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 2021

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 2021.

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

Animal species	Category of animals	Population	
		animal	herd/flock
Cattle (bovine animals)	Cattle (bovine animals)	73,893	16,312
Pigs	Pigs	21,452	1,697
Small ruminants	Goats	20,416	
	Sheep	149,405	
	Sheep and goats		5,172

DISEASE STATUS TABLES

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

Region	Zoonotic agent	Number of infected herds	Total number of herds
Montenegro	Brucella	0	73,893

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

Region	Zoonotic agent	Number of infected herds	Total number of herds
Montenegro	Brucella	0	169,821

DISEASE STATUS TABLES

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

Region	Zoonotic agent	Number of infected herds	Total number of herds
Montenegro	Mycobacterium tuberculosis complex (MTC)	0	73,893

PREVALENCE TABLES

Table Campylobacter:CAMPYLOBACTER 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	Meat from broilers (Gallus gallus) - carcase - chilled - Slaughterhouse - Not Available - food sample - neck skin - Surveillance - based on Regulation 2073 - Industry sampling - Objective sampling	single (food/feed)	10	Gram	N_A	ISO 10272-2:2017 Campylobacter	50	50	Campylobacter, unspecified sp.	50

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 - hard - made from raw or low heat-treated milk - Household - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	1054	0	detection	Listeria monocytogenes	1,054	0
	Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	90	0	<=100	Listeria monocytogenes	90	0
								>100	Listeria monocytogenes	90	0
	Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Household - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	52	0	detection	Listeria monocytogenes	52	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	22	0	<=100	Listeria monocytogenes	22	0
								>100	Listeria monocytogenes	22	0
	Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - 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
	Cheeses made from goats' milk - hard - made from pasteurised milk - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	7	0	<=100	Listeria monocytogenes	7	0
								>100	Listeria monocytogenes	7	0
	Dairy products (excluding cheeses) - butter - 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) - cream - Household - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	26	0	detection	Listeria monocytogenes	26	0
	Dairy products (excluding cheeses) - cream - 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
	Dairy products (excluding cheeses) - fermented dairy products - fermented cream - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	26	0	<=100	Listeria monocytogenes	26	0
								>100	Listeria monocytogenes	26	0
	Dairy products (excluding cheeses) - ice-cream - 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	80	0	<=100	Listeria monocytogenes	80	0
								>100	Listeria monocytogenes	80	0
	Fishery products, unspecified - ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	3	0	<=100	Listeria monocytogenes	3	0
								>100	Listeria monocytogenes	3	0
	Meat from bovine animals - meat products - fermented sausages - Retail - Not Available - food sample - Surveillance - 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 - meat products - ready-to-eat - 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
	Meat from bovine animals - meat products - ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	7	0	<=100	Listeria monocytogenes	7	0
								>100	Listeria monocytogenes	7	0
	Meat from broilers (Gallus gallus) - meat products - ready-to-eat - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	30	0	<=100	Listeria monocytogenes	30	0
								>100	Listeria monocytogenes	30	0
	Meat from other animal species or not specified - meat products - cooked, ready-to-eat - Border Control Posts - 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 - meat products - cooked, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	24	0	<=100	Listeria monocytogenes	24	0
								>100	Listeria monocytogenes	24	0
	Meat from pig - meat products - fermented sausages - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	65	0	<=100	Listeria monocytogenes	65	0
								>100	Listeria monocytogenes	65	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 - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	42	0	<=100	Listeria monocytogenes	42	0
								>100	Listeria monocytogenes	42	0
	Meat from pig - meat products - unspecified, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	30	0	<=100	Listeria monocytogenes	30	0
								>100	Listeria monocytogenes	30	0
	Meat from poultry, unspecified - meat products - cooked, ready-to-eat - Retail - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	18	0	<=100	Listeria monocytogenes	18	0
								>100	Listeria monocytogenes	18	0
	Milk, cows' - UHT milk - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Millilitre	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	Gallus gallus (fowl) - broilers - before slaughter - Farm - Montenegro - environmental sample - boot swabs - Control and eradication programmes - Official sampling - Objective sampling	herd/flock		N_A	N_A	Not Available	84	22	Salmonella Enteritidis	5
									Salmonella spp., unspecified	14
									Salmonella Typhimurium	3
	Gallus gallus (fowl) - broilers - day-old chicks - Farm - Not Available - environmental sample - delivery box liner - Surveillance - Official sampling - Objective sampling	herd/flock		N_A	N_A	Not Available	159	17	Salmonella Enteritidis	8
									Salmonella spp., unspecified	9
	Gallus gallus (fowl) - laying hens - adult - Farm - Montenegro - animal sample - faeces - Control and eradication programmes - Official sampling - Objective sampling	herd/flock		N_A	N_A	Not Available	44	8	Salmonella Enteritidis	3
									Salmonella spp., unspecified	4
									Salmonella Typhimurium	1
	Turkeys - fattening flocks - before slaughter - Farm - Montenegro - animal sample - faeces - Control and eradication programmes - Official sampling - Objective sampling	herd/flock		N_A	N_A	Not Available	11	2	Salmonella spp., unspecified	2

