



# Implementation of Rabies programme in Bulgaria, 2019

*SCoPAFF, 23-24  
September 2020*

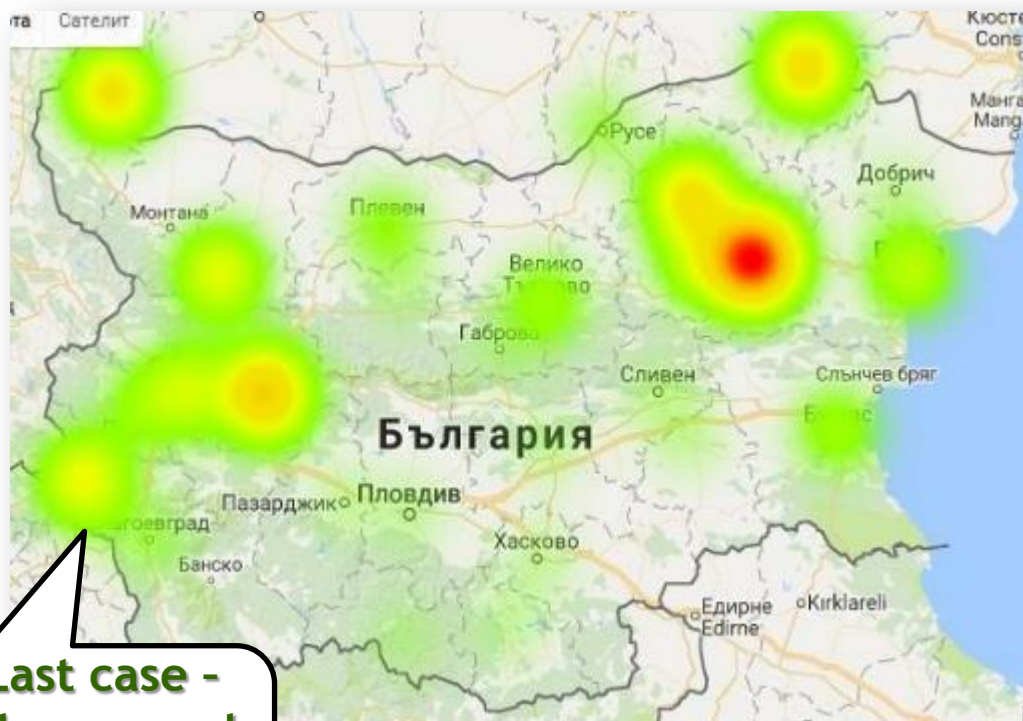


Animal Health Unit  
Bulgarian Food Safety Agency  
Contacts: 02 915 98 42; [ahwfc@bfsa.bg](mailto:ahwfc@bfsa.bg)



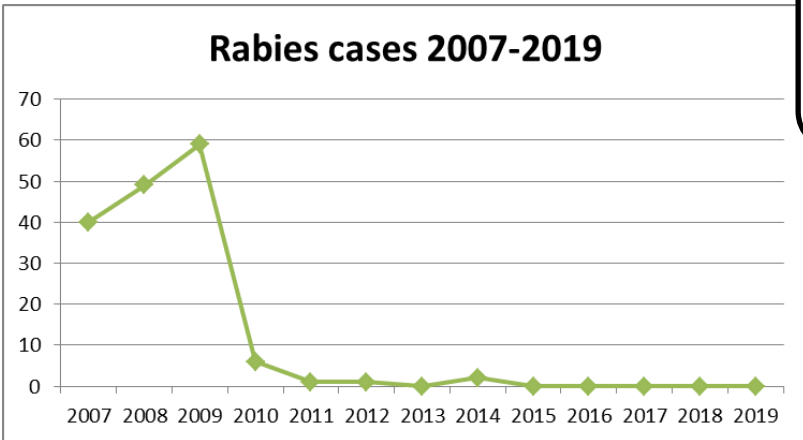
# Epidemiological situation 2007-2019

Year	Total No. Domestic					
	of cases	animals	Dogs	Cats	Foxes	Jackals
2007	40	-	7	7	24	2
2008	49	-	6	4	33	6
2009	59	4	3	3	47	2
2010	6	-	3	1	2	-
2011	1	-	-	-	1	-
2012	1	-	-	-	1	-
2013	0	-	-	-	-	-
2014	2	-	-	-	2	-
2015	0	-	-	-	-	-
2016	0	-	-	-	-	-
2017	0	-	-	-	-	-
2018	0	-	-	-	-	-
2019	0	-	-	-	-	-
<b>Total:</b>	<b>158</b>	<b>4</b>	<b>19</b>	<b>15</b>	<b>110</b>	




