European Food Safety Authority

ZOONOSES MONITORING

Montenegro

TRENDS AND SOURCES OF ZOONOSES AND ZOONOTIC AGENTS IN FOODSTUFFS, ANIMALS AND FEEDINGSTUFFS

including information on foodborne outbreaks, antimicrobial resistance in zoonotic and indicator bacteria and some pathogenic microbiological agents

IN 2019

PREFACE

This report is submitted to the European Commission in accordance with Article 9 of Council Directive 2003/99/ EC*. The information has also been forwarded to the European Food Safety Authority (EFSA).

The report contains information on trends and sources of zoonoses and zoonotic agents in Montenegro during the year 2019.

The information covers the occurrence of these diseases and agents in animals, foodstuffs and in some cases also in feedingstuffs. In addition the report includes data on antimicrobial resistance in some zoonotic agents and indicator bacteria as well as information on epidemiological investigations of foodborne outbreaks.
Complementary data on susceptible animal populations in the country is also given. The information given covers both zoonoses that are important for the public health in the whole European Union as well as zoonoses, which are relevant on the basis of the national epidemiological situation.
The report describes the monitoring systems in place and the prevention and control strategies applied in the country. For some zoonoses this monitoring is based on legal requirements laid down by the European Union legislation, while for the other zoonoses national approaches are applied.

The report presents the results of the examinations carried out in the reporting year. A national evaluation of the epidemiological situation, with special reference to trends and sources of zoonotic infections, is given. Whenever possible, the relevance of findings in foodstuffs and animals to zoonoses cases in humans is evaluated.
The information covered by this report is used in the annual European Union Summary Reports on zoonoses and antimicrobial resistance that are published each year by EFSA.

The national report contains two parts: tables summarising data reported in the Data Collection Framework and the related text forms. The text forms were sent by email as pdf files and they are incorporated at the end of the report.

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* Directive 2003/ 99/ EC of the European Parliament and of the Council of 12 December 2003 on the monitoring of zoonoses and zoonotic agents, amending Decision 90/ 424/ EEC and repealing Council Directive 92/ 117/ EEC, OJ L 325, 17.11.2003, p. 31

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ANIMAL POPULATION TABLES

Table Susceptible animal population

		Population		
Animal species	**Category of animals**	**animal**	**slaughter animal (heads)**	**herd/flock**
Cattle (bovine animals)	Cattle (bovine animals)	87,527	31,159	22,983
Gallus gallus (fowl)	Gallus gallus (fowl) - broilers		983,478	
Goats	Goats	46,282	122	
Pigs	Pigs	40,394	20,516	12,422
Sheep	Sheep	170,337	50,620	
Sheep and goats	Sheep and goats			6,112

DISEASE STATUS TABLES

Table Bovine brucellosis in countries and regions that do not receive Community co-financing for eradication programme

Region	Number of herds with status officially free	Number of infected herds	Total number of herds
Montenegro	0	0	22,983

Table Ovine or Caprine brucellosis in countries and regions that do not receive Community co-financing for eradication programme

Region	Number of herds with status officially free	Number of infected herds	Total number of herds
Montenegro	0	0	6,112

DISEASE STATUS TABLES

Table Bovine tuberculosis in countries and regions that do not receive Community co-financing for eradication programme

Region	Number of herds with status officially free	Number of infected herds	Interval between routine tuberculin tests	Total number of herds
Montenegro	0	3	12	22,983

PREVALENCE TABLES

Table LISTERIA in food

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Total units tested	Total units positive	Method	Zoonoses	N of units tested	N of units positive
Not Available	Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Border Control Posts - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	96	0	<= 100	Listeria monocytogenes	96	0
								>100	Listeria monocytogenes	96	0
	Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Processing plant - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	10	0	detection	Listeria monocytogenes	10	0
	Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	74	0	<= 100	Listeria monocytogenes	74	0
								>100	Listeria monocytogenes	74	0
	Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	1269	0	detection	Listeria monocytogenes	1,269	0
	Dairy products (excluding cheeses) - cream - made from pasteurised milk - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	25	0	<= 100	Listeria monocytogenes	25	0
								>100	Listeria monocytogenes	25	0
	Dairy products (excluding cheeses) - cream - made from pasteurised milk - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	82	0	detection	Listeria monocytogenes	82	0
	Dairy products (excluding cheeses) - dairy products, not specified - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	5	0	<= 100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0
	Dairy products (excluding cheeses) - dairy products, not specified - Processing plant - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	1539	0	<= 100	Listeria monocytogenes	1,539	0
	Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	10	0	<= 100	Listeria monocytogenes	10	0
								>100	Listeria monocytogenes	10	0
	Dairy products (excluding cheeses) - yoghurt - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	25	0	<= 100	Listeria monocytogenes	25	0
								>100	Listeria monocytogenes	25	0
	Fish - marinated - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	11	0	<= 100	Listeria monocytogenes	11	0
								>100	Listeria monocytogenes	11	0
	Fish - smoked - Border Control Posts - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	15	0	<= 100	Listeria monocytogenes	15	0
								>100	Listeria monocytogenes	15	0
	Meat from bovine animals - fresh - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	1	0	<= 100	Listeria monocytogenes	1	0
								>100	Listeria monocytogenes	1	0
	Meat from other animal species or not specified - meat products - cooked, ready-to-eat - Border Control Posts - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	98	0	>100	Listeria monocytogenes	98	0
			25	Gram	N_A	98	0	<= 100	Listeria monocytogenes	98	0
	Meat from other animal species or not specified - meat products - cooked, ready-to-eat - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	55	0	<= 100	Listeria monocytogenes	55	0
								>100	Listeria monocytogenes	55	0
	Meat from other animal species or not specified - meat products - cooked, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	2	0	<= 100	Listeria monocytogenes	2	0
								>100	Listeria monocytogenes	2	0
	Meat from other animal species or not specified - meat products - raw and intended to be eaten raw - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	20	0	<= 100	Listeria monocytogenes	20	0
								>100	Listeria monocytogenes	20	0
	Meat from pig - fresh - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	27	0	detection	Listeria monocytogenes	27	0
	Meat from pig - meat products - fermented sausages - Border Control Posts - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	20	0	<= 100	Listeria monocytogenes	20	0
								>100	Listeria monocytogenes	20	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Total units tested	Total units positive	Method	Zoonoses	N of units tested	N of units positive
Not Available	Meat from pig - meat products - fermented sausages - Processing plant - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	55	0	detection	Listeria monocytogenes	55	0
	Meat from pig - meat products - fermented sausages - Retail - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	35	10	<= 100	Listeria monocytogenes	35	10
								>100	Listeria monocytogenes	35	10
	Meat, mixed meat - meat products - Border Control Posts - Not Available - food sample - Monitoring - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	9	0	<= 100	Listeria monocytogenes	9	0
								>100	Listeria monocytogenes	9	0
	Milk, cows' - pasteurised milk - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	5	0	<= 100	Listeria monocytogenes	5	0
								>100	Listeria monocytogenes	5	0

