaccination coverage, time needed for compensation) over time. This allows measurement of the progress and identification of strengths and weaknesses in the implementation of the programme and it is used in setting targets and objectives in subsequent programmes.

The current collection and analysis of epidemiological data, analysis of vaccination coverage, analysis of factors that prevent bigger impact of vaccination on reduction of the disease prevalence as well as existing traceability of animals are not sufficient to accelerate the eradication of brucellosis in areas with high disease prevalence.

7. CLOSING MEETING

The closing meeting was held in Lisbon on December 5, 2014. The audit team presented to the CCA the main findings and preliminary conclusions of the audit. During the meeting the CCA did not expressed any major disagreement with the main findings and preliminary conclusions.

8. RECOMMENDATIONS

The Competent Authorities should provide the Commission services with details of actions taken and planned including a timetable for completion within twenty five working days of receipt of the report to address the following recommendations:

No.	Recommendation
1.	<p>To implement on-the-spot verification of quality and completeness of vaccination and movement restrictions and controls to ensure that activities and measures are implemented as described in the programme approved as required by Article 15.1(a) of Commission Implementing Decision 2013/722/EU.</p> <p><i>Recommendation based on conclusions No.: 75, 80 and 112.</i></p> <p><i>Associated findings No.: 36, 51 and 97.</i></p>
2.	<p>To ensure that holdings with animals in which presence of brucellosis has been officially confirmed carry out cleaning and disinfection under official supervision and in accordance with instructions given by the official veterinarian, as required in Article 5 of Council Decision 90/242/EEC.</p> <p><i>Recommendation based on conclusions No.: 112.</i></p> <p><i>Associated findings No.: 60, 97.</i></p>
3.	<p>To interpret and use the results of confirmatory diagnostic tests in the decision making process according to the approved programme and Annex C to Council Directive 91/68/EEC.</p> <p><i>Recommendation based on conclusions No.: 79.</i></p> <p><i>Associated findings No.: 48.</i></p>
4.	<p>To ensure registration and control of all animal movements, including movements to common pastures in order to provide for full traceability of animals for brucellosis control or eradication purposes, according to the approved programme.</p> <p><i>Recommendation based on conclusions No.: 33, 80.</i></p> <p><i>Associated findings No.: 27, 30, 31, 51.</i></p>
5.	<p>To ensure that all sheep and goat holdings in the country are registered, in order to allow for full implementation of Article 2 of Regulation (EC) No 1505/2006 as regards checks concerning compliance by keepers with Regulation (EC) No 21/2004.</p> <p><i>Recommendation based on conclusions No.: 35.</i></p> <p><i>Associated findings No.: 12.</i></p>
6.	<p>To ensure that all outbreaks of brucellosis are epidemiologically investigated according to the approved programme, in order to obtain reliable information on sources of infection as well as factors influencing the introduction and spread of infection, in particular in areas with high disease prevalence.</p> <p><i>Recommendation based on conclusions No.: 77.</i></p> <p><i>Associated findings No.: 70.</i></p>

ANNEX 1 – LEGAL REFERENCES

Legal Reference	Official Journal	Title
Dec. 2006/968/EC	OJ L 401, 30.12.2006, p. 41-45	2006/968/EC: Commission Decision of 15 December 2006 implementing Council Regulation (EC) No 21/2004 as regards guidelines and procedures for the electronic identification of ovine and caprine animals
Dec. 90/242/EEC	OJ L 140, 1.6.1990, p. 123-127	90/242/EEC: Council Decision of 21 May 1990 introducing a Community financial measure for the eradication of brucellosis in sheep and goats
Dec. 2008/341/EC	OJ L 115, 29.4.2008, p. 44-46	2008/341/EC: Commission Decision of 25 April 2008 laying down Community criteria for national programmes for the eradication, control and monitoring of certain animal diseases and zoonoses
Dec. 2008/425/EC	OJ L 159, 18.6.2008, p. 1-45	2008/425/EC: Commission Decision of 25 April 2008 laying down standard requirements for the submission by Member States of national programmes for the eradication, control and monitoring of certain animal diseases and zoonoses for Community financing
Dec. 2008/940/EC	OJ L 335, 13.12.2008, p. 61-90	2008/940/EC: Commission Decision of 21 October 2008 laying down standard reporting requirements for national programmes for the eradication, control and monitoring of certain animal diseases and zoonoses co-financed by the Community
Dec. 2013/722/EU	OJ L 328, 7.12.2013, p. 101-117	2013/722/EU: Commission Implementing Decision of 29 November 2013 approving annual and multiannual programmes and the financial contribution from the Union for the eradication, control and monitoring of certain animal diseases and zoonoses presented by the Member States for 2014 and the following years
Dir. 91/68/EEC	OJ L 46, 19.2.1991, p. 19-36	Council Directive 91/68/EEC of 28 January 1991 on animal health conditions governing intra-Community trade in ovine and caprine animals

Reg. 1505/2006	OJ L 280, 12.10.2006, p. 3-6	Commission Regulation (EC) No 1505/2006 of 11 October 2006 implementing Council Regulation (EC) No 21/2004 as regards the minimum level of checks to be carried out in relation to the identification and registration of ovine and caprine animals
Reg. 21/2004	OJ L 5, 9.1.2004, p. 8-17	Council Regulation (EC) No 21/2004 of 17 December 2003 establishing a system for the identification and registration of ovine and caprine animals and amending Regulation (EC) No 1782/2003 and Directives 92/102/EEC and 64/432/EEC
Reg. 882/2004	OJ L 165, 30.4.2004, p. 1, Corrected and re-published in OJ L 191, 28.5.2004, p. 1	Regulation (EC) No 882/2004 of the European Parliament and of the Council of 29 April 2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules
Reg. 652/2014	OJ L 189, 27.06.2014, p. 1-32	Regulation (EU) No 652/2014 of the European Parliament and of the Council of 15 May 2014 laying down provisions for the management of expenditure relating to the food chain, animal health and animal welfare, and relating to plant health and plant reproductive material, amending Council Directives 98/56/EC, 2000/29/EC and 2008/90/EC, Regulations (EC) No 178/2002, (EC) No 882/2004 and (EC) No 396/2005 of the European Parliament and of the Council, Directive 2009/128/EC of the European Parliament and of the Council and Regulation (EC) No 1107/2009 of the European Parliament and of the Council and repealing Council Decisions 66/399/EEC, 76/894/EEC and 2009/470/EC