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 - hard - made from raw or low heat-treated milk - Household - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	1054	1	Salmonella spp., unspecified	1
	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 6579-1:2017 Salmonella	5	0	Salmonella	0
	Live bivalve molluscs - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	26	0	Salmonella	0
	Meat from bovine animals - carcase - Slaughterhouse - Not Available - food sample - carcase swabs - Surveillance - based on Regulation 2073 - Industry sampling - Objective sampling	single (food/feed)	400	Square centimetre	N_A	ISO 6579-1:2017 Salmonella	66	0	Salmonella	0
	Meat from broilers (Gallus gallus) - carcase - chilled - Slaughterhouse - Not Available - food sample - neck skin - Surveillance - based on Regulation 2073 - Industry sampling - Objective sampling	single (food/feed)	25	Gram	N_A	ISO 6579-1:2017 Salmonella	50	2	Salmonella spp., unspecified	2
	Meat from other animal species or not specified - meat preparation - intended to be eaten cooked - Border Control Posts - Not Available - food sample - Surveillance - Official sampling - Objective sampling	single (food/feed)	10	Gram	N_A	ISO 6579-1:2017 Salmonella	45	1	Salmonella spp., unspecified	1
	Meat from pig - carcase - Slaughterhouse - Not Available - food sample - carcase swabs - Surveillance - based on Regulation 2073 - Industry sampling - Objective sampling	single (food/feed)	400	Square centimetre	N_A	ISO 6579-1:2017 Salmonella	9	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 6579-1:2017 Salmonella	360	29	Salmonella enterica, subspecies enterica	10
									Salmonella spp., unspecified	19
	Meat from sheep - carcase - Slaughterhouse - Not Available - food sample - carcase swabs - Surveillance - based on Regulation 2073 - Industry sampling - Objective sampling	single (food/feed)	400	Square centimetre	N_A	ISO 6579-1:2017 Salmonella	12	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
Salmonella Enteritidis	Sauce and dressings - mayonnaise		1	10	0	0				
Unknown	Unknown						5	33	1	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
Salmonella Enteritidis	unk	Not Available	Not Available	Not Available	2021MEFBO-02	General	Sauce and dressings - mayonnaise	homemade mayonnaise	Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans	Take-away or fast-food outlet	Take-away or fast-food outlet	Montenegro	Infected food handler	N_A	1	10	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	2021MEFBO-05	General	Unknown	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Unknown	Unknown	N_A	1	20	0	0
					2021MEFBO-06	General	Unknown	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Unknown	Unknown	N_A	1	3	0	0
					2021MEFBO-12	General	Unknown	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Unknown	Unknown	N_A	1	4	0	0
					2021MEFBO-13	General	Unknown	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Unknown	Unknown	N_A	1	2	1	0
					2021MEFBO-14	General	Unknown	N_A	Unknown	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Restaurant or Cafe or Pub or Bar or Hotel or Catering service	Unknown	Unknown	N_A	1	4	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	25-Jul-2022
Disease Status	25-Jul-2022
Food Borne Outbreaks	25-Jul-2022
Prevalence	26-Jul-2022

ZOONOSES MONITORING

MONTENEGRO

TEXT FORMS FOR THE 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 2021

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1. Institutions and Laboratories involved in zoonoses monitoring and reporting

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

The Ministry of Agriculture, Forestry and Water Management (MAFWM) prepares development strategies in the field of food safety, veterinary and phytosanitary area. MAFWM also prepares and adopts legislation in the field of food safety, veterinary and phytosanitary area. MAFWM supervises administrative decisions made by the Administration for Food Safety, Veterinary and Phytosanitary Affairs (AFSVPA) and decides upon complaints to decisions made by AFSVPA in the first instance administrative procedure and acts.

The Administration for Food Safety, Veterinary and Phytosanitary Affairs (AFSVPA) is the competent authority for the implementation of food safety, veterinary and phytosanitary policies as well as implementation of official controls. AFSVPA responsibilities includes:

- Keeping the register of animals, holdings, veterinary ambulances, food and feed production and marketing establishments;
- Adopting multiannual and annual programmes and plans of official controls in the field of food safety, veterinary and phytosanitary area;
- Carrying out official controls and enforcement measures in the field of food safety, veterinary and phytosanitary area;
- In particular AFSVPA prepares, implements, evaluates and reports: the program of annual mandatory animal and phytosanitary health protection measures, as well as special programs for animal health protection, programs for monitoring of zoonoses, zoonotic agents and monitoring of their resistance to antimicrobial agents, salmonella control programs and veterinary and pesticides residue monitoring program and other food quality and safety programmes (e.g. contaminants).
- Prepares and coordinates contingency plans for animal diseases, food and feed safety and phytosanitary crisis.
- Prepares technical and expert basis for legislation development and adoption.
- Cooperates with international organisations and competent authorities of other countries in the area of competence.

The 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:

- Evaluation of public health - monitors, investigates and analyses the epidemiological situation;
- Monitors and controls timely implementation of preventive programs of interest to Montenegro;
- Prepares programes for prevention, detection and control of infection diseases;
- Identify risks for public health;
- Perform laboratory analysis - microbiological and parasitological, chemical, biological, toxicological, biochemical and other laboratory analyses in humans and food.
- Keeping the register of public health status;
- Collects and processes health-statistical data;

IPH laboratories for chemistry and sanitary microbiology are the official laboratories for microbiological and chemical analyses of drinking water and foodstuffs (food, dietary products and dietary supplements), designated by MAFWM. Laboratories are MEST EN ISO / IEC 17025:2018 accredited by the Accreditation Body of Montenegro.

Scope of accreditation can be found at: Dodatak Sertifikatu o akreditaciji broj: Li 08 (akreditacija.me)

Diagnostic Veterinary Laboratory (DVL), founded by the Veterinary law, performs the following tasks:

- monitors and evaluates epidemiological situation in Montenegro;
- proposes measures for prevention, detection and eradication of infectious, parasites and other animal diseases;
- laboratory and pathoanatomic diagnostics of infectious diseases and other animal diseases;
- microbiological laboratory analyses and testing of food of animal origin and feed;

- laboratory analyses and testing of semen and ovaries for artificial insemination and monitors and proposes measures for productivity of animals;
- participates in implementation of training strategies for veterinarians and animal keepers.

DVL is MEST EN ISO / IEC 17025:2018 accredited by the Accreditation Body of Montenegro. Scope of accreditation can be found at: Redni (akreditacija.me)

2. Animal population

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

Data source on animal diseases (bovine, cattle and small ruminants TBC and brucella testing) and number of animals is the Veterinary Information System (VIS) operating within AFSVPA. VIS includes data on bovine, sheep, goats and pigs since 2009, 2011 and 2014 respectively. The data on animal population submitted are as on 31st December 2021.

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.

Data source for poultry number are official registers for poultry production (broilers and laying hens) of the administration.

Data sources for laboratory diagnostic of food and feed pathogens are reports from the laboratories performing testing.