Table Salmonella:SALMONELLA in animal

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	N of flocks under control programme	Target verification	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Dogs - Farm - Not Available - animal sample - faeces - Surveillance - Official sampling - Objective sampling	animal		N_A	N_A	Not Available	1	0	Salmonella	0
	Gallus gallus (fowl) - Farm - Not Available - environmental sample - air - Surveillance - Official sampling - Objective sampling	animal		N_A	N_A	Not Available	108	0	Salmonella	0
	Gallus gallus (fowl) - laying hens - adult - Farm - Not Available - animal sample - faeces - Surveillance - Official sampling - Objective sampling	animal		N_A	N_A	Not Available	86	0	Salmonella	0
	Gallus gallus (fowl) - unspecified - day-old chicks - Farm - Not Available - animal sample - faeces - Surveillance - Official sampling - Objective sampling	animal		N_A	N_A	Not Available	164	0	Salmonella	0
	Gallus gallus (fowl) - unspecified - Farm - Not Available - animal sample - cloacal swab - Surveillance - Official sampling - Objective sampling	animal		N_A	N_A	Not Available	16	0	Salmonella	0
	Gallus gallus (fowl) - unspecified - Farm - Not Available - animal sample - faeces - Surveillance - Official sampling - Objective sampling	animal		N_A	N_A	Not Available	2	0	Salmonella	0
	Gallus gallus (fowl) - unspecified - Farm - Not Available - animal sample - foetus/stillbirth - Surveillance - Official sampling - Objective sampling	animal		N_A	N_A	Not Available	78	0	Salmonella	0
	Gallus gallus (fowl) - unspecified - Farm - Not Available - animal sample - Surveillance - Official sampling - Objective sampling	animal		N_A	N_A	Not Available	18	0	Salmonella	0
	Gallus gallus (fowl) - unspecified - Farm - Not Available - environmental sample - boot swabs - Surveillance - Official sampling - Objective sampling	animal		N_A	N_A	Not Available	18	0	Salmonella	0
	Gallus gallus (fowl) - unspecified - Farm - Not Available - environmental sample - dust - Surveillance - Official sampling - Objective sampling	animal		N_A	N_A	Not Available	7	0	Salmonella	0
	Gallus gallus (fowl) - unspecified - Farm - Not Available - environmental sample - hatcher basket liner - Surveillance - Official sampling - Objective sampling	animal		N_A	N_A	Not Available	102	0	Salmonella	0
	Monkeys - Farm - Not Available - animal sample - faeces - Surveillance - Official sampling - Objective sampling	animal		N_A	N_A	Not Available	1	0	Salmonella	0
	Rabbits - farmed - Farm - Not Available - animal sample - faeces - Surveillance - Official sampling - Objective sampling	animal		N_A	N_A	Not Available	12	0	Salmonella	0
	Turkeys - unspecified - Farm - Not Available - animal sample - faeces - Surveillance - Official sampling - Objective sampling	animal		N_A	N_A	Not Available	12	0	Salmonella	0

Table Salmonella:SALMONELLA in food

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Cheeses made from cows' milk - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	1283	0	Salmonella	0
	Cheeses made from cows' milk - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	4	0	Salmonella	0
	Cheeses made from goats' milk - hard - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	1	0	Salmonella	0
	Dairy products (excluding cheeses) - cream - made from pasteurised milk - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	10	0	Salmonella	0
	Dairy products (excluding cheeses) - cream - made from pasteurised milk - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	83	0	Salmonella	0
	Dairy products (excluding cheeses) - dairy products, not specified - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	1	0	Salmonella	0
	Dairy products (excluding cheeses) - dairy products, not specified - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	1539	0	Salmonella	0
	Dairy products (excluding cheeses) - ice-cream - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	4	0	Salmonella	0
	Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	5	0	Salmonella	0
	Dairy products (excluding cheeses) - milk powder and whey powder - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	5	0	Salmonella	0
	Eggs - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	50	Gram	N_A	ISO 6579:2002 Salmonella	55	0	Salmonella	0
	Eggs - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	50	Gram	N_A	ISO 6579:2002 Salmonella	6	0	Salmonella	0
	Eggs - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	batch (food/feed)	50	Gram	N_A	ISO 6579:2002 Salmonella	2	0	Salmonella	0
	Meat from bovine animals - fresh - chilled - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	3	0	Salmonella	0
	Meat from other animal species or not specified - minced meat - intended to be eaten cooked - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	10	0	Salmonella	0
	Meat from other animal species or not specified - minced meat - intended to be eaten cooked - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	29	0	Salmonella	0
	Meat from other animal species or not specified - minced meat - intended to be eaten cooked - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	18	0	Salmonella	0
	Meat from pig - fresh - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	1	0	Salmonella	0
	Meat from pig - fresh - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	2	0	Salmonella	0

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Meat from poultry, unspecified - carcase - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	225	2	Salmonella group B	2
	Meat from poultry, unspecified - fresh - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	390	0	Salmonella	0
	Meat from poultry, unspecified - fresh - frozen - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	50	2	Salmonella group C1	2
	Meat from poultry, unspecified - fresh - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	8	0	Salmonella	0
	Meat from poultry, unspecified - fresh - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	7	1	Salmonella group C1	1
	Meat, mixed meat - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	21	5	Salmonella	5
									Salmonella Enteritidis	5
									Salmonella group C1	5
									Salmonella Typhimurium	5
	Meat, mixed meat - meat products - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	4	0	Salmonella	0

