

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).

This form is for information only, no submission possible.

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Country code: HR

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.

During 2018th sheep and goat brucellosis programme was implemented in the whole territory of Croatia. All animals older than 6 months were tested in herds not yet officially free and representative number of animals had to be tested in herds that are officially free. During 2018th certain risk areas were introduced in the programme. These are counties bordering with Bosna and Hercegovina: Sisak - moslavina, Karlovac, Lika-senj, Brod-posavina, Zadar , Šibenik-knin, Vukovar-srijem, Split-dalmatia and Dubrovnik-neretva county. Total number of holdings in those risk areas is 12 725 with 479 114 animals (54 % of holdings and 63 % of animals). Detailed results of testing are in tables in point 2. Inside those counties, some municipalities were classified as high risk based on the historical data (outbreaks in municipalities Plitvička jezera and Korenica in Lika senj-county; Cetingrad, Vojnić and Krnjak in Karlovac county; Dvor in Sisak - moslavina county; Sinj, Hrvace and Lovreć in Split-dalmatia county; Cviljane in Šibenik-knin county). In those municipalities, testing was performed on all animals older than 6 months, including officially free flocks regardless the size of the flock, before pasture season begins and by latest in the end of March (769 holdings with 31 891 animals). All animals older than 6 months were tested with RBT in NRL Croatian Veterinary Institute (CVI) Zagreb and 4 regional branches located in Split, Križevci, Rijeka i Vinkovci. RBT positive samples were retested with CFT. All RBT positive tests from regional branches are transferred to NRL in Zagreb and tested again with RBT and CFT. In case more than 5 % of samples in the flock were RBT

positive, all animals in the flock were tested with CFT. In officially free flocks only representative number of animals was tested according to Directive 91/68, Annex A, Chapter I B, except in high risk areas where all animals from the flock had to be tested. All CFT positive animals were euthanised and sampled for bacteriological investigation (samples include: uterus, testicles, spleen, fetus, lymph nodes (supramammary, inguinal, portal, mandibular and mesenteric)). In total 9 flocks was positive (CFT) with 15 animals. There was one confirmed case of *Brucella melitensis* in bovine herd. Additional epidemiological information about outbreak is in point 1.3. Premovement test was not mandatory for movement between officially free herds. Animals from flocks not yet official free cannot be moved. All abortions in sheep and goats have to be reported and investigated.

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

Compared to 2017, there is some progress in implementation of sheep and goat brucellosis programme. Still, some of the problems are related to updating of database - some of the flocks that are not tested are actually empty flocks, and some issues are related to authorised veterinary organisation that do not perform all of the sampling because of lack of the staff.

Flock coverage is slightly bigger than last year.

2014 - 77 %; 2015- 87 %; 2016 - 84 %, 2017-85 % and 2018 - 86 %.

Number of officially free flocks has increased from April 2018 to December 2018 from 18 098 flocks to 18 960.

There was one outbreak of *B.melitensis* in bovine herd.

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 attachment feature) Use the textbox below to provide clarifications for the maps you attach, if needed.

Bovine herd, October 2018, Sisak - moslavina county:

Brucellosis was confirmed in one bovine herd with 29 animals. Suspicion was raised during regular annual herd testing in the framework of Surveillance programme for bovine brucellosis on October 3rd, 2018. 10 bovine animals revealed positive results in serological testing (CFT 7 positives, ELISA 10 positive, cELISA 7 positive) . In addition, brucelin skin test was performed on all bovine animals older than 12 months out of which 5 animals were positive. Those bovine animals were slaughtered and samples were taken for bacteriological confirmation. *Brucella melitensis* was isolated from the samples (supramammary lymph nodes) originating from 3 bovines. According to the results of bacteriological testing whole herd was considered as infected and whole herd was designated for slaughter. Animals present on the holding at the time of outbreak: 29 bovine animals - 1 young bull, 17 cows, 6 heifers and 5 calves. There was no other animals on the holding. Animals are kept in 3 closed stables and also on the pasture attached and surrounding owners house. Pasture is fenced with electric fence. There is the possibility for contact with wild animals and stray dogs. Animals were drinking water from the river Glina. This river also represents borderline with Bosna and Hercegovina. In the last 2 years only artificial insemination is practiced, but before there was natural insemination. According to owners statement there was no abortions, orchitis or arthritis in the herd, but there was a case of arthritis in bull 3 years ago. Mastitis occasionally occurs in cows. Source of infection was not confirmed. Herd was tested in previous years in the framework of bovine brucellosis programme and it was always negative.