2.2. 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 (Bubalus bubalis) 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:**

        - 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);
        - 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.

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

Over the last years, total number of holdings of bovines, porcine, sheep and goats has a steady. Dominant type of holding is small family farm with few exceptions of larger 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.

2.4. 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 upgrade will contain geographical coordinates of animals and holdings.

2.5. Additional information

Write text here please

(a): National identification and registration system(s), source of reported statistics (Eurostat, others)
(b): Link to website with density maps if available, tables with number of herds and flocks according to geographical area

3. General evaluation*: Bovine Tuberculosis

3.1. History of the disease and/or infection in the country[(a)]

No confirmed cases in 2021. Last confirmed case (one case) of bovine animals was in 2019. year. .

3.2. Evaluation of status, trends and relevance as a source for humans

Write text here please

3.3. Any recent specific action in the Member State or suggested for the European Union[(b)]

Write text here please

3.4. Additional information

Write text here please

* **For each zoonotic agent**

(a): Epidemiological evaluation (trends and sources) over time until recent/current situation for the different relevant matrixes (food, feed, animal). If relevant: the official "disease status" to be specified for the whole country and/or specific regions within the country

(b): If applicable

4. Description of Monitoring/Surveillance/Control programmes system*: Bovine Tuberculosis

4.1. Monitoring/Surveillance/Control programmes system[(a)]

Active surveillance

For the timely detection and control of tuberculosis in all bovine animals older than six weeks, an intradermal tuberculin test is carried out by veterinary ambulances (authorised veterinarian) in order to detect and eradicate disease and to create conditions for obtaining and maintaining the health status of tuberculosis-free holdings in the territory of Montenegro.

Responsible institution: AFSVPA, veterinary inspection

Operator: Veterinary ambulances, Veterinary inspection, DVL

For more than 10 years, in accordance with the annual programmes of measures, diagnostic examination of bovine animals for tuberculosis has been carried out on all bovine animals older than 6 weeks in all establishments, on the whole territory of Montenegro. The examination is performed by authorised veterinary ambulances that this activity has been delegated to as an activity of public interest, in accordance with the Veterinary Law.

Passive surveillance

In accordance with the Rulebook on classification of infectious animal diseases, manner of notification of occurrence or suspicion and declaring infectious animal diseases resolved (Official Gazette of MNE No. 92/17) and Compulsory Programme of Animal Health Measures 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.

In case of clinical symptoms on the basis of which possible presence of bovine tuberculosis is suspected: persistent cough, weight loss and swelling of accessible lymph nodes or granulomatous or other changes in organs of slaughtered or dead animals, the veterinarian or authorised veterinarian at the slaughter line has the obligation to report the suspicion to veterinary inspector (competent authority) in accordance with the Rulebook on the classification of infectious animal diseases, manner of notification of occurrence or suspicion and declaring infectious animal diseases resolved (Official Gazette of MNE No. 92/2017).

After reporting the suspicious case of live animals, the veterinary inspector orders the measures to either rule out or confirm the disease.

The pathogenic material for confirmation of M. bovis is taken from the changed lymph nodes and parenchymal organs such as: lungs, liver, spleen, etc. In cases where no pathological changes are present in animals, samples of retropharyngeal, bronchial, mediastinal, supramammary, mandibular and some mesenteric lymph nodes and the liver are taken for testing and cultivation

4.2. Measures in place[(b)]

Rulebook for measures for detection, control and eradication of bovine tuberculosis ("Official Gazette of MNE", no. 64/08) harmonized with the Council Directive 64/432, 77/391/EEC, 78/52/EEC and 82/400/EEC, defines the measures of identification, control and eradication of bovine tuberculosis.
Clinical signs or reasons on which the suspicion of the possible presence of bovine tuberculosis is based on:

- Persistent cough, weight loss, and swelling of the lymph nodes on the basis of which may be suspected tuberculosis;

- Granulomatous or other changes in the organs of slaughtered or dead animals on the basis of which may be suspected tuberculosis;

- When it's considered that the animals reacted positively to an intradermal tuberculin test:

a) Positive or suspect - in the case of using single disposable intradermal tuberculin test,

b) Positive in the case when the first test used was a comparative intradermal tuberculin test,

c) Unclear or positive in the case when as the second (repeated) test used is a comparative intradermal tuberculin test.

A method of performing intradermal tuberculin test and evaluation of the reaction is carried out in accordance with Annex I of the Rulebook.

In the event that the response to a single tuberculin test is suspicious or positive, the veterinary inspector orders to perform comparative intradermal tuberculin test on animal and other prescribed measures. The measures shall remain in force until the results of the comparative intradermal tuberculin test are received.

In the case when suspicion on tuberculosis is not ruled out, the veterinary inspector immediately puts the farm under official surveillance, conducts epizootic research and requires the implementation of a prescribed diagnostic procedure to confirm or ruled out the presence of disease.

Veterinary inspector suspends the status of herd officially free of tuberculosis and orders other prescribed measures. The veterinary inspector shall immediately inform the competent authority on a suspension of the status of the herd. At the slaughterhouse during post-mortem examination of suspected animal, all tbc changes on organs are sampled and sent to laboratory testing. In the case that changes were not notices, samples of liver and retro pharyngeal, bronchial, mediastinal, supramammary, mandibular and mesenteric lymph nodes must be sent to laboratory testing. The same procedure is conducted in the case of euthanasia of suspected animal.

The measures shall remain in force until suspicion on presence of bovine tuberculosis in a herd is officially confirmed or ruled out.

Bovine tuberculosis is officially confirmed when Mycobacterium bovis is isolated.

When bovine tuberculosis has been officially confirmed in a herd, veterinary inspector withdrawn the status of herd free from tuberculosis and orders other prescribed measures.

When bovine tuberculosis has been officially confirmed in a herd, a veterinary inspector conducts official supervision of facilities for processing of non-edible products of animal origin to prevent the spread of bovine tuberculosis.

On the withdrawal of the status of the herd referred, the veterinary inspector immediately informs the competent authority.

