European Food Safety Authority

ZOONOSES MONITORING

BULGARIA

The Report referred to in Article 9 of Directive 2003/99/EC

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

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

IN 2009

INFORMATION ON THE REPORTING AND MONITORING SYSTEM

Country: Bulgaria

Reporting Year:

Laboratory name	Description	Contribution
		Brucelloses, Bruceloidoses, Leptospirosis, Malleus, Enzootic Bovine Leucosis, Salmonellosis, Trichinellosis, Anthrax, TSE, CSF, Rabies, Tubercullosis
		Brucelloses, Bruceloidoses, Leptospirosis, Malleus, Enzootic Bovine Leucosis, Salmonellosis, Trichinellosis, Anthrax, TSE, CSF, Rabies, Tubercullosis
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INFORMATION ON THE REPORTING AND MONITORING SYSTEM

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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 Bulgaria during the year 2009 .

The information covers the occurrence of these diseases and agents in humans, animals, foodstuffs and in some cases also in feedingstuffs. In addition the report includes data on antimicrobial resistance in some zoonotic agents and commensal 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 Community 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 Community 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 Community Summary Report on zoonoses that is published each year by EFSA.

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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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1. ANIMAL POPULATIONS

The relevance of the findings on zoonoses and zoonotic agents has to be related to the size and nature of the animal population in the country.

A. Information on susceptible animal population

Sources of information

The HQ of NVS collected the data from the RVS-s about the number of the animals and the animal holdings.

Definitions used for different types of animals, herds, flocks and holdings as well as the types covered by the information

The animal holding is the place where the animals are kept.

Geographical distribution and size distribution of the herds, flocks and holdings

The Republic of Bulgaria is divided on the 28 administrative diostricts. At the HQ of NVS is collected the data for the all regions.

Additional information

no

Table Susceptible animal populations

* Only if different than current reporting year

		Number of herds or flocks		Number of slaughtered animals		Livestock numbers (live animals)		Number of holdings	
Animal species	Category of animals	Data	Year*	Data	Year*	Data	Year*	Data	Year*
Cattle (bovine animals)	meat production animals			14968		246594		2840	
	mixed herds			3871		728			
	dairy cows and heifers			19330		766943		81352	
	calves (under 1 year)			14968		113538		42862	
	- in total	129432		38169		1127803		127060	
Ducks	- in total [1)]			4178688		1195771			
Gallus gallus (fowl)	mixed flocks/holdings					3654812			
	broilers					8956204			
	laying hens					4236754			
	- in total			52077180		16847770		25581	
Goats	mixed herds			189		34			
	meat production animals			3960		117933			
	animals over 1 year					498954			

Table Susceptible animal populations

		Number of herds or flocks		Number of slaughtered animals		Livestock numbers (live animals)		Number of holdings	
Animal species	Category of animals	Data	Year*	Data	Year*	Data	Year*	Data	Year*
Goats	milk goats					434217			
	animals under 1 year			3960		29338			
	- in total	120576		4149		1080476		97979	
Pigs	breeding animals					214192			
	fattening pigs			507014		34052			
	mixed herds			24617		37168			
	- in total	68912		531631		285412		62344	
Sheep	animals over 1 year					1955837			
	mixed herds			2965		185			
	milk ewes					1784742			
	meat production animals			578320		253685			
	animals under 1 year (lambs)			578320		239310			
	- in total	145318		581285		4234359		142266	
Solipeds, domestic	horses - in total	125390		6647		170123		124725	

Table Susceptible animal populations

		Number of herds or flocks		Number of slaughtered animals		Livestock numbers (live animals)		Number of holdings	
Animal species	Category of animals	Data	Year*	Data	Year*	Data	Year*	Data	Year*
Turkeys	- in total			51580		35081		12	

Comments:

[1)] All waterfowl

2. INFORMATION ON SPECIFIC ZOONOSES AND ZOONOTIC AGENTS

Zoonoses are diseases or infections, which are naturally transmissible directly or indirectly between animals and humans. Foodstuffs serve often as vehicles of zoonotic infections. Zoonotic agents cover viruses, bacteria, fungi, parasites or other biological entities that are likely to cause zoonoses.