**Last case -  
Blagoevgrad  
region,  
June, 2014**

*Distribution of the rabies cases  
for the period 2007 - 2014*




# Oral vaccination of foxes

 **Beginning of the programme – 2009** => currently part of the Multiannual National Programme for Animal Diseases and Zoonoses

 **2 campaigns per year – spring and autumn**

 **Aerial and manual distribution**

 **Vaccine used – Lysvulpen, Bioveta**

 **Bait density – 25 baits/sq. km**

 **Quality control of the batches**

Year	Vaccination campaigns	Regions	Size of territory (km <sup>2</sup> )
2009	2 – spring and autumn	18	55 037 km <sup>2</sup>
2010	1 spring	19	55 995 km <sup>2</sup>
2011	1 spring	19	55 995 km <sup>2</sup>
2012	2 – spring and autumn	20	59 500 km <sup>2</sup>
2013	2 – spring and autumn	20	59 500 km <sup>2</sup>
2014	2 – spring and autumn	22	79 119 km <sup>2</sup>
2015	2 – spring and autumn	16	54 716 km <sup>2</sup>
2016	2 – spring and autumn	16	54 716 km <sup>2</sup>
2017	2 – spring and autumn	16	54 716 km <sup>2</sup>
2018	2 – spring and autumn	23	57 019 km <sup>2</sup>
2019	2 – spring and autumn	23	57 019 km <sup>2</sup>





# Oral vaccination of foxes

2015-2017

2018 =>



■ *Manual distribution*

■ *High-altitude areas not covered by vaccination*



# Oral vaccination of foxes - 2019

Aerial distribution					
No of regions	Campaign	No. of baits	Size of territory (km <sup>2</sup> )	Type of distribution	Bait density (per km <sup>2</sup> )
22	spring	1 425 900	60 017	aerial	23,76
	autumn	1 426 100	62 278		22,90
	<b>Total</b>	<b>2 852 000</b>	<b>61 147,5</b>	<b>aerial</b>	<b>23,33</b>

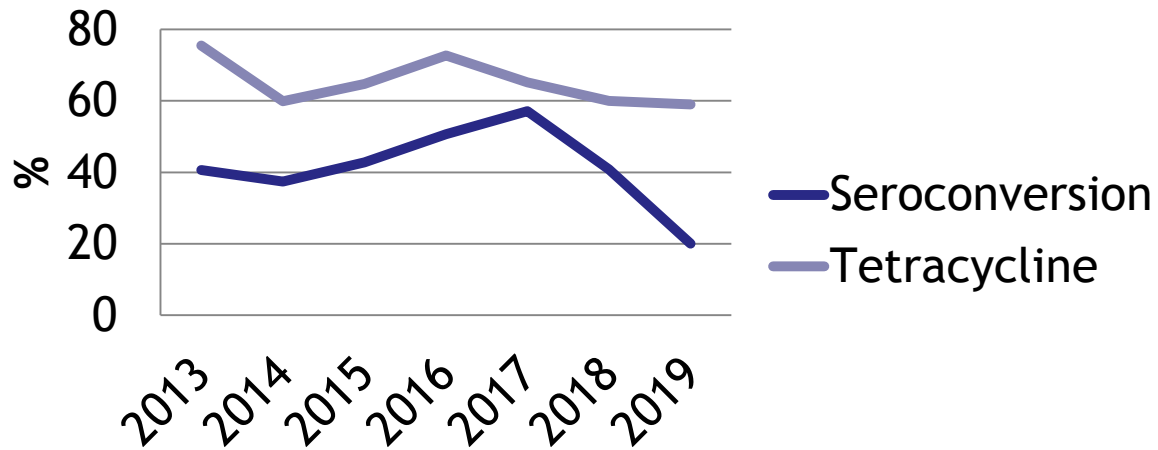
Manual distribution					
No of regions	Campaign	No. of baits	Size of territory (km <sup>2</sup> )	Type of distribution	Bait density (per km <sup>2</sup> )
2	spring	12 000	4 300	manual	2,79
	autumn	12 000	4 300		2,79
	<b>Total</b>	<b>24 000</b>	<b>4 300</b>	<b>manual</b>	<b>2,79</b>



# Monitoring of vaccination effectiveness, foxes

Species	FAT					TMT					ELISA						
	Young			Adult		Young			Adult		Young			Adult			
Fox	128	0	-	338	0	-	132	53	40,15%	342	228	66,66%	88	77,95%	198	47	23,73%