Table Salmonella:SALMONELLA in feed

Area of Sampling	Matrix - Sampling stage - Sampling origin - Sample type - Sampling context - Sampler - Sampling strategy	Sampling unit	Sample weight	Sample weight unit	Sampling Details	Method	Total units tested	Total units positive	Zoonoses	N of units positive
Not Available	Complementary feedingstuffs - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	3	0	Salmonella	0
	Complementary feedingstuffs - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	12	0	Salmonella	0
	Compound feedingstuffs for cattle - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	12	0	Salmonella	0
	Compound feedingstuffs for fish - final product - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	1	0	Salmonella	0
	Compound feedingstuffs for fish - final product - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	1	0	Salmonella	0
	Compound feedingstuffs for pigs - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	1	0	Salmonella	0
	Compound feedingstuffs for pigs - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	8	0	Salmonella	0
	Compound feedingstuffs for poultry, laying hens - final product - Processing plant - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	1	0	Salmonella	0
	Compound feedingstuffs for poultry, laying hens - final product - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579:2002 Salmonella	16	0	Salmonella	0

FOODBORNE OUTBREAKS TABLES

Foodborne Outbreaks: summarized data

when numbers referring to cases, hospitalized people and deaths are reported as unknown, they will be not included in the sum calculation

		Outbreak strenght	Strong				Weak			
Causative agent	Food vehicle		N outbreaks	N human cases	N hospitalized	N deaths	N outbreaks	N human cases	N hospitalized	N deaths
Rotavirus	Unknown		1	14	0	0				
Unknown	Unknown						2	83	0	0

Strong Foodborne Outbreaks: detailed data

Causative agent	H	AG	VT	Other Causative Agent	FBO nat. code	Outbreak type	Food vehicle	More food vehicle info	Nature of evidence	Setting	Place of origin of problem	Origin of food vehicle	Contributory factors	Comment	N outbreaks	N human cases	N hosp.	N deaths
Rotavirus	unk	Not Available	Not Available	Not Available	FBO03	Not Available	Unknown	N_A	Detection of causative agent in food chain or its environment - Detection of indistinguishable causative agent in humans	Not Available	Not Available	Not Available	Not Available	N_A	1	14	0	0

Weak Foodborne Outbreaks: detailed data

Causative agent	H	AG	VT	Other Causative Agent	FBO nat. code	Outbreak type	Food vehicle	More food vehicle info	Nature of evidence	Setting	Place of origin of problem	Origin of food vehicle	Contributory factors	Comment	N outbreaks	N human cases	N hosp.	N deaths
Unknown	unk	Not Available	Not Available	Not Available	FBO01	Not Available	Unknown	N_A	Descriptive environmental evidence; Descriptive epidemiological evidence	Not Available	Not Available	Not Available	Not Available	N_A	1	30	0	0
					FBO02	Not Available	Unknown	N_A	Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans;Descriptive epidemiological evidence	Not Available	Not Available	Not Available	Not Available	N_A	1	53	0	0

ANTIMICROBIAL RESISTANCE TABLES FOR CAMPYLOBACTER

ANTIMICROBIAL RESISTANCE TABLES FOR SALMONELLA

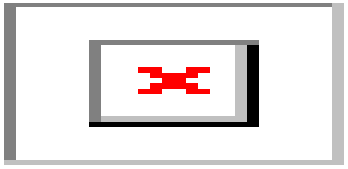
ANTIMICROBIAL RESISTANCE TABLES FOR INDICATOR ESCHERICHIA COLI

OTHER ANTIMICROBIAL RESISTANCE TABLES

Specific monitoring of ESBL-/AmpC-/carbapenemase-producing bacteria and specific monitoring of carbapenemase-producing bacteria, in the absence of isolate detected

No data returned for this view. This might be because the applied filter excludes all data.

Specific monitoring of ESBL-/AmpC-/carbapenemase-producing bacteria and specific monitoring of carbapenemase-producing bacteria, in the absence of isolate detected



Latest Transmission set

Table Name	Last submitted dataset transmission date
Animal Population	31-Aug-2020
Disease Status	31-Aug-2020
Food Borne Outbreaks	31-Aug-2020
Prevalence	31-Aug-2020

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Appendix A –

1. Institutions and Laboratories involved in zoonoses monitoring and reporting

- Ministry of Agriculture and Rural Development
- Administration for Food Safety, Veterinary and Phytosanitary Affairs
- Institute for Public Health (IPH)
- Diagnostic Veterinary Laboratory

TheMinistryof Agriculture and Rural Development (MARD) is the competent authority for the field of food safety, veterinary and phytosanitary policy. MARD adopts legislation in the field of veterinary policy, the program of mandatory animal health protection measures, special programs of animal health protection, programs for monitoring of zoonoses, zoonotic agents and monitoring of their resistance to antimicrobial agents, salmonella control programs, residue monitoring program, decides upon complaints to decisions made in the first instance procedure, co-operates with international organisations and competent authorities of other states in the veterinary field.

Administration for Food Safety, Veterinary and Phytosanitary Affairs (AFSVPA)is independent government body under the supervision of MARD, established by the Decree on the Organisation and Functioning of Public Administration (Official Gazette of Montenegro 80/15). AFSVPAresponsibilities include:

- Keeping registers of animals, holdings and establishments;
- Adopting multiannual and annual plans of official controls in the field of animal health and welfare, food and feed safety;
- Development of technical basis for: animal health protection strategy, the program of mandatory animal health protection measures, other special programs, contingency plans and regulations in the veterinary field;
- Registration and approval of establishments in accordance with this Veterinary Law;
- Carring out official controls in veterinary field;
- cooperation with international organisations and competent authorities of other states in the veterinary field. Within AFSVPA operate tree departments; Food Safety, Veterinary and Phytosanitary department, each carrying out responsibilities of relevance.