2.1 SALMONELLOSIS

2.1.1 General evaluation of the national situation

A. General evaluation

National evaluation of the recent situation, the trends and sources of infection

Since 1 Jan. 2007 NVS implements the multy annual technical program for control of Salmonellosis for breeding flocks poultry.
With COMMISSION DECISION, concerning a Community financial contribution towards a baseline survey on the prevalence of Salmonella in turkeys to be carried out in Bulgaria and in Romania (2007/208/EC) NVS implements survey program.
With COMMISSION DECISION 2007/219/EC concerning a Community financial contribution towards a baseline survey on the prevalence of Salmonella in slaughter pigs to be carried out in Bulgaria and in Romania NVS implements survey program.
MULTI-ANNUAL CONTROL PROGRAMME ON SALMONELLA IN LAYING HENS OF GALLUS GALLUS was drafted and sent to the Comm. for approaval. The implementation of the program will start on 1 Jan. 2008.

Relevance of the findings in animals, feedingstuffs and foodstuffs to human cases (as a source of infection)

no data available

Recent actions taken to control the zoonoses

since now NVS takes samples for Salmonella bacteria from:
fresh broiler meat;
fresh pig meat;
fresh turkey meat;
table eggs;
cloacal swabs of breeding flocks;
cloacal swabs of broiler flocks;
feacal samples of fattening pigs.

Suggestions to the Community for the actions to be taken

no

Additional information

no

2.1.2 Salmonellosis in humans

A. Salmonellosis in humans

Reporting system in place for the human cases

A competent authority is a Ministry of health.

2.1.3 Salmonella in foodstuffs

A. Salmonella spp. in pig meat and products thereof

Monitoring system

Sampling strategy

At slaughterhouse and cutting plant

In each slaughterhouse and cutting plant there is a program for monitoring of Salmonella spp.
The samples shall be taken from each pig batch.

At meat processing plant

As a Member State, Bulgaria implements Council Regulation 2073/2004/EC

At retail

no

Methods of sampling (description of sampling techniques)

At slaughterhouse and cutting plant

according COMMISSION DECISION 2007/219/EC,concerning a Community financial contribution towards a baseline survey on the prevalence of Salmonella in slaughter pigs to be carried out in Bulgaria and in Romania

Preventive measures in place

Regarding the State Profilaxis Program of Bulgaria in the outbreaks there is a vaccination of pigs twice per year (at the first day after born and 15 days after that.)
In all backyards and commercial holdings there are biosecurity measures according to the EU legislation.

Control program/mechanisms

The control program/strategies in place

The control programe is according to the Commission Decision 2007/219 EC

Suggestions to the Community for the actions to be taken

No

Notification system in place

WAHIS

Results of the investigation

No data available

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

No data available

Additional information

NO

B. Salmonella spp. in bovine meat and products thereof

Monitoring system

Sampling strategy

At slaughterhouse and cutting plant

As a member state, we implement EU legislation.
The sampling strategy is according to Reg. 2073/2005/EC.

C. Salmonella spp. in broiler meat and products thereof

Monitoring system

Sampling strategy

At slaughterhouse and cutting plant

As a member state, we implement EU legislation.
The sampling strategy is according to Reg. 2073/2005/EC.

At meat processing plant

The official inspections in the establishments for production, storage and trade with food are carried out in accordance with the Council Regulation 854/2004, laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption.
The number of samples has been calculated by the official veterinarians on the basis of risk assessment and the type and quality of the materials included in the food processing and the results of the previous inspections.
At the regional veterinary services (RVSs) the schedule for inspections in the controlled establishments of food was elaborated.
The samples from foods of poultry origin shall be taken and preceded as provided in Council Regulation 2073/2005. The frequency of sample taking could be increased and decreased on the basis of the results of the sample testing.