The measures shall remain in force until it restored the status of the herd officially free from bovine tuberculosis, in accordance with procedure stipulated in the Rulebook.

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

Notification is performed in accordance with the Rulebook on the classification of infectious animal diseases, manner of notification of occurrence or suspicion and declaring infectious animal diseases resolved (Official Gazette of MNE No. 92/2017).

In the event that the response to a single tuberculin test is suspicious or positive, the authorised veterinarian notifies the veterinary inspector (competent authority).

In the case when suspicion on tuberculosis is not ruled out (after conduction of comparative test), the authorised veterinarian notifies the veterinary inspector (competent authority).

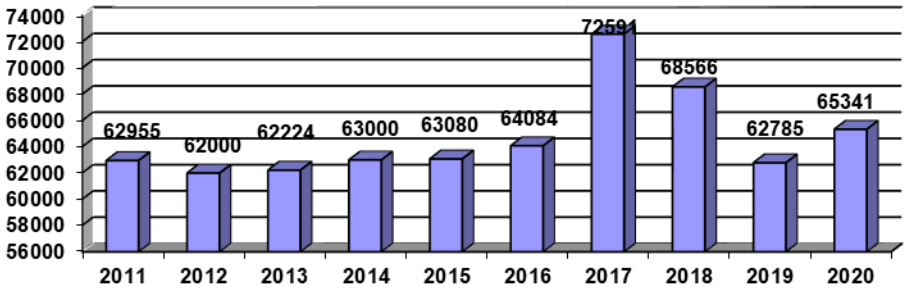
In the case when tbc is officially confirmed, official laboratory notifies the veterinary inspector (competent authority).

In the case of clinical sings of tbc (suspicion) or tbc changes at the slaughter, veterinarian or authorised veterinarian notifies the veterinary inspector (competent authority) that orders the measures to either rule out or confirm the disease.

4.4. Results of investigations and national evaluation of the situation, the trends [(d)] and sources of infection[(e)]

There were no officially positive cases in 2021, while there was one suspected case (animal reacted to tbc tests).

Overview of the number of bovine animals tested in the period 2011-2020:



In 2021 61077 bovine animal is tested on TBC.

4.5. Additional information

Write text here please

*** For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for 'Prevalence' and 'Disease Status': one text form reported per each combination of matrix/zoonoses or zoonotic agent**

(a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, limit of detection of the method, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.
(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; 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, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.
(c): Mandatory: Yes/No.
(d): Minimum five years.
(e): Relevance of the findings in animals to findings in foodstuffs and for human cases (as a source of infection).

5. General evaluation*: Brucellosis of cattle, sheep and goats

3.1. History of the disease and/or infection in the country[(a)]

For many years the testing has been covering the entire bovine population (older than 12 months, according to the data from the Electronic Database), and the presence of specific antibodies against Brucella spp. has not been established in any of the samples delivered and tested thus far.

Since 2020, the testing has covered the entire ovine and caprine population (older than 6 months). Previously, the testing was carried out only in municipalities bordering other countries. The presence of specific antibodies against Brucella spp. has not been established in any of the samples delivered and tested thus far.

3.2. Evaluation of status, trends and relevance as a source for humans

Write text here please

3.3. Any recent specific action in the Member State or suggested for the European Union[(b)]

Write text here please

3.4. Additional information

Write text here please

* **For each zoonotic agent**
(a): Epidemiological evaluation (trends and sources) over time until recent/current situation for the different relevant matrixes (food, feed, animal). If relevant: the official "disease status" to be specified for the whole country and/or specific regions within the country
(b): If applicable

6. Description of Monitoring/Surveillance/Control programmes system*: Brucellosis of cattle, sheep and goats

6.1. Monitoring/Surveillance/Control programmes system[(a)]

Active surveillance

In accordance with the Compulsory Programme of Animal Health Measures and 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: AFSVPA, Veterinary Inspection

Operator: Veterinary ambulances (authorised veterinarians), veterinary inspection, DVL.

Passive surveillance

In accordance with the Rulebook on classification of infectious animal diseases, manner of notification of occurrence or suspicion and declaring infectious animal diseases resolved (Official Gazette of MNE No. 92/17) and Compulsory Programme of Animal Health Measures 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.

The mandatory diagnostic examination has been foreseen of bovine, ovine and caprine animals: in cases of abortion - 15 days following abortion; when the clinical signs of brucellosis are established - abortion, placental retention, orchitis, and epididymitis, arthritis that may be associated with other clinical signs or other changes on the basis of which brucellosis may be suspected; animals that were in contact with people or animals suspected of being infected or diagnosed with brucellosis.

6.2. Measures in place[(b)]

Bovine Brucellosis

Rulebook on measures for the detection, control, and eradication of bovine brucellosis (Official Gazette MNE No. 64/2008), harmonized with the Council Directive 64/432, 77/391/EEC, 78/52/EEC and 82/400/EEC defines the measures of identification, control and eradication of bovine brucellosis.
In accordance with the Rulebook the following bovine animals shall be regarded as suspected of brucellosis:

- those with the positive or suspicious result of the serological test (RB test, ELISA test, CFT test, MRT, SAT);
- those showing one or more clinical signs: abortion, placental retention, orchitis and epididymitis, arthritis that may be associated with other clinical signs or other changes on the basis of which brucellosis may be suspected;
- those that were in contact with people or animals suspected of being infected or diagnosed with brucellosis.

Authorised veterinarians take blood samples on farms and deliver them to the Diagnostic Veterinary Laboratory, which performs laboratory testing using the Rose Bengal test as a screening test.
Procedure of conducting serological test and microbiological research is conducted in accordance with Annex I of the Rulebook that is according to the methods of International organisation for animal health (OIE).
In case of suspicion on brucellosis, veterinary inspector immediately puts the holding under official surveillance in order to confirm or ruled out the presence of the disease, suspends the status of herd officially brucellosis free, conducts epizootic research and orders other measures prescribed with the Rulebook. The measures shall remain in force until suspicion on presence of bovine brucellosis in a herd is officially confirmed or ruled out.
Bovine animals diagnosed with brucellosis shall be:

- Those with a positive reaction to at least two serological tests set out in Annex I (RB test, ELISA test, CFT test, MRT, SAT);
- Those for which microbiological testing confirmed the presence of the causative agent of bovine brucellosis.