## Vaccination effectiveness in foxes

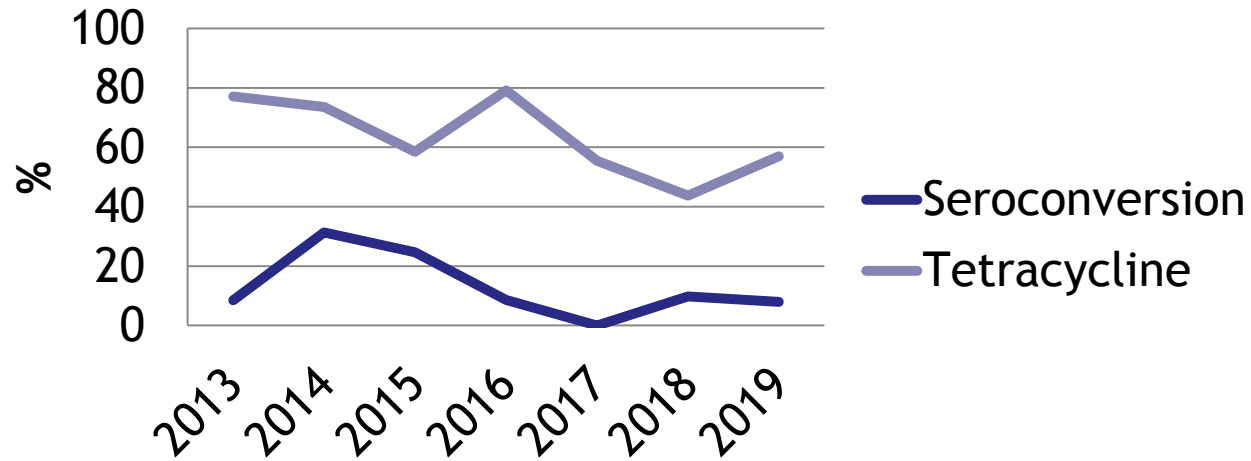




# Monitoring of vaccination effectiveness, jackals

Species	FAT				TMT				Serology					
	Young		Adult		Young		Adult		Young		Adult			
Jackals	154	0 -	485	0 -	154	60	38,96 %	485	308	63,50 %	63	69,52%	172	137,55%

Vaccination effectiveness in jackals



# Rabies surveillance in 2019



Region	SUSPECTS								ROAD-KILLS						FOUND DEAD				SHOT IN NON-VACCINATED AREAS		
	Fox	Jackal	Marten	Bovine s	Sheep	Goat	Dog	Cat	Fox	Jackal	Roe deer	Wild rabbit	Dog	Cat	Fox	Jackal	Bat	Dog	Fox	Jackal	Wol
Blagoevgrad									9						1				2		
Bourgas					2				2	7											
Varna							1														
V. Tarnovo	1								2										2	15	
Vidin	1							1	2	2											
Vratsa																			31	52	
Gabrovo								2	8	1				1					112	122	1
Dobrich	1																				
Kardzjali									9	4					1				12	6	
Kyustendil							1						1								
Lovech									1										7	12	
Montana																					
Pazardzjik									2												
Pernik									2	1											
Pleven									4	1						3			13	26	
Plovdiv									1												
Razgrad							1	1											151	167	
Rouse																					
Silistra																					
Sliven																			1	1	
Smolyan									2						1						
Sofia- city									2										2		
Sofia- district							1		32	3	1										
Stara Zagora																					
Targovishte																					
Haskovo									2	9											2
Shoumen							1		1						3			1	5	2	
Yambol									1		5				1						
Total	3				2		5	5	81	33	1		1	1	7	3		1	338	402	4

FATs		
Dead animals	Shot in non-vaccinated areas	Shot in vaccinated areas
143	744	1105





# Thank you!

Bulgarian Food Safety Agency  
15A Pencho Slaveikov blvd.  
1606 Sofia, Bulgaria  
tel.: 00359 2 915 98 20  
e\_mail: [cvo@bfsa.bg](mailto:cvo@bfsa.bg); [ceo@bfsa.bg](mailto:ceo@bfsa.bg)

Animal Health Department  
tel.: 00359 2 915 98 42  
e\_mail: [ahwfc@bfsa.bg](mailto:ahwfc@bfsa.bg);  
<http://babh.government.bg/bg/Page/ah/index/ah/Здравеопаз>