At retail

The official inspections in the establishments for production, storage and trade with food are carried out in accordance with the Council Regulation 854/2004, laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption.
The number of samples has been calculated by the official veterinarians on the basis of risk assessment and the type and quality of the materials included in the food processing and the results of the previous inspections.
At the regional veterinary services (RVSs) the schedule for inspections in the controlled establishments of food was elaborated.
The samples from foods of poultry origin shall be taken and preceded as provided in Council Regulation 2073/2005. The frequency of sample taking could be increased and decreased on the basis of the results of the sample testing.

Definition of positive finding

At slaughterhouse and cutting plant

The broiler meat could be used for human consumption if they are treated in a manner that guarantees the elimination of Salmonella enteritidis and Salmonella typhimurium in accordance with Community legislation on food hygiene.

Preventive measures in place

There are strict bio- security measures in the broiler holdings
Bio-security is a combination of practices, which are intended to prevent the spread of disease-causing organisms within the poultry farm. Where these are performed in parallel with the sanitation and disinfection procedures, bio-security measures could eradicate or, at least, reduce the level of pathogens to values, at which no hazard of infection would be likely.
The bio-security measures in industrial poultry farms, small farms and private backyards are in

accordance to the manual of Bio- security measures, issued by USAID Bulgaria and with the EC requirements.

Bio-security measures on holdings:

Health status of poultry
On entering to all houses on the farm must be located disinfection barrier
Control of movement of people
Transport hygiene
Feed hygiene
Water hygiene
Rodent, insect and bird control
Cleaning and disinfecting of buildings
Recording of all events and operations
For each buildings must be applied self instruments

Control program/mechanisms

Suggestions to the Community for the actions to be taken

no

Measures in case of the positive findings or single cases

The broiler meat could be used for human consumption if they are treated in a manner that guarantees the elimination of Salmonella enteritidis and Salmonella typhimurium in accordance with Community legislation on food hygiene.

Additional information

no

D. Salmonella spp. in eggs and egg products

Monitoring system

Sampling strategy

As a member state, we implement EU legislation.
The sampling strategy is according to Reg. 2073/2005/EC.

E. Salmonella spp. in turkey meat and products thereof

Monitoring system

Sampling strategy

At slaughterhouse and cutting plant

As a member state, we implement EU legislation.
The sampling strategy is according to Reg. 2073/2005/EC.

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified	S. Agona
Meat from broilers (Gallus gallus) - fresh - at retail		Batch		8414	11			11	
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant		---							
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at retail		Batch		6387	24			24	
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at retail		Batch		403	0				
Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - at retail		Batch		2690	1			1	
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM)		Batch		611	10			10	
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at retail		Batch		839	0				
Meat from duck - at retail		Batch		1189	6			6	
Meat from turkey - fresh - at retail		Batch		52	0				
Meat from turkey - meat preparation - intended to be eaten cooked - at retail		Batch		158	0				
Meat from turkey - meat products - cooked, ready-to -eat - at retail		Batch		5	0				
Meat from turkey - meat products - raw but intended to be eaten cooked - at retail		Batch		20	1			1	

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified	S. Agona
Meat from turkey - mechanically separated meat (MSM)		Batch		86	0				
Meat from turkey - minced meat - intended to be eaten cooked - at retail		Batch		75	1			1	