In January 2019 herd was depopulated. All bovines, sheep and goats in the range of 3 km from the infected holding were tested with negative results.

New outbreak May 2019 - mixed herd, Dubrovnik-neretva county

Outbreak occurred in municipality Metkovic in Dubrovnik - Neretva county in mixed holding with goats (148) and bovines (46). Suspicion was raised when local veterinary inspector received notification from Human Epidemiological Service that one woman has brucellosis. Case was traced back to this herd. It is suspected that brucellosis was introduced with infected goats from Bosna and Hercegovina. The animals were not identified, records on the holding were not kept regularly. *B.melitensis* was isolated and confirmed in goats and bovine animals. Whole herd will be depopulated. All goats have already been euthanized. Bovine animals will be tested. Depopulation will be decided based on the further laboratory tests results of bovine animals. All susceptible animals in 10 km range were tested immediately. There are no new outbreaks.

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

Map of location of last 4 confirmed cases of *B.melitensis* in the last 4 years is attached (attachment 1) - new updated with outbreak from May 2019.

Number of infected flocks in Croatia in the time period 2008-2019 is attached (attachment 2). - updated.

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 herds depopulated	% of herds coverage		% of positive herds Period herd prevalence		% of positive herds Herd incidence	
Bjelovarsko - bilogorska	Sheep and Goats	2,519	2,519	2,519	2,298	1	1	0
		0 %	91.23 %		0.04 %		0.04 %	
Brodsko-posavska	Sheep and Goats	613	613	613	580	0	0	0
		%	94.62 %		0 %		0 %	
Dubrovačko-neretvanska	Sheep and Goats	312	312	312	128	0	0	0
		%	41.03 %		0 %		0 %	
Grad Zagreb	Sheep and Goats	130	130	130	94	0	0	0
		%	72.31 %		0 %		0 %	
Istarska	Sheep and Goats	765	765	765	702	0	0	0
		%	91.76 %		0 %		0 %	
Karlovačka	Sheep and Goats	1,345	1,345	1,345	1,235	1	0	0
		0 %	91.82 %		0.08 %		0 %	
Koprivničko-križevačka	Sheep and Goats	839	839	839	751	0	0	0
		%	89.51 %		0 %		0 %	
Krapinsko-zagorska	Sheep and Goats	613	613	613	605	0	0	0
		%	98.69 %		0 %		0 %	
Ličko-senjska	Sheep and Goats	2,020	2,020	2,020	1,614	0	0	0
		%	79.9 %		0 %		0 %	
Međimurska	Sheep and Goats	117	117	117	108	0	0	0
		%	92.31 %		0 %		0 %	
Osječko-baranjska	Sheep and Goats	1,126	1,126	1,126	1,050	2	2	0
		0 %	93.25 %		0.19 %		0.19 %	
Požeško-slavonska	Sheep and Goats	933	933	933	916	0	0	0
		%	98.18 %		0 %		0 %	
Primorsko-goranska	Sheep and Goats	995	995	995	653	0	0	0
		%	65.63 %		0 %		0 %	
Sisačko-moslavačka	Sheep and Goats	2,348	2,348	2,348	2,297	3	3	0
		0 %	97.83 %		0.13 %		0.13 %	
Splitsko-dalmatinska	Sheep and Goats	1,369	1,369	1,369	773	0	0	0
		%	56.46 %		0 %		0 %	
Šibensko-kninska	Sheep and Goats	1,329	1,329	1,329	1,085	0	0	0
		%	81.64 %		0 %		0 %	
Varaždinska	Sheep and Goats	342	342	342	310	0	0	0
		%	90.64 %		0 %		0 %	
Virovitičko-podravska	Sheep and Goats	917	917	917	887	1	1	0
		0 %	96.73 %		0.11 %		0.11 %	
Vukovarsko-srijemska	Sheep and Goats	694	694	694	624	0	0	0
		%	89.91 %		0 %		0 %	
Zadarska	Sheep and Goats	1,954	1,954	1,954	1,533	0	0	0
		%	78.45 %		0 %		0 %	
Zagrebačka	Sheep and Goats	1,160	1,160	1,160	1,073	1	1	0
		0 %	92.5 %		0.09 %		0.09 %	