Institute for Public Health (IPH) is a highly-specialized health institution at the tertiary level of health care, with the aim to preserve and improve the health of all citizens. The Institute performs the following tasks:

- monitors and controls timely implementation of preventive programs of interest to Montenegro;
- monitors, investigates and analyzes the epidemiological situation;
- collects and processes health-statistical data;
- maintains medical records of interest to Montenegro;
- Carries out microbiological and parasitological, chemical, biological, toxicological, biochemical and other laboratory analyses.

Laboratories for chemistry and sanitary microbiology are accredited by the Accreditation Body of Montenegro for food, water and soil/sediment analysis as well as for noise testing. Scientific-research activity of the Institute is directed specially to research in the field of public health activities, and research related to the improvement and development of the health service.
The Institute is the teaching base of the Faculty of Medicine, which provides conditions and implements plans and programs of the University of Montenegro, Faculty of Medicine, in accordance with the law.
IPH is accredited with standard **MEST EN ISO / IEC 17025:2018** of the Accreditation body of Montenegro.Scope of accreditation includes Microbiological testing of water, foodstuffs (food, dietary products and dietary supplements) Physical chemical analysis: drinking water; surface and underground water; swimming pool water; waste water; sediment; fish and fish products;

milk and dairy products; wine; meat and meat products; olive oil; honey and honey products; grains, grains products, milled and bakery products and pasta; soups, broths, sauces and condimets; table salt and salt for food industry; beverages and juices; food of plant and animal origin, Testing of environmental noise Sampling of drinking water, surface and underground waters and waste waters for chemical analysis and sampling of drinking water for mycrobiological analysis.

Diagnostic Veterinary Laboratory (DVL) is the official laboratory by the MARD. DVL performs diagnostic veterinary activities on the territory of Montenegro in order to protect and improve the health of animals. The tasks of the laboratory are detection and diagnosis of animal diseases, the implementation of the animal health program, controls for ensuring the health safety of products of animal origin and feed. In addition, the laboratory also deals with research work, veterinary education and public education.

DVL uses the laboratory information system VisarisLabIS. VisarisLabIS is a latest generation laboratory management and quality control information system for fully paperless automated laboratory and quality workflow support systems.

DVL is accredited with standard **MEST EN ISO/IEC 17025:2017**of the Accreditation body of Montenegro.Scope of accreditation: Microbiological testing of food of animal origin: meat and meat products, milk and dairy products, eggs and egg products Microbiological, serology, immunology and parasitological testing of biological materials (organic secretion, excretion, tissues, tissue liquids, swabs).

2. Animal population

1. Sources of information and the date(s) (months, years) the information relates to[(a)]

Data source is the Veterinary Information System (VIS) operating within AFSVPA. VIS includes data on bovine, sheep, goatsand pigs since 2009, 2011 and 2014 respectively. The data on animal population submitted are as on 31st December 2019.
Under the project Development of a sustainable Veterinary Information Management System (VIS) No: MNE-MIDAS2-8820-ME-RFBI-G-20-2 financed by the World Bank, the VIS is currently being upgraded.

2. Definitions used for different types of animals, herds, flocks and holdings as well as the production types covered

- **the animals** are domestic or other animals;
- **domestic animals** are all kinds of cattle, including buffalo (Bubalusbubalis) and buffalo (Bison bison), sheep, goats, pigs and ungulates;
- **other animals** are animals not covered by the definition of domestic animals (pets, poultry, bees);
- **the bovine keeper** is the owner of the bovine animal or any natural or legal person responsible for the animal, whether permanent or temporary, as well as during transport
- **the sheep or goat keeper** is the owner of the sheep or goats or any natural or legal person responsible for the animal, whether permanent or temporary
- **the pig-keeper** is the owner of the pigs or any natural or legal person responsible for the animal, whether permanent or temporary;
- **the equine keeper** is the owner of the equidae, or any natural or legal person responsible for keeping them, with or without compensation, permanently or temporarily, as well as during transportation, at fairs or during competitions, races or cultural events;
- **the keeper of other animals** is the owner or any natural or legal person responsible for the animal, including temporary animal care;
- **cattle holding** is any establishment or building, and in the case of open-air breeding, the land where the cattle are kept, kept or bred;
- **sheep and goat holding** is any establishment, building or, in the case of open-air breeding, the land on which sheep and goats are kept permanently or temporarily
- **pig holding** is any establishment, building or, in the case of outdoor breeding, the place where pigs are kept
- **holding for other animals** is any establishment, indoor or open space where animals are kept;
- **products of animal origin** are:
  - o products of animal origin intended for human consumption:
    - food of animal origin, including honey and blood,
    - live bivalve molluscs, live echinoderms, live tunicates, live gastropodsintended for human consumption,
    - other animals intended for preparation, for the purpose of delivery to the final consumer (live);
  - o products of animal origin intended for animal nutrition:
    - meat meal, fish meal, bone meal, liver meal, blood meal, feather meal,
    - feed containing products referred to in sub items a) and c) of this item,
    - other products of animal origin;
    - products of animal origin intended for industrial use: raw skin, fur, wool, hair, bristle, feathers, hoofs, bones, horns, blood, intestines and otherproducts of animal origin intended for industrial use;

- products of animal origin intended for pharmaceutical use: organs, glands, animal tissue and bodily fluids, which are used in preparation of pharmaceutical products;
- reproductive material;

