European Commission

Eradication: Final report for Sheep And Goat Brucellosis 2018

For each approved annual or multi-annual programme Member States shall submit to the Commission by the 30 April each year an annual detailed technical and financial report covering the previous year. That report shall include the results achieved and a detailed account of eligible costs incurred (Art 14 of Regulation (EU) No 652/2014).

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Reporting period

From: 2018   **To:** 2018   **Year of implementation:** 2018

1. Technical implementation of the programme

1.1 Description and evaluation of the evolution of the epidemiological situation, the technical implementation of the activities foreseen under the programme and the cost-effectiveness of the programme.

Madeira
It was not possible to implement in 2018 all the actions foreseen in the programme for the autonomous region of Madeira, so that a representative view of the real situation in that autonomous region could be shown.
For that reason we decided not to consider the developed actions in this report, namely for reimbursement purposes.

The sheep and goat brucellosis eradication programme (S&GBEP) carried out in 2018 for the non-officially free regions of Portugal (5 regions of the continental area) resulted in a positive evolution of the epidemiological indicators.
Compared to 2017, herd apparent prevalence decreased from 0.73% to 0.49% and herd incidence from 0.63 % to 0.42%. The percentage of positive animals remained 0.08%. All regions except Norte, are now below 1% herd prevalence.

Please see map 1.1 in the annex, regarding the evolution over time of epidemiological indicators and number of positive herds and animals.

The S&GBEP was implemented as foreseen, reaching a coverage of 96.87% of herds, varying from 93.39% in the Lisboa e Vale do Tejo region to 97.56% in the Centro region.
There were 260 herds with at least one positive animal and 222 were new positive. Infection was confirmed by bacteriology in 44 herds out of 246 herds investigated.

Most positive animals were subjected to sanitary slaughter and those coming from newly infected herds were subjected to organ collection for bacteriology. A total of 1.638 animals were slaughtered and the percentage of slaughtered positive animals with isolation of B. melitensis was of 20.27% (106/523). From these 106 isolates 65.15% were from the Norte region.

The measure of total slaughter was implemented in 7 herds, following the identification of infection and the difficulties in improving the status of the herd.

Vaccination was applied in 2.811 herds (32.272 animals). Please see graph in point 1.1 in the annex, regarding the evolution over time of vaccinated herds and animals.

The implementation of S&GBEP is of great importance as B. melitensis is the main agent of human brucellosis and the programme has achieved, over time an improvement of the sanitary status of the small ruminant's population.

1.2 Details on the level of achievement of the targets set in the approved programme and technical difficulties.

The S&GBEP implemented in 2018 resulted in a reduction of 48.98% of herd apparent prevalence and of 50% in the herd incidence. The percentage of positive animals remained the same.
The variation of apparent herd prevalence by region, from 2017 to 2018, was the following:
Norte – decrease from 2.25% to 1.43%
Centro – decrease from 0.09 % to 0.05%
LVT – increase from 0.37 % to 0.38%
Alentejo – decrease from 0.16% to 0.15%
Algarve – decrease from 0.80 to 0.50%

The percentage of free (B3), officially free (B4) and B3S/B4S herds is 99,85%.
The main reasons for attributing a suspended status are detected irregularities on animal movement (58.7%), followed by delays in regular sampling (28.9%) and non-negative serology (9.7%). Brucellosis suspicion accounts for only 2.5% of the suspensions of free or officially-free status.
At the 31st December 2018, 44 herds had an infected status in 2regions: Norte (75%) and Alentejo (25%).

Technical difficulties in the implementation S&GBEP are mainly related to the management of single positive reactions in B4 herds and in B3 herds that have RB positive with low titre CF results in vaccinated animals with no other evidence of Brucella infection. Other problems are those related to the difficulties in the survey of very small herds in marginal areas where accessibilities are difficult.

1.3 Epidemiological maps for infection and other relevant data on the disease/activities (information on serotypes involved,...) (Please attach files of data using the PDF attachement feature) Use the textbox below to provide clarifications for the maps you attach, if needed.

The geographical distribution of infected herds (B2.1) is presented in Annex.
By the end of 2018, only 3 counties had more than 3 infected herds.

1.4 Additional epidemiological information (on epidemiological inquiries, abortions, lesions found in abattoir, human cases, etc...)

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 94 epidemiological inquiries in newly infected flocks in the mainland. The main probable reasons were:
- introduction of of animals (49%),
- contacts at pastures (38%),
- Contacts with animals from other herds (51%).

There were 5 samples of abortions/placenta tested for Brucellosis (2 sheep and 3 goats), all with negative results.

