Eradication: Final report for Bovine Tuberculosis 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 bovine tuberculosis eradication programme (BTEP) carried out in 2018 for the non-officially free region of Portugal (4 regions of the mainland área and the Azores) resulted in a stability of the epidemiological indicators.
In the Mainland:
Herd tuberculosis prevalence (herds with at least one positive animal to CITT) was 0.24%, lower than in 2015 (0.35%). Graph 1 (in annex) presents the evolution of the number of positive herds and animals from 2013 to 2018 while Graph 2 presents the prevalence in herds and animals over time, showing a stable situation in the last years.
The tendency of herd incidence was also to decrease, from 0.27% in 2015 to 0.17 % in 2018. The graph 3 (in annex) shows that the majority of positive herds identified each year are new positive herds.

In 2018 the percentage of positive animals was 0.05%.

In the Azores:
Evolution of bovine tuberculosis tested and infected herds in the islands of Azores is presented in Graph 4 of the annex. In 2018 a total of 1475 herds were tested and in 7 herd animals were found positive.

Regarding the technical implementation of the programme:
In the Mainland:
The BTEP was implemented as foreseen, reaching a coverage of 97.6%, varying from 96.9% in the LVT region to 97.9% in the Norte region.
There were 70 positive herds and 49 were new positive (70%). Infection was confirmed by bacteriology in 55 herds out of 66 herds investigated (83%).

In the Azores:
The BTEP was implemented as foreseen, reaching a coverage of 103.8%.

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

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

In the Mainland:
According to the Working Document SANTE/2017/10186: Guidelines for the Union co-funded programmes of eradication, control and surveillance of animal diseases and zoonoses for the years 2018, the expected results (targets) were the following: Herd prevalence – 0.26% and Herd incidence – 0.20%
The perspectives for the achievement of the foreseen targets are therefore positive.
There are some regional differences in the epidemiological situation over these last 2 years, with Norte, Alentejo and LVT decreasing its herd prevalence while Centro increased. Algarve Region is officially free.
All positive animals are subjected to sanitary slaughter and those coming from newly infected herds were subjected to organ collection for bacteriology. The percentage of slaughtered animals sampled with isolation of M. bovis was 55% (182/328). From these 182 isolates, 54 were from the Centro region and 114 from the Alentejo region, the two areas of Portugal with higher density of wild animals, deer and wild boars, that represent a relevant source for tuberculosis infection.
The main reasons for attributing a suspended status for tuberculosis are: delays in regular sampling (65%), followed by Tuberculosis suspicion (15%) and non-negative tests (14%). Detected irregularities on animal movement only accounts for 6% of the suspensions of officially free status.
At the 31st December, 72 herds had a non-officially free status.

At the Azores:
The herd apparent prevalence of BTEP implemented in 2018 is of 0.475%.

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.

In the Mainland:
The geographical distribution of infected herds (T2.1) are presented in Annex.
By the end of 2018, the areas with higher number of infected herds were those in the interior of the country where the interface with wild animals is relevant.

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

The Regional Services (DSAVR) are responsible for the epidemiological evaluation of herds with positive results to the diagnostic tests or herds with bacteriological isolation of M. bovis. For this evaluation a specific data collection questionnaire is used (epidemiological enquiry (EI) Model 758).
There were 72 (provisional data) epidemiological inquiries carried out of newly infected herds.
Contact with wild animals is confirmed as an important source of tuberculosis, followed by the introduction of animals in the holdings.
A tuberculosis surveillance plan for large game animals is in place in the risk area of the country (interior of Centro and Alentejo regions). This plan includes the following measures:

- In all big game hunting activities a veterinarian is present;
- All hunted animals are submitted to an initial examination, made by the veterinarian, to ensure food security and the protection of hunters and personnel involved in these activities;
- Reinforcement of correct destination of the by-products of hunting;
- Collection of samples for laboratory diagnosis (histopathological and bacteriological examination) of any suspected lesions of tuberculosis is carried out.
Results obtained in the last 7 years indicate that in 39% of the hunting acts, suspected legions were found and in 28% of the hunting acts, tuberculosis confirmation is achieved. This represents 4, 6% of positives in hunter deer and 4, 8% of positive hunter wild boars.
Regarding the lesions found in abattoir (surveillance data), from 308.630 animals slaughtered 57 were suspected of tuberculosis.
Compulsory pre-movement testing has been applied to avoid the entrance of infected bovine in T3 herds, with the following data registered at 2018 for the continent:
- 34565 holdings / 229.219 animals.

Human cases: according to information provided by DGS (Health Human Services) there is no available information on identification of isolates of Mycobacterium bovis on human cases.

In the Azores:
In 2018 there was a tuberculosis outbreak on S. Miguel Island, triggered with a slaughter suspicion (DDO), later confirmed. Three epidemiological inquiries were done: one concluded that the reason of the infection was the introduction of animals from one infected herd and the other two concluded that it was due to sharing equipment. Another slaughter suspicion was negative to mycobacterial test.
Lesions found in abattoir (surveillance data):
A total of 138 animals were slaughtered (79 testing positive in tuberculin and 59 cohabitants). From those 138 bovines, 71 had compatible lesions with tuberculosis in post-mortem inspection and 36 were positive on microbiological test.