- **trader** is a natural or legal person engaged in commercial buying or selling of animals, either directly or indirectly, who regularly trades animals and who, in a period not longer than 30 days from the day of purchase, sells or relocates animals from one facility into other facilities that are not in his ownership;
- **animals** means animals from the family of hoofed animals (equines, donkeys, mules, hinny), animals from the family of cloven-hoofed animals (bovine, ovine, caprine, porcine animals), poultry (chicken, turkeys, geese, ducks and other birds reared or kept for the production of meat, breeding or for laying eggs and other products and wild birds for rearing and breeding), ornamental, exotic and wild birds and mammals, dogs, cats, hares, bees, silkworm, pollinating insects and other arthropods, fish, crustaceans, frogs, snails, and other molluscs, echinoderms, turtles and other reptiles, annelids, wild game, experimental animals and reproductive material;
- **food business operator** means the natural or legal person or entrepreneur responsible for ensuring that the requirements of food law are met within the food business under their control;
- **feed business operator** means the natural or legal person or entrepreneur responsible for ensuring that the requirements of food law are met within the feed business under their control;
- **retail** means the handling and/or processing, preparation and storage of food at the point of sale or delivery to the final consumer, and includes distribution terminals, catering operations, factory canteens, restaurants and other food service operations, shops, supermarket distribution centres and wholesale outlets;
- **wholesale market** means handling of food in one or more separate units that have common equipment and premises where food is sold to the operators of food;
- **primary production** means the production, rearing or growing of primary products including harvesting, milking and farmed animal production prior to slaughter, as well as hunting and fishing and the harvesting of products (wild fruits and plants) from nature;
- **primary product** means a product obtained from primary production, including products obtained from the soil, livestock breeding, hunting and fishing;
- **Holding**: any establishment, construction or, in the case of an open-air farm, any place in which animals are held, kept or handled.
- **A geographical entity** is a unit of one building or a complex of buildings included grounds and territories where an animal species is or could be hold.
- **Herd**: an animal or group of animals kept on a holding as an epidemiological unit; if more than one herd is kept on a holding, each of these herds shall form a distinct unit and shall have the same health status.

3. National changes of the numbers of susceptible population and trends

Dominant type of holding is small family farm, and few large farms. The characteristic of Montenegro is that holdings are small in more than 90% of cases resulting in a low average number of animals per holding.

4. Geographical distribution and size distribution of the herds, flocks and holdings[(b)]

According to the Statistical Office of Montenegro (MONSTAT), Montenegro is one statistical region on all three NUTS levels. Further subdivision into local administrative units: LAU1 (Local Administrative Unit 1) is equivalent to number of Montenegrin municipalities (23 in total), and LAU2 settlements, 1,307.
VIS is out to be upgraded to contain geographical coordinates of animals and holdings.

5. Additional information

3. Description of Monitoring/Surveillance/Control programmes system*: Please add the matrix and zoonotic agent *L. monocytogenes* in food - All foodstuffs - food sample

1. Monitoring/Surveillance/Control programmes system

The Compulsory Programme of Animal Health Measures and Program of Measures on Food and Feed Safety establish preventive measures for monitoring, preventing the outbreak, detection, control and eradication of infectious and parasitic diseases, the manner of their implementation, the entities that will implement them, the financial sources, reporting, and other conditions for their implementation.
Programs are adopted annually.
The implementation of measures is mandatory throughout the epizootiological area of Montenegro, appropriate to the degree of danger and the epizootiological situation from the previous period.
The programs create preconditions for harmonization of the animal health and food safety field with the EU requirements, which relate to obtaining and maintaining the health status of farms for certain infectious diseases and protection of human health.
The implementation of Programs is the responsibility of the administrative authority competent for veterinary affairs (hereinafter: AFSVPA).
The monitoring of epizootiological situation and diagnostics in case of suspected infectious and parasitic diseases are carried out in order to detect and suppress the occurrence and spread of infectious diseases in a timely manner and to maintain a stable epizootiological situation in Montenegro.

2. Measures in place[(b)]

In case of suspicion of particularly dangerous and contagious diseases suspected of being reported, or health problems in animals that may be suspected of infectious disease, observed by the animal keeper or veterinarian during active or passive surveillance, intervention or any other in that case, the suspicion is be reported to the competent official veterinarian without delay.
The veterinarian is obliged to carry out a clinical examination of the animal, take a detailed history, data on the origin and movement of the animal, instructs the keeper to carry out the prescribed measures and record the ordered measures in the records kept on the holding and take the necessary measures to confirm or exclude suspicion of the disease. That is, determining the cause of the animal's death and preventing the spread of the disease.
Depending on the specificity and characteristics of the case, that is, the suspicion raised, the official veterinarian, with the expert support of the DVL, or veterinarian from the competent veterinary clinic, performs additional epizootiological tests and sampling of laboratory testing materials.
The DVL carries out laboratory diagnostic and other tests, gives expert opinions and recommendations in accordance with the recommendations of the International Organization for Animal Health (OIE) and other relevant institutions in the field of animal health, for taking measures for diseases for which no specific regulations established rules of procedure, provides expert assistance to the official veterinarian in the supervision and implementation of measures to prevent the occurrence, detection, control and eradication of infectious animal diseases.

3. Notification system in place to the national competent authority[(c)]

For the purpose of diagnosis of particularly dangerous and infectious diseases of domestic animals suspected or confirmed, the veterinarian takes samples of tissues and organs of sick and / or dead animals, according to the sampling instructions of the DVL and submit them to the DVL.
For the purpose of regular and timely updating of animal disease data and mandatory international notification (OIE, Animal Disease Notification System - ADNS, competent

veterinary authorities of neighbouring countries), veterinarians are obliged, without delay, no later than 24 hours (by telephone and fax or electronically) to report suspected or confirmed cases of diseases from the list of diseases subject to reporting obligations (especially dangerous infectious diseases and dangerous diseases) to the competent official veterinarian. The competent official veterinarian notifies the AFSVPA without delay of any suspected or confirmed occurrence of the disease within 24 hours at the latest (by telephone and fax or electronically). The official veterinarian reports the disease (by fax or electronic means). When the presence of an infectious disease is confirmed on the basis of the results from the diagnostic tests, the DVL, which carried out the diagnostic examination, confirms the presence of the infectious disease without delay (by telephone, fax or electronically) and in writing informs the AFSVPA and the competent official veterinarian.
On the basis of a risk analysis of the occurrence of the disease, in order to prevent the spread of the disease and / or transmit it to humans, the Ministry may order the implementation of one or more measures, in accordance with the degree of danger of spreading the disease.
4. Additional information