According to the Directorate-General of Health (DGS), 20 human cases of brucellosis were notified in 2018

(provisional data), all laboratory confirmed and were distributed by the following districts:
- 1 case - Aveiro, Braga, Castelo Branco and Évora;
- 2 cases - Leiria and Santarém;
- 3 cases – Lisboa;
- 4 cases – Bragança;
- 5 cases – Vila Real.
Three from Vila Real were related to a farm with infected goats (Brucella melitensis).

2. TECHNICAL IMPLEMENTATION ON RUMINANT DISEASES PROGRAMMES
VERY IMPORTANT: Please fill out the following tables with figures corresponding to measures performed during the implementing period (1/1 to 31/12).

Table A - DATA ON HERDS

Region	Animal species	Total number of herds	Total number of herds under the programme	Number of herds to be checked under the programme this year	Number of herds checked	Number of positive herds	Number of new positive herds	Number of herds depo-pulated
		% of herds depopulated	% of herds coverage		% of positive herds Period herd prevalence		% of positive herds Herd incidence	
DSAVR N	Sheep and Goats	14,910	14,910	14,910	14,544	208	176	2
		0.96 %		97.55 %		1.43 %		1.21 %
DSAVR C	Sheep and Goats	23,696	23,696	23,696	23,118	11	11	1
		9.09 %		97.56 %		0.05 %		0.05 %
DSAVR LVT	Sheep and Goats	6,804	6,804	6,804	6,354	24	20	3
		12.5 %		93.39 %		0.38 %		0.31 %
DSAVR ALT	Sheep and Goats	8,288	8,288	8,288	7,996	12	12	0
		0 %		96.48 %		0.15 %		0.15 %
DSAVR ALG	Sheep and Goats	1,030	1,030	1,030	1,004	5	3	1
		20 %		97.48 %		0.5 %		0.3 %
Total		54,728	54,728	54,728	53,016	260	222	7
		2.69 %		96.87 %		0.49 %		0.42 %

Table B - DATA ON ANIMALS

Region	Animal species	Total number of animals	Number of animals under the programme	Number of animals to be tested under the programme this year	Number of animals tested	Number of animals tested individually	Number of positive animals	Number of animals with positive result slaugh-tered or culled	Number of animals slaugh-tered
		% coverage at animals level				% positive animals Animal Prevalence			
DSAVR N	Sheep and Goats	376,983	376,983	339,285	332,482	332,482	730	767	851
					97.99 %				0.22 %
DSAVR C	Sheep and Goats	531,575	531,575	390,085	367,460	367,460	19	20	46
					94.2 %				0.01 %
DSAVR LVT	Sheep and Goats	220,370	220,370	173,394	158,519	158,519	216	220	277
					91.42 %				0.14 %
DSAVR ALT	Sheep and Goats	1,349,488	1,349,488	613,887	560,189	560,189	12	11	14
					91.25 %				0 %
DSAVR ALG	Sheep and Goats	53,018	53,018	52,563	48,557	48,557	229	335	450
					92.38 %				0.47 %
Total		2,531,434	2,531,434	1,569,214	1,467,207	1,467,207	1,206	1,353	1,638
					93.5 %				0.08 %

Table C - DATA ON VACCINATION PROGRAMMES

Region	Animal species	Total number of	Total number of	Number of herds in	Number of herds	Number of animals	Number of doses of	Number of adults	Number of young	Number of animals

		herds	animals	vaccination programme this year	vaccinated	vaccinated	vaccine admini- stered	vaccinated	animals vaccinated	with primary vaccination (initial+ booster)
DSAVR N	Sheep and Goats	14,910	376,983	3,010	2,594	28,600	28,604	0	28,600	28,600
DSAVR C	Sheep and Goats	23,696	531,575	201	201	3,158	3,158	0	3,158	3,158
DSAVR LVT	Sheep and Goats	6,804	220,370	3	1	8	8	1	7	8
DSAVR ALG	Sheep and Goats	1,030	53,018	20	15	506	506	0	506	506
Total		46,440	1,181,946	3,234	2,811	32,272	32,276	1	32,271	32,272

Table D - DATA ON STATUS OF HERDS AT THE END OF THE PERIOD

	Region	Animal species	Total number of herds and animals under the programme	Unknown	Not free or not officially free from disease		Free of officially free-disease status suspended/ withdrawn	Free from disease	Officially free from disease
					Last check positive	Last check negative			
herds	DSAVR N	Sheep and Goats	14,910	0	21	42	285	4,515	10,047
animals	"	"	376,983	0	2,421	3,985	9,826	253,920	106,831
herds	DSAVR C	Sheep and Goats	23,696	0	0	0	454	452	22,790
animals	"	"	531,575	0	0	0	4,593	40,798	486,184
herds	DSAVR LVT	Sheep and Goats	6,804	0	10	7	311	25	6,451
animals	"	"	220,370	0	1,686	321	4,616	1,832	211,915
herds	DSAVR ALT	Sheep and Goats	8,288	0	0	1	181	5	8,101
animals	"	"	1,349,488	0	0	191	9,090	987	1,339,220
herds	DSAVR ALG	Sheep and Goats	1,030	0	1	2	28	378	621
animals	"	"	53,018	0	113	623	901	18,640	32,741
Total - herds			54,728	0	32	52	1,259	5,375	48,010
Total - animals			2,531,434	0	4,220	5,120	29,026	316,177	2,176,891