Total	22,440	22,440	22,440	19,316	9	8	0
	0 %	86.08 %	0.05 %	0.04 %			

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 slaughtered or culled	Number of animals slaughtered
		% coverage at animals level				% positive animals Animal Prevalence			
Bjelovarsko-bilogorska	Sheep and Goats	63,317	48,646	48,646	41,179	41,179	1	1	1
		84.65 %				0 %			
Brodsko-posavska	Sheep and Goats	18,797	13,336	13,336	8,218	8,218	0	0	0
		61.62 %				0 %			
Dubrovačko-neretvanska	Sheep and Goats	8,861	7,364	7,364	2,836	2,836	0	0	0
		38.51 %				0 %			
Grad Zagreb	Sheep and Goats	3,724	2,430	2,430	1,359	1,359	0	0	0
		55.93 %				0 %			
Istarska	Sheep and Goats	19,435	15,636	15,636	11,753	11,753	0	0	0
		75.17 %				0 %			
Karlovačka	Sheep and Goats	31,440	26,587	26,857	23,168	23,168	2	2	2
		86.26 %				0.01 %			
Koprivničko-križevačka	Sheep and Goats	12,948	11,706	11,706	10,345	10,345	0	0	0
		88.37 %				0 %			
Krapinsko-zagorska	Sheep and Goats	5,924	5,834	5,834	5,761	5,761	0	0	0
		98.75 %				0 %			
Ličko-senjska	Sheep and Goats	84,573	69,076	69,076	51,026	51,026	0	0	0
		73.87 %				0 %			
Međimurska	Sheep and Goats	4,135	3,960	3,960	2,633	2,633	0	0	0
		66.49 %				0 %			
Osječko-baranjska	Sheep and Goats	41,589	31,982	31,982	22,449	22,449	2	2	2
		70.19 %				0.01 %			
Požeško-slavonska	Sheep and Goats	23,575	19,285	19,285	15,600	15,600	0	0	0
		80.89 %				0 %			
Primorsko-goranska	Sheep and Goats	40,509	31,325	31,325	16,180	16,180	0	0	0
		51.65 %				0 %			
Sisačko-moslavačka	Sheep and Goats	44,812	42,293	42,293	38,376	38,376	4	4	4
		90.74 %				0.01 %			
Splitsko-dalmatinska	Sheep and Goats	64,311	52,858	52,858	25,680	25,680	0	0	0
		48.58 %				0 %			
Šibensko-kninska	Sheep and Goats	66,397	54,841	54,841	35,939	35,939	0	0	0
		65.53 %				0 %			
Varaždinska	Sheep and Goats	8,022	7,298	7,298	5,200	5,200	0	0	0
		71.25 %				0 %			
Virovičko-podravska	Sheep and Goats	24,871	17,987	17,987	13,915	13,915	5	5	5
		77.36 %				0.04 %			
Vukovarsko-srijemska	Sheep and Goats	19,863	16,161	16,161	11,498	11,498	0	0	0
		71.15 %				0 %			
Zadarska	Sheep and Goats	125,864	102,118	102,118	63,322	63,322	0	0	0
		62.01 %				0 %			
Zagrebačka	Sheep and Goats	30,954	24,563	24,563	14,198	14,198	1	1	1

					57.8 %				0.01 %
Total	743,921	605,286	605,556	420,635	420,635	15	15	15	
					69.46 %				0 %