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 depopulated
		% of positive herds depopulated	% of herds coverage		% of positive herds Period herd prevalence		% of positive herds Herd incidence	
DSAVR N	Cattle	17,892	17,207	16,873	16,530	7	7	0
		0 %	97.97 %		0.04 %		0.04 %	
DSAVR C	Cattle	7,200	6,747	6,703	6,504	19	12	3
		15.79 %	97.03 %		0.29 %		0.18 %	
DSAVR LVT	Cattle	2,158	1,598	1,581	1,533	2	2	0
		0 %	96.96 %		0.13 %		0.13 %	
DSAVR ALT	Cattle	4,831	4,735	4,665	4,536	42	28	0
		0 %	97.23 %		0.93 %		0.62 %	
RA Açores	Cattle	6,559	6,559	1,421	1,475	7	7	1
		14.29 %	103.8 %		0.47 %		0.47 %	
Total		38,640	36,846	31,243	30,578	77	56	4
		5.19 %	97.87 %		0.25 %		0.18 %	

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	Cattle	334,780	332,785	206,372	205,945	205,945	16	16	26
					99.79 %				0.01 %
DSAVR C	Cattle	178,203	175,192	129,516	129,293	129,293	180	183	481
					99.83 %				0.14 %
DSAVR LVT	Cattle	210,947	179,068	103,426	103,351	103,351	3	3	3
					99.93 %				0 %
DSAVR ALT	Cattle	840,768	839,056	639,699	639,498	639,498	343	328	343
					99.97 %				0.05 %
RA Açores	Cattle	275,015	275,015	41,409	48,016	48,016	78	79	138
					115.96 %				0.16 %
Total		1,839,713	1,801,116	1,120,422	1,126,103	1,126,103	620	609	991
					100.51 %				0.06 %

Table C - DATA ON VACCINATION PROGRAMMES

Region	Animal species	Total number of herds	Total number of animals	Number of herds in vaccination programme this year	Number of herds vaccinated	Number of animals vaccinated	Number of doses of vaccine admini-stered	Number of adults vaccinated	Number of young animals vaccinated	Number of animals with primary vaccination (initial+ booster)
Total		0	0	0	0	0	0	0	0	0

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	Cattle	17,207	0	2	5	26	0	17,174
animals	"	"	332,785	0	24	221	445	0	332,095
herds	DSAVR C	Cattle	6,747	0	5	11	21	0	6,710
animals	"	"	175,192	0	597	1,805	651	0	172,139
herds	DSAVR LVT	Cattle	1,598	0	0	0	25	0	1,573
animals	"	"	179,068	0	0	0	1,325	0	177,743
herds	DSAVR ALT	Cattle	4,735	0	9	40	22	0	4,664
animals	"	"	839,056	0	1,687	10,377	1,641	0	825,351
herds	RA Açores	Cattle	6,559	0	1	1	5	0	6,552
animals	"	"	275,015	0	95	282	830	0	273,808
Total - herds			36,846	0	17	57	99	0	36,673
Total - animals			1,801,116	0	2,403	12,685	4,892	0	1,781,136

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

Region	Animal species	Status	Reason	Number of herds
DSAVR N	Cattle	suspended	non-negative result in diagnostic test	5
DSAVR N	Cattle	suspended	does not fulfil the routine testing frequency	15
DSAVR N	Cattle	suspended	entering animals in the herd with insufficient status	2
DSAVR N	Cattle	suspended	the disease is suspected	4
DSAVR C	Cattle	suspended	non-negative result in diagnostic test	2

DSAVR C	Cattle	suspended	does not fulfil the routine testing frequency	18
DSAVR C	Cattle	suspended	the disease is suspected	1
DSAVR LVT	Cattle	suspended	non-negative result in diagnostic test	1
DSAVR LVT	Cattle	suspended	does not fulfil the routine testing frequency	21
DSAVR LVT	Cattle	suspended	entering animals in the herd with insufficient status	3
DSAVR ALT	Cattle	suspended	non-negative result in diagnostic test	5
DSAVR ALT	Cattle	suspended	does not fulfil the routine testing frequency	7
DSAVR ALT	Cattle	suspended	entering animals in the herd with insufficient status	1
DSAVR ALT	Cattle	suspended	the disease is suspected	9
RA Açores	Cattle	suspended	non-negative result in diagnostic test	5
Total				99

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	Cattle	Tuberculin test	218,132	218,132	16
DSAVR N	Cattle	Bacteriological test	20	20	13
DSAVR N	Cattle	PCR test	13	13	13
DSAVR C	Cattle	Tuberculin test	138,440	138,440	180
DSAVR C	Cattle	Bacteriological test	109	109	54
DSAVR C	Cattle	PCR test	54	54	54
DSAVR LVT	Cattle	Tuberculin test	107,915	107,915	3
DSAVR LVT	Cattle	Bacteriological test	4	4	1
DSAVR LVT	Cattle	PCR test	1	1	1
DSAVR ALT	Cattle	Tuberculin test	700,644	700,644	335
DSAVR ALT	Cattle	Bacteriological test	195	195	114
DSAVR ALT	Cattle	PCR test	114	114	114
DSAVR ALT	Cattle	Gamma-interferon test	69	69	8
RA Açores	Cattle	Tuberculin test	49,344	49,344	78
RA Açores	Cattle	Bacteriological test	83	83	36
RA Açores	Cattle	PCR test	36	36	36
Total			1,215,173	1,215,173	1,056
			Methods of laboratory analysis	**Total number of tests**	
			Total - Bacteriological test	411	
			Total - Gamma-interferon test	69	
			Total - PCR test	218	
			Total - Tuberculin test	1,214,475	

COMMENT / ADDITIONAL CLARIFICATION

1 - There are no pre-movement tests for export (mandatory under Directive 64/432) included in the claim.
2 - Salvage values were deducted.
3 - Only paid tests/slaughtered animals were considered