Table Salmonella in red meat and products thereof

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified	S. Colorado	S. Rissen
Meat from bovine animals - fresh - at retail		Batch		951	1		1			
Meat from bovine animals - meat preparation - intended to be eaten raw - at retail		Batch		15	0					
Meat from bovine animals - meat preparation - intended to be eaten cooked - at retail		Batch		2347	7	2		5		
Meat from bovine animals - meat products - cooked, ready-to-eat - at retail		Batch		68	0					
Meat from bovine animals - meat products - raw but intended to be eaten cooked - at retail		Batch		327	0					
Meat from bovine animals - minced meat - intended to be eaten raw - at retail		Batch		43	0					
Meat from bovine animals - minced meat - intended to be eaten cooked - at retail		Batch		687	0					
Meat from horse - fresh - at retail		Batch		40	0					
Meat from pig - fresh - at retail		Batch		3986	2			2		
Meat from pig - meat preparation - intended to be eaten raw - at retail		Batch		215	0					
Meat from pig - meat preparation - intended to be eaten cooked - at retail		Batch		10389	28		7	21		
Meat from pig - meat products - cooked, ready-to-eat - at retail		Batch		3513	5		5			
Meat from pig - meat products - raw but intended to be eaten cooked - at retail		Batch		2441	2				1	1
Meat from pig - mechanically separated meat (MSM)		Batch		377	0					

Table Salmonella in red meat and products thereof

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified	S. Colorado	S. Rissen
Meat from pig - minced meat - intended to be eaten raw - at processing plant		---								
Meat from pig - minced meat - intended to be eaten raw - at retail		Batch		353	1			1		
Meat from pig - minced meat - intended to be eaten cooked - at retail		Batch		7652	26		7	19		
Meat from sheep - fresh - at processing plant		Batch		253	0					

Table Salmonella in other food

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified	S. Corvallis
Crustaceans - unspecified - cooked - at retail		Batch		310	0				
Crustaceans - unspecified - raw - at retail		Batch		5	0				
Egg products - at retail		Batch		1166	0				
Eggs - raw material (liquid egg) for egg products		Batch		320	0				
Eggs - table eggs - at packing centre		Batch		3239	0				
Eggs - table eggs - at retail		Batch		1847	0				
Fishery products, unspecified - at retail		Batch		563	0				
Fruits and vegetables - precut		Batch		130	0				
Live bivalve molluscs		Batch		200	2				2
Molluscan shellfish - cooked - at retail		Batch		164	0				
Molluscan shellfish - raw - at retail		Batch		85	0				

Table Salmonella in milk and dairy products

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified
Cheeses made from cows' milk - at retail		Batch		611	0			
Cheeses made from cows' milk - soft and semi-soft - at retail		Batch		822	0			
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at retail		Batch		4621	0			
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at retail		Batch		2274	0			
Cheeses made from goats' milk - at retail		Batch		150	0			
Cheeses made from goats' milk - soft and semi-soft - at retail		Batch		30	0			
Cheeses made from goats' milk - soft and semi-soft - made from pasteurised milk - at retail		Batch		254	0			
Cheeses made from sheep's milk - soft and semi-soft - at retail		Batch		176	0			
Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - at retail		Batch		1738	0			
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at retail		Batch		300	0			
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at retail		Batch		237	0			
Dairy products (excluding cheeses) - ice-cream - at retail		Batch		369	0			
Dairy products (excluding cheeses) - milk powder and whey powder - at retail		Batch		50	0			

Table Salmonella in milk and dairy products

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified
Milk, cows' - pasteurised milk - at retail		Batch		30	0			
Milk, cows' - raw		Batch		2	0			

2.1.4 Salmonella in animals

A. Salmonella spp. in bovine animals

Monitoring system

Sampling strategy

as a member state, we implement EU legislation.
The sampling strategy is according to Reg. 2073/2005/EC

B. Salmonella spp. in ducks - breeding flocks and meat production flocks

Monitoring system

Sampling strategy

Breeding flocks

As a member state, we implement EU legislation.
The sampling strategy is according to Reg. 2073/2005/EC.

C. Salmonella spp. in geese - breeding flocks and meat production flocks

Monitoring system

Sampling strategy

Breeding flocks

As a member state, we implement EU legislation.
The sampling strategy is according to Reg. 2073/2005/EC.