3. 1. Description of Monitoring/Surveillance/Control programmes system* Bovine Tuberculosis
1. Monitoring/Surveillance/Control programmes system
For the timely detection and control of tuberculosis in all bovine animals older than six weeks, an intradermal tuberculin test is carried out in order to detect and eradicate this disease and to create conditions for obtaining and maintaining the health status of tuberculosis-free holdings in the territory of Montenegro. Operator: Veterinary clinics, veterinary inspection, DVL. Coverage: 69 200 cattle in the territory of Montenegro
2. Measures in place[(b)]
All cattle on a holding of all ages is recorded in the tuberculin list for each holding individually, on the basis of the actual situation on the holding, including cattle under six weeks old, and for cattle older than six weeks enter the tuberculinization data in the tuberculin list and enter datas from the list in the AFSVPA Electronic Database. After the prescribed time has elapsed since the tuberculin application (72 hours), the veterinarian reads the reaction of the bovine animals to the tuberculin and records the result in the tuberculin list for the holding concerned, in which he / she has previously entered the data during the tuberculin application. It is recommended that the reaction be read by the same person or veterinarian who administered the tuberculin. Of slaughtered or euthanized bovine animals in cases of suspected tuberculosis, samples must be taken and DVL submitted for bacteriological testing for the presence of tuberculosis agents. Bovine tuberculosis has been officially confirmed when the causative agent of Mycobacterium bovis is isolated.
3. Notification system in place to the national competent authority[(c)]
The data on the results of the tuberculin test must be entered in the Electronic database no later than five working days from the date of reading, and in case a suspected or positive reaction to the tuberculin test is recorded, the veterinarian is obliged to enter the results without delay, and no later than 24 hours from the time of reading a suspicious or positive result.
4. Additional information
In 2019, 62 785 cattle were tested. All cattle that had a suspicious / positive reaction to bovine tuberculin during tuberculin testing were retuberculinized. After retuberculinization, no positive result for bovine tuberculosis was found, out of a total of 4 submitted samples, the presence of Mycobacterium bovis was not determined in any of them. Data on tested cattle on the farm are recorded in the Veterinary Information System, for each individually tested cattle..

3.2. Description of Monitoring/Surveillance/Control programmes system* Brucellosis of cattle, sheep and goats
1. Monitoring/Surveillance/Control programmes system
In order to detect and control brucellosis in a timely manner, diagnostic testing of blood sera is carried out in all bovine animals over 12 months of age, except males intended for fattening, and in sheep and goats over six months of age, in order to create the preconditions for obtaining and maintaining the health status of holdings free of this disease.in the territory of Montenegro. Responsible institution: Ministry of Agriculture and Rural Development – AFSVPA, Veterinary Inspection. Operator: Veterinary clinics, DVL, veterinary inspection. Coverage: 57 500 cattle and 78 000 sheep and goats in the territory of Montenegro.
2. Measures in place[(b)]
Diagnostic testing of blood sera of all bovine animals over 12 months of age, other than males intended for fattening, is be carried out once a year using the Rose Bengal buffered antigen test method and sheep and goat diagnostic testing of sheep and goats older than six months using the brucella antigen test buffered method When sampling, 7 - 8 ml of blood (approximately two fingers to the tip of the tube) is taken from each animal. Blood samples are stored at refrigerator temperature (4 - 8°C), not frozen or overheated. Blood samples are submitted to the DVL within 24 to a maximum of 36 hours to avoid hemolysis. Any hemolytic sample as well as a sample that does not contain sufficient blood for the diagnostic test will be rejected by the laboratory as unsuitable for testing, and the veterinary clinic is obliged to repeat the sampling and delivery of samples at their own expense. Diagnostic testing of bovine animals, other than males intended for fattening, sheep and goats, is compulsory: - for abortions - after 15 days from the abortion; - when clinical signs of brucellosis are identified - abortion, placental retardation, orchitis and epididymitis, arthritis that may be associated with other clinical signs, or other changes that may be suspected of brucellosis; - which have been in contact with humans or animals suspected of being infected or suffering from brucellosis.
3. Notification system in place to the national competent authority[(c)]
All data relating to the actual situation on the holding - newly recorded or found heads, as well as those no longer on the holding, must be recorded in the Electronic Database immediately after blood samples have been taken. The Administration will, no later than 20 days after the expiry of the prescribed deadline for the submission of the annual census, submit to the competent official veterinarian a list of holdings that have not fulfilled the obligation to submit an annual list of sheep and goats for the purpose of taking the measures prescribed by law.
4. Additional information A total of 51 025 samples of bovine blood sera for brucellosis were taken and laboratory tested. The presence of specific antibodies against Brucella spp. was not detected in any of the submitted and tested samples. A total of 73 042 blood serum samples from sheep and goats from farms located in border municipalities to the Republic of Serbia, Bosnia and Herzegovina, the Republic of Albania and the Republic of Kosovo were examined. In addition, diagnostic testing of samples submitted for abortions of cattle, sheep and goats was performed and the presence of Brucella spp, the cause of brucellosis, was not detected in any of them. The presence of specific antibodies against Brucella melitensis was not detected in any of the submitted and tested blood samples of small ruminants.