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 administered	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	Bjelovarsko-bilogorska	Sheep and Goats	2,519	62	0	293	0	0	2,164
animals	"	"	48,646	459	0	4,126	0	0	58,732
herds	Brodsko-posavska	Sheep and Goats	613	19	0	35	0	0	559
animals	"	"	13,336	7,290	0	3,154	0	0	18,353
herds	Dubrovačko-neretvanska	Sheep and Goats	312	58	0	83	0	0	171
animals	"	"	7,364	297	0	2,265	0	0	6,299
herds	Grad Zagreb	Sheep and Goats	130	14	0	21	0	0	95
animals	"	"	2,430	372	0	403	0	0	2,949
herds	Istarska	Sheep and Goats	765	17	0	100	0	0	648
animals	"	"	15,636	99	0	1,287	0	0	18,049
herds	Karlovačka	Sheep and Goats	1,345	27	0	96	0	0	1,222
animals	"	"	26,587	599	0	893	0	0	29,948
herds	KOprivničko-križevačka	Sheep and Goats	839	29	0	148	0	0	662
animals	"	"	11,706	398	0	2,583	0	0	9,967
herds	Krapinsko-zagorska	Sheep and Goats	613	13	0	40	0	0	560
animals	"	"	5,834	73	0	240	0	0	5,611
herds	Ličko-senjska	Sheep and Goats	2,020	122	0	202	0	0	1,696
animals	"	"	69,076	1,779	0	4,758	0	0	78,036
herds	Međimurska	Sheep and Goats	117	2	0	24	0	0	91
animals	"	"	3,960	15	0	318	0	0	3,802
herds	Osječko-baranjska	Sheep and Goats	1,126	32	0	96	0	0	998
animals	"	"	31,982	795	0	936	0	0	39,858
herds	Požeško-slavonska	Sheep and Goats	933	18	0	76	0	0	839
animals	"	"	19,285	163	0	834	0	0	22,578
herds	Primorsko-goranska	Sheep and Goats	995	64	0	155	0	0	776
animals	"	"	31,325	899	0	3,135	0	0	36,475
herds	Sisačko-moslavačka	Sheep and Goats	2,348	44	0	115	0	0	2,189
animals	"	"	42,293	568	0	1,123	0	0	43,121
herds	Splitsko-dalmatinska	Sheep and Goats	1,369	161	0	176	0	0	1,032
animals	"	"	52,858	10,511	0	3,618	0	0	50,182
herds	Šibensko-kninska	Sheep and Goats	1,329	103	0	156	0	0	1,070
animals	"	"	54,841	2,076	0	4,070	0	0	60,251
herds	Varaždinska	Sheep and Goats	342	15	0	51	0	0	276
animals	"	"	7,298	101	0	358	0	0	7,563
herds	Virovitičko-podravska	Sheep and Goats	917	14	0	48	0	0	855

animals	"	"	17,987	127	0	445	0	0	24,299
herds	Vukovarsko-srijemska	Sheep and Goats	694	27	0	84	0	0	583
animals	"	"	16,161	541	0	2,047	0	0	17,275
herds	Zadarska	Sheep and Goats	1,954	243	0	250	0	0	1,461
animals	"	"	102,118	5,956	0	9,460	0	0	110,448
herds	Zagrebačka	Sheep and Goats	1,160	49	0	98	0	0	1,013
animals	"	"	24,563	11,601	0	665	0	0	18,688
Total - herds			22,440	1,133	0	2,347	0	0	18,960
Total - animals			605,286	44,719	0	46,718	0	0	662,484

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

Region	Animal species	Status	Reason	Number of herds
Požeško-slavonska	Sheep	suspended	entering animals in the herd with insufficient status	2
Sisačko-moslavačka	Sheep	suspended	the disease is suspected	2
Sisačko-moslavačka	Sheep and Goats	suspended	entering animals in the herd with insufficient status	1
Zadarska	Sheep and Goats	suspended	entering animals in the herd with insufficient status	2
Šibensko-kninska	Sheep and Goats	suspended	problems in I&R of animals and insufficient testing	1
Total				8

Table F - STRATIFIED DATA ON SURVEILLANCE AND LABORATORY TESTS

Region	Animal species	Test type	Number of samples	Number of tests	Number of positive tests
Croatia	Sheep	Rose bengal test	370,432	370,432	454
Croatia	Goats	Rose bengal test	48,532	48,532	23
Croatia	Sheep	Complement fixation test	1,258	1,258	13
Croatia	Goats	Complement fixation test	41	41	1
Croatia	Sheep	Bacteriological test	38	70	0
Croatia	Goats	Bacteriological test	14	20	0
Croatia	Sheep	PCR test	16	16	0
Croatia	Goats	PCR test	4	4	0
Total			420,335	420,373	491
		Methods of laboratory analysis		Total number of tests	
		Total - Bacteriological test		90	
		Total - Complement fixation test		1,299	
		Total - PCR test		20	
		Total - Rose bengal test		418,964	

COMMENT / ADDITIONAL CLARIFICATION

Laboratory tests are paid to the Croatian Veterinary Institute (CVI) according to monthly invoices from the CVI. This procedure is not connected with the payment to the AVO (authorised veterinary organisations) for sampling. All sampling performed by AVO has to be recorded in the animal identification and registration database. This database contains records of 420 635 sampled animals (table B - data on animals). AVOs have to submit monthly invoices which contain all the measures that were performed for the month in question. Veterinary and Food safety Directorate (VFSD) receives this invoices and extracts data for B.melitensis for further reporting, analyses and archive. During 2018th AVOs have sent only 370 878 samples for payment. Accordingly, only those were claimed in the Final Financial Report.

7 % of overhead is added up to total cost actually incurred for bacteriological tests and PCR.

Exchange rate indicated below is 1 EUR = 7.4338 HRK (March 31st 2019.)