D. Salmonella spp. in pigs

Monitoring system

Sampling strategy

Breeding herds

The Republic of Bulgaria implements the baseline survey for breeding pigs. The survey started at the begining of 2008

Fattening herds

The sampling strategy is in accordance with the Commission Decision (2007/219/Đ•Đž)

E. Salmonella spp. in turkey - breeding flocks and meat production flocks

Monitoring system

Sampling strategy

Breeding flocks (separate elite, grand parent and parent flocks when necessary)

The sampling strategy is in accordance with COMMISSION DECISION (2007/208/EC)
concerning a Community financial contribution towards a baseline survey on the prevalence of Salmonella in turkeys to be carried out in Bulgaria and in Romania

Meat production flocks

The sampling strategy is in accordance with COMMISSION DECISION (2007/208/EC)
concerning a Community financial contribution towards a baseline survey on the prevalence of Salmonella in turkeys to be carried out in Bulgaria and in Romania

Methods of sampling (description of sampling techniques)

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Day-old chicks

The sampling strategy is in accordance with COMMISSION DECISION (2007/208/EC)
concerning a Community financial contribution towards a baseline survey on the prevalence of Salmonella in turkeys to be carried out in Bulgaria and in Romania

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Rearing period

The sampling strategy is in accordance with COMMISSION DECISION (2007/208/EC)
concerning a Community financial contribution towards a baseline survey on the prevalence of Salmonella in turkeys to be carried out in Bulgaria and in Romania

Breeding flocks (separate elite, grand parent and parent flocks when necessary): Production period

The sampling strategy is in accordance with COMMISSION DECISION (2007/208/EC)
concerning a Community financial contribution towards a baseline survey on the prevalence of Salmonella in turkeys to be carried out in Bulgaria and in Romania

Meat production flocks: Day-old chicks

The sampling strategy is in accordance with COMMISSION DECISION (2007/208/EC)
concerning a Community financial contribution towards a baseline survey on the prevalence of Salmonella in turkeys to be carried out in Bulgaria and in Romania

Meat production flocks: Rearing period

The sampling strategy is in accordance with COMMISSION DECISION (2007/208/EC)
concerning a Community financial contribution towards a baseline survey on the prevalence of Salmonella in turkeys to be carried out in Bulgaria and in Romania

Meat production flocks: Before slaughter at farm

The sampling strategy is in accordance with COMMISSION DECISION (2007/208/EC)

concerning a Community financial contribution towards a baseline survey on the prevalence of Salmonella in turkeys to be carried out in Bulgaria and in Romania

Meat production flocks: At slaughter (flock based approach)

n/a

Table Salmonella in breeding flocks of Gallus gallus

	Number of existing flocks	Source of information	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Hadar	S. Infantis	S. Typhimurium	S. Virchow	Salmonella spp., unspecified
Gallus gallus (fowl) - parent breeding flocks for egg production line - day-old chicks			Flock	6	0						
Gallus gallus (fowl) - parent breeding flocks for egg production line - during rearing period			Flock	46	0						
Gallus gallus (fowl) - parent breeding flocks for egg production line - adult			Flock	255	8	5					1
Gallus gallus (fowl) - parent breeding flocks for broiler production line - day-old chicks			Flock	61	1						1
Gallus gallus (fowl) - parent breeding flocks for broiler production line - during rearing period			Flock	75	0						
Gallus gallus (fowl) - parent breeding flocks for broiler production line - adult			Flock	1865	17	5		6	2	2	
Gallus gallus (fowl) - parent breeding flocks for broiler production line - unspecified			Flock	3	0						
Gallus gallus (fowl) - parent breeding flocks, unspecified - day-old chicks			Flock	36	0						
Gallus gallus (fowl) - parent breeding flocks, unspecified - during rearing period			Flock	32	0						
Gallus gallus (fowl) - parent breeding flocks, unspecified - adult			Flock	73	2						2
Gallus gallus (fowl) - parent breeding flocks, unspecified			Flock	8	0						