When bovine brucellosis is officially confirmed in herd, veterinary inspector withdraws the status of herd officially free from brucellosis, conducts epizootic research and orders other prescribed measures.
When brucellosis is officially confirmed in the herd, veterinary inspector conducts official supervision of premises and procedures for safe disposal of corps and by products of anima origin in order to stop spread of brucellosis trough this sources.
On the withdrawal of the status of the herd, the veterinary inspector immediately informs the competent authority.
Measures shall remain in force until it is restored the status of the herd officially free from bovine brucellosis.

Ovine and Caprine Brucellosis

Rulebook on the measures for the prevention of occurrence, detection, control, and eradication of ovine and caprine brucellosis (B. melitensis) (Official Gazette of MNE No. 33/14) defines the measures of identification, control and eradication of ovine and caprine brucellosis.
In accordance with the Rulebook the following ovine and caprine animals shall be regarded as suspected of brucellosis:

- those with the positive or suspicious result of the serological test Rose Bengal;
- those showing one or more clinical signs: abortion, placental retention, orchitis and epididymitis, arthritis that may be associated with other clinical signs or other changes on the basis of which brucellosis may be suspected;
- those that were in contact with people or animals suspected of being infected or diagnosed with brucellosis.

Authorised veterinarians take blood samples on farms and deliver them to the Diagnostic Veterinary Laboratory, which performs laboratory testing using the Rose Bengal test as a screening test.
Procedure of conducting serological test and microbiological research is conducted in accordance with Annex I of the Rulebook that is according to the methods of International organisation for animal health (OIE).
In case of suspicion on brucellosis, veterinary inspector immediately puts the holding under official surveillance in order to confirm or ruled out the presence of the disease, suspends the status of herd officially brucellosis free and orders other measures prescribed with the Rulebook. The measures shall remain in force until suspicion on presence of ovine and caprine brucellosis in a herd is officially confirmed or ruled out.
Ovine and caprine animals diagnosed with brucellosis shall be:

- Those with a positive reaction (RB test, RVK, ELISA test, TFP, Brucelin test, and other test in accordance OIE manual);
- Those for which bacteriological testing, phato-anatomic, molecular and serological testing confirms the presence of the causative agent of bovine brucellosis.

When ovine/caprine brucellosis is officially confirmed in herd, veterinary inspector conducts epizootic research, withdraw of the status of the herd and orders other prescribed measures.
When brucellosis is officially confirmed in the herd, veterinary inspector conducts official supervision of premises and procedures for safe disposal of corps and by products of anima origin in order to stop spread of brucellosis trough this sources.
On the withdrawal of the status of the herd, the veterinary inspector immediately informs the competent authority.
Measures shall remain in force until it is restored the status of the herd officially free from ovine/caprine brucellosis.

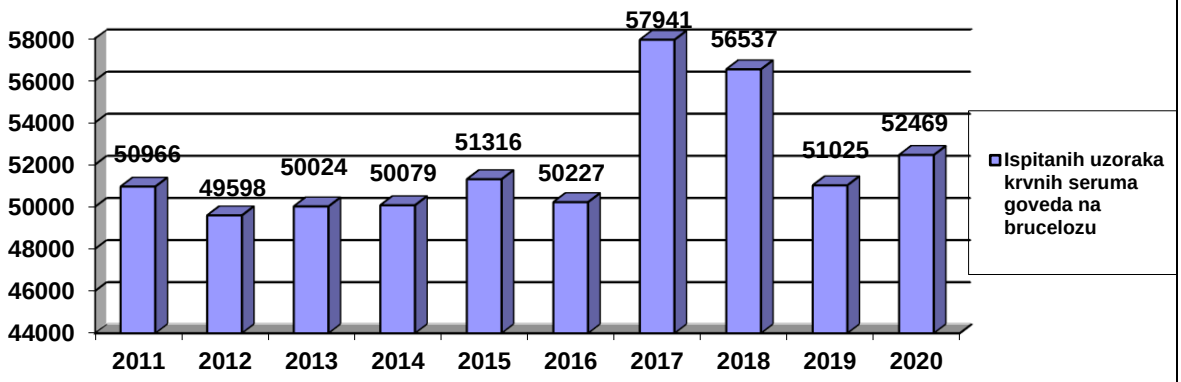
6.3. Notification system in place to the national competent authority[(c)]

Notification is performed in accordance with the Rulebook on the classification of infectious animal diseases, manner of notification of occurrence or suspicion and declaring infectious animal diseases resolved (Official Gazette of MNE No. 92/2017).

In the event of suspicious or positive case on brucellosis, DVL notifies the veterinary inspector (competent authority).

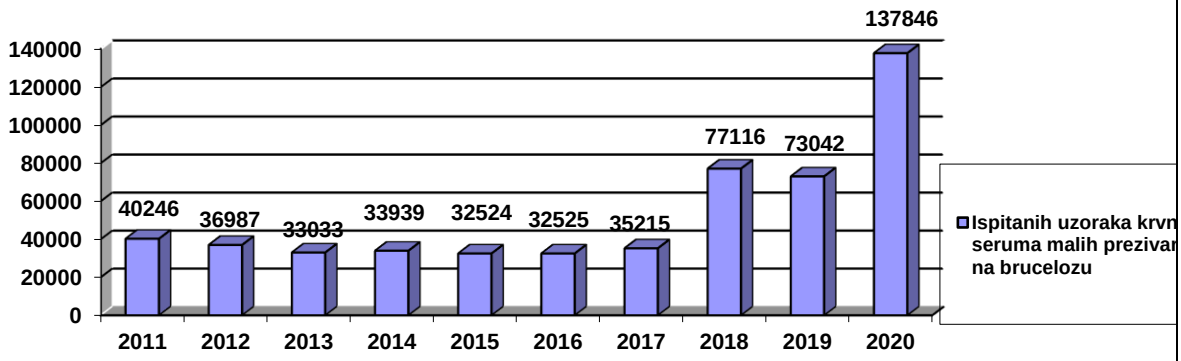
6.4. Results of investigations and national evaluation of the situation, the trends [(d)] and sources of infection[(e)]

Overview of the number of bovine animals tested in the period 2011-2020:



Number of samples in 2021 is **49696.**

Overview of the number of ovine/caprine animals tested in the period 2011-2020:



Number of samples in 2021 is 127370

6.5. Additional information

Write text here please

* **For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for 'Prevalence' and 'Disease Status': one text form reported per each combination of matrix/zoonoses or zoonotic agent**

(a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, limit of detection of the method, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.