3.3. Description of Monitoring/Surveillance/Control programmes system* Avian influenza
1. Monitoring/Surveillance/Control programmes system
In order to detect avian influenza occurrence in a timely manner, active and passive monitoring of avian influenza occurrence in wild birds and domestic poultry is carried out. Carrier: Veterinary clinics, DVL, veterinary inspection. - DVL prepares an annual report on activities carried out for the implementation of this program and submits it to the Management Board. When the presence of highly pathogenic avian influenza is detected, the emergency, harmless killing of dead birds, infected birds is carried out under the prescribed zoohygiene and biosafety measures under the supervision of the official veterinarian,. Realization period: passive monitoring - throughout the year, active monitoring - during the migration period of wild birds (March-April and October-November).
2. Measures in place[(b)]
in order to effectively monitor the health status of the poultry, data on holdings is entered in the register of poultry holders kept by the AFSVPA. In case of sudden death of birds (wild - migratory or domestic) with clinical signs suggesting or suspected to be avian influenza, the veterinarian shall take tracheal and / or cloacal swabs of the dead birds or other appropriate samples and submit them to the laboratory for examination (passive monitoring of avian influenza). For the active monitoring of avian influenza, the following is performed: - sampling of tracheal and / or cloacal swabs of migratory birds caught and submitting to the laboratory for testing, with data: place of catch, date of catch, exact name of the bird species (native or Latin), in accordance with the expert guidance of the AFSVPA; - DVL performs laboratory-diagnostic testing for avian influenza from blood samples submitted for the presence of specific antibodies by serological ELISA and for the tracheal and / or cloacal swabs captured by migratory birds by molecular Real-Time PCR technique.
3. Notification system in place to the national competent authority[(c)]
DVL prepares an annual report on activities carried out for the implementation of this program and submits it to the Management Board. When the presence of highly pathogenic avian influenza is detected, the emergency, harmless killing of dead birds, infected birds and those deemed official by the official veterinarian is carried out under the prescribed zoohygiene and biosecurity measures under the supervision of the official veterinarian.
4. Additional information Last case of 2016 - Highly pathogenic H5N5 - Duck (Anascrecca) was found at Skadar Lake. Serological testing for avian influenza within the active monitoring of domestic poultry was conducted during October 2019, immediately after the migratory wave in which migratory birds migrated south through the territory of Montenegro. Blood samples of laying hens (1728) were collected and delivered to the DVL. The presence of specific antibodies to avian influenza virus was not detected in any of the submitted and tested blood samples. Delivery of tracheal/cloacal swabs of wild birds was performed during December 2019. A total of 250 swab samples were delivered, of which 125 tracheal and 125 cloacal swabs. Swabs were taken from following species: Aythiya ferina, Anas crecca, Aythiya marila, Aythiya niroca, Anas platyrhynchos. Molecular diagnostic method - Real-time PCR did not detect the presence of avian influenza virus (M-gene) sequence in any cloacal swab sample. RNA sequence of avian influenza virus was not detected by laboratory examination of samples of organs of dead birds.

3.4. Description of Monitoring/Surveillance/Control programmes system* Rabies
1. Monitoring/Surveillance/Control programmes system
In order to prevent rabies outbreaks, dogs and cats are vaccinated with an inactivated vaccine to maintain active rabies virus immunity, as well as diagnostic and other measures to detect rabies outbreaks in a timely manner. Carrier: veterinary clinics, DVL, Hunting Federation of Montenegro - hunting organizations, veterinary inspection. Coverage: 50 animals in case of vaccination in case of rabies on infected and endangered area according to the decision of the official veterinarian. In order to control rabies in foxes and other wild animals, oral vaccination of foxes and other wild animals is conducted and monitoring of the success of oral vaccination of foxes and other wild animals. Carriers: Veterinary Clinics, DVL, Hunting Association of Montenegro - Hunting Organizations, National Parks of Montenegro, Veterinary Inspection. Implementation period: twice a year - spring and autumn.
2. Measures in place[(b)]
Vaccination is carried out by distribution from vaccine aircraft (baits) throughout the territory of Montenegro, except in urban areas, in water and wetlands and in military zones. Following oral vaccination, the success of the oral vaccination is monitored, as well as the presence / absence of rabies virus antigen in the fox population (active monitoring of wild animal rabies). For every 100 km^2 of territory (vaccine distribution area), four healthy foxes must be caught and tested. The foxhunting is performed by hunters from different parts of the hunting areas to allow for spatial variation, in accordance with the sampling plan of the AFSVPA, which is submitted to the Hunting Federation. Hunted foxes are sent to veterinary clinics, who enter the data in the test guide for the killed foxes for the purpose of evaluating the success of oral rabies vaccination and submit the specimen with the instruction to the DVL for testing.
The DVL performs on the samples of foxes: assessment of fox age, examines the level of antibodies to rabies virus by ELISA test and the presence of tetracycline biomarkers in teeth / bones. If these findings are positive, the fox is considered to have consumed the bait or to be vaccinated. At the same time, the DVL also tests the same fox samples for the presence / absence of FAT rabies antigen. In order to prevent the occurrence of rabies, dogs and cats are vaccinated, as well as diagnostic and other measures aimed at detecting and suppressing the occurrence of rabies. As the population of stray dogs and abandoned dogs has increased in recent years, and in order to maintain a stable epizootiological situation, within the budget of the AFSVPA funds for the procurement of vaccines against rabies for dogs were provided. Also, a system for identification and registration of dogs has been established - microchips have been procured, a Register of Pets has been established (a single electronic database, part of the VIS). All dogs that are chipped must get a dog passport, be vaccinated against rabies and entered in the Register of Pets. Vaccination of dogs and cats is the responsibility of animal keepers in order to constantly maintain active immunity against the rabies virus. The distribution of the required amount of vaccines and chips was performed to all veterinary clinics, and the chipping campaign and entry in the Register began on September 28, 2019.
3. Notification system in place to the national competent authority[(c)]
DVL submits to the AFSVPA a report on received samples of foxes killed for the purpose of assessing fox age, rabies virus antibody level, presence of tetracycline biomarkers in teeth / bones and presence / absence of rabies virus antigens, with results of electronic and in writing. Veterinary clinics are obliged to submit reports to the AFSVPA on the samples of foxes taken,

with copies of the Instructions for submission of samples to the DVL, notlater than the 10th of the month for the measures taken in the previous month.

4. Additional information

In order to monitor the presence of rabies, dead or killed domestic and wild mammals were collected and examined with suspected rabies. The presence of rabies virus was not detected in the 11 submitted samples, as well as in the samples of foxes submitted for the control of the success of oral vaccination.

The last case of rabies was recorded in March 2012 and there have been no positive cases since then.

The reason is that since the fall of 2011, a twice-yearly campaign of oral vaccination of foxes against this disease (spring and autumn) has been conducted, with the support of the European Union. For now, the EU has provided funds for the implementation of oral vaccination of wild animals until the spring of 2020.