Table E - SUSPENSION/WITHDRAWAL OF THE FREE OR OFFICIALLY FREE STATUS

Region	Animal species	Status	Reason	Number of herds
DSAVR N	Sheep and Goats	suspended	non-negative result in diagnostic test	73
DSAVR N	Sheep and Goats	suspended	does not fulfil the routine testing frequency	26
DSAVR N	Sheep and Goats	suspended	entering animals in the herd with insufficient status	178
DSAVR N	Sheep and Goats	suspended	the disease is suspected	8
DSAVR C	Sheep and Goats	suspended	non-negative result in diagnostic test	28
DSAVR C	Sheep and Goats	suspended	does not fulfil the routine testing frequency	119
DSAVR C	Sheep and Goats	suspended	entering animals in the herd with insufficient status	305
DSAVR C	Sheep and Goats	suspended	the disease is suspected	2
DSAVR LVT	Sheep and Goats	suspended	non-negative result in diagnostic test	6
DSAVR LVT	Sheep and Goats	suspended	does not fulfil the routine testing frequency	134
DSAVR LVT	Sheep and Goats	suspended	entering animals in the herd with insufficient status	169
DSAVR LVT	Sheep and Goats	suspended	the disease is suspected	2
DSAVR ALT	Sheep and Goats	suspended	non-negative result in diagnostic test	12
DSAVR ALT	Sheep and Goats	suspended	does not fulfil the routine testing frequency	84
DSAVR ALT	Sheep and Goats	suspended	entering animals in the herd with insufficient status	69
DSAVR ALT	Sheep and Goats	suspended	the disease is suspected	16
DSAVR ALG	Sheep and Goats	suspended	non-negative result in diagnostic test	3
DSAVR ALG	Sheep and Goats	suspended	does not fulfil the routine testing frequency	2
DSAVR ALG	Sheep and Goats	suspended	entering animals in the herd with insufficient status	19
DSAVR ALG	Sheep and Goats	suspended	the disease is suspected	4
Total				1,259

Table F - STRATIFIED DATA ON SURVEILLANCE AND LABORATORY TESTS

Region	Animal species	Test type	Number of samples	Number of tests	Number of positive tests
DSAVR N	Sheep and Goats	Rose bengal test	373,733	373,733	1,437
DSAVR N	Sheep and Goats	Complement fixation test	84,459	84,459	648
DSAVR N	Sheep and Goats	Bacteriological test	404	404	68
DSAVR C	Sheep and Goats	Rose bengal test	372,159	372,159	327
DSAVR C	Sheep and Goats	Complement fixation test	16,303	16,303	37
DSAVR C	Sheep and Goats	Bacteriological test	18	18	1
DSAVR LVT	Sheep and Goats	Rose bengal test	167,379	167,379	163
DSAVR LVT	Sheep and Goats	Complement fixation test	22,216	22,216	192
DSAVR LVT	Sheep and Goats	Bacteriological test	78	78	37
DSAVR ALT	Sheep and Goats	Rose bengal test	576,421	576,421	174
DSAVR ALT	Sheep and Goats	Complement fixation test	38,092	38,092	24
DSAVR ALT	Sheep and Goats	Bacteriological test	11	11	0
DSAVR ALG	Sheep and Goats	Rose bengal test	51,601	51,601	178
DSAVR ALG	Sheep and Goats	Complement fixation test	5,535	5,535	60
DSAVR ALG	Sheep and Goats	Bacteriological test	12	12	0
Total			1,708,421	1,708,421	3,346
			Methods of laboratory analysis	**Total number of tests**	
			Total - Bacteriological test	523	
			Total - Complement fixation test	166,605	
			Total - Rose bengal test	1,541,293	

COMMENT / ADDITIONAL CLARIFICATION

The last column of table C, "Number of animals with primary vaccination (d) (initial + booster)", was usually meant for the Blue Tongue report and the indent (d) is not referenced in the footnote. In the present report for sheep and goat brucellosis, this field is marked as a compulsory one.
The brucellosis vaccination is composed of one single dose inoculation, with no booster or revaccination.
In this context, the number of animals inscribed on those fields is the number of animals vaccinated, as registered in the 7th column "Number of animals vaccinated".

FINANCIAL DATA - REIMBURSEMENT CLAIM table
1 - Vaccination includes 15% loss
2 - Salvage values = 0€, due to destruction of the carcasses
3 - Only paid tests/slaughtered animals/vaccines were considered