(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; 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, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.

(c): Mandatory: Yes/No.

(d): Minimum five years.

(e): Relevance of the findings in animals to findings in foodstuffs and for human cases (as a source of infection).

7. General evaluation*: *L. monocytogenes, Salmonella, Campylobacter and other zoonotic agents* in food - All foodstuffs - food sample

3.1. History of the disease and/or infection in the country[(a)]

Write text here please

3.2. Evaluation of status, trends and relevance as a source for humans

Write text here please

3.3. Any recent specific action in the Member State or suggested for the European Union[(b)]

Write text here please

3.4. Additional information

Write text here please

* **For each zoonotic agent**

(a): Epidemiological evaluation (trends and sources) over time until recent/current situation for the different relevant matrixes (food, feed, animal). If relevant: the official "disease status" to be specified for the whole country and/or specific regions within the country

(b): If applicable

8. Description of Monitoring/Surveillance/Control programmes system*: *L. monocytogenes* in food - All foodstuffs - food sample

8.1. Monitoring/Surveillance/Control programmes system[(a)]

Monitoring in food

Monitoring of food and feed for zoonotic agents has been foreseen through the yearly programme for measures on food and feed safety in 2021 (the Programme). There are two subcomponent of the programme:

- One dedicated to monitoring of listeria monocytogenes in food only – official laboratory is SVL,

- One dedicated to monitoring of other microbiological criteria – official laboratories are SVL and IPH.

Data provided in DFC represent only data for prevalence from SVL, but not the data of IPH.
Matrix tested under the dedicated monitoring of listeria monocytogenes is (a) packaged (not frozen) hot or cold smoked or gravad fish; (b) soft or semi-soft cheeses, excluding fresh cheeses; (c) packaged heat treated meat products.
Matrix tested under the dedicated monitoring of microbiological criteria is in accordance with Regulation on microbiological criteria on food safety (OGMNE 79/2020) - food safety criteria, harmonised with Commission Regulation (EC) No 2073/2005.
The implementation of Programs is the responsibility of AFSVPA – veterinary and food safety inspectors and official laboratories.
Responsibility of FBOs – sampling plans
Testing on listeria monocytogenes is also the responsibility of FBOs in accordance with the Food safety law (OGMNE 57/2015), Regulation on food hygiene (OGMNE 13/2016, 80/2016, 80/2018 i 42/2021) and Regulation on microbiological criteria on food safety (OGMNE 79/2020).
Passive surveillance in animals

In accordance with the Rulebook on classification of infectious animal diseases, manner of notification of occurrence or suspicion and declaring infectious animal diseases resolved (Official Gazette of MNE No. 92/17) and Compulsory Programme of Animal Health Measures 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.
The implementation of the Rulebook and the Program is the responsibility animal owners, veterinary surgeons (ambulances), veterinary inspectors and DVL.

8.2. Measures in place[(b)]

Monitoring in food

In case of testing of food and laboratory results above legal limits veterinary or food safety inspectors undertakes measures in accordance with the Food safety law, risk analyse and the Regulation on microbiological criteria for food safety, including recall from the market, inspection of FBOs premises and PRP and HACCP, programmes, as well as FBOs own sampling plan and laboratory checks, etc.

Passive surveillance in animals

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, instruct 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 rule out 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.
In accordance with Article 62, paragraph 2 of the Veterinary Law, "in case of outbreak of an infectious animal disease posing a serious risk to human or animal health, the Administration shall inform of the outbreak and danger from the disease the public, the public administration bodies in charge of health, livestock, environmental protection, the crisis management, and civil security organs, about the type of the disease, the risks and measures undertaken or to be undertaken to prevent the disease. At the same time, the health service of Montenegro (Institute for Public Health of Montenegro) regularly reports to the Administration for Food Safety, Veterinary and Phytosanitary Affairs of the registered cases of infectious diseases - zoonoses in humans in Montenegro.

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

In case of testing of food and laboratory results above legal limits, official laboratory notifies veterinary and food safety inspector immediately.

When signs of a disease occur, giving rise to suspect that an animal has taken ill with or died of an infectious disease, the animal keeper has the legal obligation to notify, without delay, the nearest veterinary surgery or official veterinarian,
Where following an examination, a veterinarian from a private veterinary practice suspects an infectious disease for which reporting of suspicion is mandatory, he/she has to notify the competent official veterinarian without delay and no later than within 24 hours (by telephone, fax, or electronically).
The official veterinarian has to notify the AFSVPA without delay and no later than within 24 hours (by telephone, fax or electronically).
The notification of suspected infectious disease is done on a PS form from the Annex to the classification of infectious animal diseases, manner of notification of occurrence or suspicion and declaring infectious animal diseases resolved.

Where, based on the results of the diagnostic testing an infectious disease is confirmed, the laboratory that carried out the diagnostic testing (Diagnostic Veterinary Laboratory) notifies the Administration and the competent official veterinarian of the confirmed presence of the infectious diseases immediately, without delay (by phone, fax or electronically and also in writing). In most cases, the results of analyses are delivered to the Administration - Department for Animal Health
DVL presents to the AFSVPA the report on diagnostic testing of diseases in print and electronic format by the 15th day of the month for the previous month.
The official veterinarian notifies the competent health institution of the suspected or established case of zoonosis.