Oral vaccination of foxes and other wild animals was conducted by distributing vaccines - baits from airplanes throughout Montenegro, except in urban areas, water and wetlands and area of military zones. After the oral vaccination, the success of vaccination is monitored, with the participation of hunter organizations, fox samples are assessed for age, and rabies virus antibody levels are tested by ELISA and the presence of tetracycline biomarkers in teeth/bones. In 2019, the degree of consumption of baits in 286 samples is 78%, and seroconversion is 42% and 354 samples of hunted foxes were tested using the fluorescent antibody technique, and the presence of rabies virus antigen was not detected in any sample of fox brain tissue.

3.5. Description of Monitoring/Surveillance/Control programmes system* Q Fever

1. Monitoring/Surveillance/Control programmes system
Q fever tests are performed to detect the source of post-epidemic disease in humans and persons professionally exposed to the infection, when epizootiologically justified, as well as for any miscarriage in cattle, sheep and goats. In addition to the abortion animal, the veterinarian also takes blood samples from an animal suspected to be the source of the epidemic in humans that is, at the discretion of the official veterinarian, and submits them to the DVL for Q fever testing.
2. Measures in place[(b)]
Holders of cattle, sheep and goats are obliged to report any abortion in these animals to the veterinary clinic. All abortions of cattle, sheep or goats reported by animal keepers to veterinarians in the field and, in case of suspicion of abortion of infectious etiology, submitted to the DVL were examined for the purpose of determining the cause of abortion. Neospora caninum was most often isolated, followed by Chlamydophila abortus sheep / goat.
3. Notification system in place to the national competent authority[(c)]
4. Additional information
In 2019, Q fever was diagnosed on 11 farms, in 14 cattle, 44 sheep and 26 goats. The prescribed measures were immediately taken on the mentioned farms in order to eradicate this disease (laboratory tests, euthanasia of all positive animals, biosecurity measures).

3.6. Description of Monitoring/Surveillance/Control programmes system* Salmonella
1. Monitoring/Surveillance/Control programmes system
In order to detect and control the occurrence of domestic poultry salmonellosis in a timely

manner and to prevent the occurrence of foodborne diseases in humans, systematic monitoring of the presence of salmonellosis agents in domestic poultry flocks is carried out.
2. Measures in place[(b)]
Systematic monitoring is carried out by taking samples from domestic poultry whose products are used for public consumption from establishments registered by the AFSVPPA. Veterinary Inspection / Authorized veterinarians take samples of faeces and blood and submit to laboratories for bacteriological or serological testing. Samples are taken from establishments for the production of meat and eggs.
3. Notification system in place to the national competent authority[(c)]
The frequency of sampling, the type and number of samples is determined by AFSVPA based on risk assessed.
4. Additional information

1. Food-borne Outbreaks Salmonelosis
1. System in place for identification, epidemiological investigations and reporting of food-borne outbreaks
The acceptability of food or the suitability of food for public consumption is based on the control

of microbiological criteria defining the acceptability of food, batch of food or food production process in relation to the absence, presence or number of micro-organisms and / or the amount of their toxins / metabolites above which food is considered unsafe that is, unsuitable for human consumption. Pathogenic bacteria in food (Salmonella, E.coli, Staphilocoocus, etc.) are the most common causes of foodborne diseases. As a preventative measure, systematic monitoring and sampling of food is carried out at all stages of food production, processing and distribution. In this way, effective controls are established in accordance with the risk analysis, verifying the compliance of food placed on the market with the prescribed microbiological criteria and determining the degree and effectiveness of the implementation of good hygiene practices and the implementation of procedures established on HACCP principles by food business operators.
Implementing period: Throughout the year
During the marketing phase, it is necessary to monitor the compliance of the food with the microbiological criteria of food safety, during the shelf life of the food under specified conditions of distribution, storage and use. Monitoring of compliance of food with microbiological food safety criteria will is carried out by systematic continuous sampling, by random selection method in retail establishments.
In order to check the implementation of the prescribed hygiene requirements by food business operators during food production or during the handling, processing and processing of food, systematic continuous sampling of food processing facilities during and / or at the end of the production process is carried out by a random selection method.
Continuous, planned and systematic sampling of products of animal origin placed on the market will prevent the presence of Listeria monocytogenes.
Samples are taken by the method of random selection of products suitable for the growth of this bacterium: cold or hot smoked or marinated fish, soft and semi-hard cheeses, other than fresh cheeses and packaged, thermally treated meat products. Effective controls are established in accordance with the risk analysis and the conformity of products of animal origin placed on the market.

f the types of outbreaks covered by the reporting

IPH reports on infectious diseases subject to mandatory reporting under the Law on Protection of Population from Infectious Diseases ("Official Gazette of Montenegro", No. 012/18 of 23 February 2018), registered and reported by territorially competent municipal epidemiological services and IPH.

3. National evaluation of the reported outbreaks in the country[(a)]

In recent years, the number of people affected by food poisoning has decreased compared to a decade ago. This can be explained by the existence of better laboratory diagnostics, more accurate identification of the causative agents of the disease.

4. Descriptions of single outbreaks of special interest

Write text here please

5. Control measures or other actions taken to improve the situation

The number of reported cases of infectious diseases is significantly influenced by several factors:
- actual epidemiological situation,
- the eventual occurrence of more serious infectious diseases with more patients,
- the development of the health service and the habit of using laboratory diagnostics to confirm the diagnoses,

- keeping the health department up-to-date with regard to the records and reporting of infectious diseases, - health education of the population; - the number of infectious diseases that are required to be reported. The food borne diseases is present in almost all ages, with the highest number of patients registered in the age group of 10-14 years. The disease is recorded year-round.
6. Any specific action decided in the Member State or suggested for the European Union as a whole on the basis of the recent/current situation
Write text here please
7. Additional information
Last cases of Listeriosis were detected in 2015 (two patients) Number of cases of Salmonelloses decreased in last decade but remains steady in recent year. The most common serotype is Salmonella enteritidis.
(a): Trends in numbers of outbreaks and numbers of human cases involved, relevance of the different causative agents, food categories and the agent/food category combinations, relevance of the different type of places of food production and preparation in outbreaks, evaluation of the severity of the human cases.