8.4. Results of investigations and national evaluation of the situation, the trends [(d)] and sources of infection[(e)]

8.5. Additional information

Write text here please

* **For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for 'Prevalence' and 'Disease Status': one text form reported per each combination of matrix/zoonoses or zoonotic agent**

(a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, limit of detection of the method, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.

(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; 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, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.

(c): Mandatory: Yes/No.

(d): Minimum five years.
(e): Relevance of the findings in animals to findings in foodstuffs and for human cases (as a source of infection).

9. General evaluation, Salmonella

3.1. History of the disease and/or infection in the country[(a)]

Write text here please

3.2. Evaluation of status, trends and relevance as a source for humans

Write text here please

3.3. Any recent specific action in the Member State or suggested for the European Union[(b)]

Write text here please

3.4. Additional information

Write text here please

* **For each zoonotic agent**
(a): Epidemiological evaluation (trends and sources) over time until recent/current situation for the different relevant matrixes (food, feed, animal). If relevant: the official "disease status" to be specified for the whole country and/or specific regions within the country
(b): If applicable

10. Description of Monitoring/Surveillance/Control programmes system*: *Salmonella programme*

10.1. Monitoring/Surveillance/Control programmes system[(a)]

Monitoring in food

Monitoring of Salmonella spp. in food has been foreseen in the yearly programme for measures of food and feed safety in 2020 (the Programme), the subcomponent dedicated to monitoring of microbiological criteria.

Matrix tested under the dedicated monitoring of microbiological criteria is in accordance with Regulation on microbiological criteria on food safety (OGMNE 79/2020) - food safety criteria, harmonised with Commission Regulation (EC) No 2073/2005.

The implementation of Programs is the responsibility of AFSVPA – veterinary and food safety inspectors and official laboratories.

Responsibility of FBOs – sampling plans

Testing on listeria monocytogenes is also the responsibility of FBOs in accordance with the Food safety law (OGMNE 57/2015), Regulation on food hygiene (OGMNE

13/2016, 80/2016, 80/2018 i 42/2021) and Regulation on microbiological criteria on food safety (OGMNE 79/2020).

Active surveillance

In accordance with the Rulebook on the measures for salmonella control in poultry (OGMNE 36/2015 i 92/2017) and Compulsory Programme of Animal Health Measures and 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 (broilers and laying hens) is carried out. 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.

Responsible institution: AFSVPA, Veterinary Inspection
Operator: Veterinary ambulances (authorised veterinarians), veterinary inspection, DVL.

Responsibility of FBOs, animal owner – sampling plans
In accordance with the Rulebook on the measures for salmonella control in poultry (OGMNE 36/2015 i 92/2017) testing of poultry is also the responsibility FBOs, animal owner.

Passive surveillance in animals

In accordance with the Rulebook on classification of infectious animal diseases, manner of notification of occurrence or suspicion and declaring infectious animal diseases resolved (Official Gazette of MNE No. 92/17) and Compulsory Programme of Animal Health Measures 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.
The implementation of the Rulebook and the Program is the responsibility animal owners, veterinary surgeons (ambulances), veterinary inspectors and DVL.

10.2. Measures in place[(b)]

Monitoring in food

In case of testing of food and laboratory results above legal limits veterinary or food safety inspectors undertakes measures in accordance with the Food safety law, risk analyse and the Regulation on microbiological criteria for food safety, including recall from the market, inspection of FBOs premises and PRP and HACCP, programmes, as well as FBOs own sampling plan and laboratory checks, etc.

Active surveillance

Measures in case of confirmation of Salmonella in broilers and laying hens are either slaughtering and heat treatment of meat or stamping out and disposal of carcases and other measures from the Rulebook on the measures for salmonella control in poultry (OGMNE 36/2015 i 92/2017).

In accordance with Article 62, paragraph 2 of the Veterinary Law, "in case of outbreak of an infectious animal disease posing a serious risk to human or animal health, the Administration shall inform of the outbreak and danger from the disease the public, the public administration bodies in charge of health, livestock, environmental protection, the crisis management, and civil security organs, about the type of

the disease, the risks and measures undertaken or to be undertaken to prevent the disease. At the same time, the health service of Montenegro (Institute for Public Health of Montenegro) regularly reports to the Administration for Food Safety, Veterinary and Phytosanitary Affairs of the registered cases of infectious diseases - zoonoses in humans in Montenegro.

Passive surveillance in animals

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, instruct 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 rule out 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.

In accordance with Article 62, paragraph 2 of the Veterinary Law, "in case of outbreak of an infectious animal disease posing a serious risk to human or animal health, the Administration shall inform of the outbreak and danger from the disease the public, the public administration bodies in charge of health, livestock, environmental protection, the crisis management, and civil security organs, about the type of the disease, the risks and measures undertaken or to be undertaken to prevent the disease. At the same time, the health service of Montenegro (Institute for Public Health of Montenegro) regularly reports to the Administration for Food Safety, Veterinary and Phytosanitary Affairs of the registered cases of infectious diseases - zoonoses in humans in Montenegro.

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

In case of testing of food and laboratory results above legal limits, official laboratory notifies veterinary and food safety inspector immediately.

In case of confirmation of Salmonella in broilers and laying hens, DVL immediately notifies veterinary inspector.

When signs of a disease occur, giving rise to suspect that an animal has taken ill with or died of an infectious disease, the animal keeper has the legal obligation to notify, without delay, the nearest veterinary surgery or official veterinarian,

Where following an examination, a veterinarian from a private veterinary practice suspects an infectious disease for which reporting of suspicion is mandatory, he/she has to notify the competent

official veterinarian without delay and no later than within 24 hours (by telephone, fax, or electronically). The official veterinarian has to notify the AFSVPA immediately and no later than within 24 hours (by telephone, fax or electronically).

The notification of suspected infectious disease is done on a PS form from the Annex to the classification of infectious animal diseases, manner of notification of occurrence or suspicion and declaring infectious animal diseases resolved.

Where, based on the results of the diagnostic testing an infectious disease is confirmed, the laboratory that carried out the diagnostic testing (Diagnostic Veterinary Laboratory) notifies the Administration and the competent official veterinarian of the confirmed presence of the infectious diseases immediately, without delay (by phone, fax or electronically and also in writing). In most cases, the results of analyses are delivered to the Administration - Department for Animal Health

DVL presents to the AFSVPA the report on diagnostic testing of diseases in print and electronic format by the 15th day of the month for the previous month.

The official veterinarian notifies the competent health institution of the suspected or established case of zoonosis.

10.4. Results of investigations and national evaluation of the situation, the trends [(d)] and sources of infection[(e)]

Write text here please

10.5. Additional information

Write text here please

*** For all combinations of zoonotic agents and matrix (Food, Feed and Animals) for 'Prevalence' and 'Disease Status': one text form reported per each combination of matrix/zoonoses or zoonotic agent**

(a): Sampling scheme (sampling strategy, frequency of the sampling, type of specimen taken, methods of sampling (description of sampling techniques) + testing scheme (case definition, diagnostic/analytical methods used, limit of detection of the method, diagnostic flow (parallel testing, serial testing) to assign and define cases. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.

(b): The control program/strategies in place, including vaccination if relevant. If applicable a description of how eradication measures are/were implemented, measures in case of the positive findings or single cases; 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, if applicable. If programme approved by the EC, please provide link to the specific programme in the Commission`s website.

(c): Mandatory: Yes/No.

(d): Minimum five years.

(e): Relevance of the findings in animals to findings in foodstuffs and for human cases (as a source of infection).

11. Food-borne Outbreaks

11.1. System in place for identification, epidemiological investigations and reporting of food-borne outbreaks

Health care institutions and other legal entities that provide health care services are obliged to keep the prescribed records, register and databases on infectious diseases that are connected to a single information system, in accordance with a special law. They are obliged to immediately inform the competent health institution - Institute for public health of Montenegro(IPH), the administrative body responsible for inspection affairs and the administrative body responsible for food safety, veterinary and phytosanitary affairs in case of occurrence of contagious diseases zoonoses and foodborne diseases, or hospital infections in accordance with the with the law.

The regionally competent health institution (hygienic-epidemiological service) is obliged to perform epidemiological surveillance and directly implement measures to prevent, control, eliminate and eradicate infectious diseases.

The competent health institution is obliged to inform the IPH, competent local government bodies and other entities about the movement of infectious diseases, in order to provide early warning and exchange information.

5.2. Description of the types of outbreaks covered by the reporting

Write text here please

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

During 2021, 6 FWB outbreaks were recorded in Montenegro.

The total number of patients in all 6 outbreaks was 43. Of that number one person was hospitalized. There were no deaths caused by FWBO in 2021.

For one outbreak in 2021, the causative agent was found in food (salmonellae enteritidis), and the route of transmission was an infected person (germ carrier) employed in the place (fast food) where the epidemic broke out.

For other five outbreaks, the causes - sources of infection, as well as the ways of transmission of the infectious agent have not been discovered. Contaminated food is suspected as source of infection.

5.4. Descriptions of single outbreaks of special interest

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

- early detection and epidemiological surveillance;
- health examinations of certain categories of the population, carriers and employees in facilities under sanitary supervision with counseling;
- epidemiological investigation;

- laboratory testing to determine the causes of infectious diseases and the causes of epidemics of infectious diseases;
- health education of patients, members of their families and other persons at risk of contracting infectious diseases;
- disinfection, disinsection and deratization, according to epidemiological indications

5.6. 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

5.7. Additional information

Write text here please

(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.

6. Institutions and laboratories involved in antimicrobial resistance monitoring and reporting

Write text here please

Short description of the institutions and laboratories involved in data collection and reporting

7. General Antimicrobial Resistance Evaluation

7.1. Situation and epidemiological evolution (trends and sources) regarding AMR to critically important antimicrobials[(a)] (CIAs) over time until recent situation

Write text here please

7.2. Public health relevance of the findings on food-borne AMR in animals and foodstuffs

Write text here please

7.3. Recent actions taken to control AMR in food producing animals and food

Write text here please

7.4. Any specific action decided in the Member State or suggestions to the European Union for actions to be taken against food-borne AMR threat

Write text here please

7.5. Additional information

Write text here please

(a): The CIAs depends on the bacterial species considered and the harmonised set of substances tested within the framework of the harmonised monitoring:

- For *Campylobacter* spp., macrolides (erythromycin) and fluoroquinolones (ciprofloxacin);
- For *Salmonella* and *E. coli*, 3rd and 4th generation cephalosporins (cefotaxime) and fluoroquinolones (ciprofloxacin) and colistin (polymyxin);

8. General Description of Antimicrobial Resistance Monitoring*; Please add the matrix and bacterial species

8.1. General description of sampling design and strategy[(a)]

Write text here please

8.2. Stratification procedure per animal population and food category

Write text here please

8.3. Randomisation procedure per animal population and food category

Write text here please

8.4. Analytical method used for detection and confirmation[(b)]

Write text here please

8.5. Laboratory methodology used for detection of antimicrobial resistance[(C)]

Write text here please

8.6. Library preparation used

Write text here please

8.7. Version of the predictive tool

Write text here please

8.8. Results of investigation

Write text here please

8.9. Additional information

Write text here please

*** to be filled in per combination of bacterial species/matrix**

(a): Method of sampling (description of sampling technique: stage of sampling, type of sample, sampler), Frequency of sampling, Procedure of selection of isolates for susceptibility testing, Method used for collecting data.

(b): Analytical method used for detection and confirmation: according to the legislation, the protocols developed by the EURL-AR should be used and reported here. In the case of the voluntary specific monitoring on Carbapenemase-producers, the

selective media used (commercial plates, 'in house' media) should be also reported here. In general, any variation with regard to the EURL-AR protocols should be stated here, number of isolates isolated per sample, in particular for *Campylobacter* spp..

(c): Antimicrobials included, Cut-off values