Table Salmonella in breeding flocks of Gallus gallus

	S. Agona	S. Bareilly	S. Senftenberg
Gallus gallus (fowl) - parent breeding flocks for egg production line - day-old chicks			
Gallus gallus (fowl) - parent breeding flocks for egg production line - during rearing period			
Gallus gallus (fowl) - parent breeding flocks for egg production line - adult			2
Gallus gallus (fowl) - parent breeding flocks for broiler production line - day-old chicks			
Gallus gallus (fowl) - parent breeding flocks for broiler production line - during rearing period			
Gallus gallus (fowl) - parent breeding flocks for broiler production line - adult	1	1	
Gallus gallus (fowl) - parent breeding flocks for broiler production line - unspecified			
Gallus gallus (fowl) - parent breeding flocks, unspecified - day-old chicks			
Gallus gallus (fowl) - parent breeding flocks, unspecified - during rearing period			
Gallus gallus (fowl) - parent breeding flocks, unspecified - adult			
Gallus gallus (fowl) - parent breeding flocks, unspecified			

Table Salmonella in other poultry

	Number of existing flocks	Source of information	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified	S. Abony	S. Agona	S. Corvallis
Gallus gallus (fowl) - laying hens - day-old chicks [1)]		Whole country	Single	36	0						
Gallus gallus (fowl) - laying hens - during rearing period		Whole country	Single	17	5	2		1			1
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes - official and industry sampling		Whole country	Single	101	20	9			1	2	
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes - sampling by industry		Whole country	Single	28	7	1					
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes - official sampling - objective sampling		Whole country	Single	46	10	5			1	2	
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes - official sampling - suspect sampling		Whole country	Single	19	3	3					
Gallus gallus (fowl) - broilers - day-old chicks		Whole country	Single	20	0						
Gallus gallus (fowl) - broilers - before slaughter - at farm - Control and eradication programmes - official and industry sampling		Whole country	Single	1152	16	5		1		3	
Ducks - breeding flocks, unspecified		Whole country	Single	1	0						

Table Salmonella in other poultry

	S. Infantis	S. Kottbus	S. Montevideo	S. Senftenberg	S. Virchow
Gallus gallus (fowl) - laying hens - day-old chicks [1)]					
Gallus gallus (fowl) - laying hens - during rearing period	1				
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes - official and industry sampling	1			2	5
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes - sampling by industry	1			1	4
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes - official sampling - objective sampling				1	1
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes - official sampling - suspect sampling					
Gallus gallus (fowl) - broilers - day-old chicks					
Gallus gallus (fowl) - broilers - before slaughter - at farm - Control and eradication programmes - official and industry sampling	2	2	1		2
Ducks - breeding flocks, unspecified					

Comments:

[1)] no information of existing flocks

Table Salmonella in other animals

	Source of information	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified	S. Dublin
Cattle (bovine animals) - adult cattle over 2 years		Animal	425	3	1	1		1
Cattle (bovine animals) - calves (under 1 year)		Animal	52	0				
Goats		Animal	23	0				
Pigs		Herd	64	0				
Pigs - breeding animals		Herd	29	0				
Pigs - fattening pigs		Herd	29	0				
Sheep		Herd	39	0				

Table Salmonella in other birds

	Source of information	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified
Guinea fowl		Animal	66	0			
Ostriches		Animal	1	0			
Partridges		Animal	49	0			
Pheasants		Animal	35	0			
Pigeons		Animal	9	0			
Quails		Animal	11	0			

2.1.5 Salmonella in feedingstuffs

Table Salmonella in compound feedingstuffs

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified
Pet food - dog snacks (pig ears, chewing bones)		Batch		115	0			

Table Salmonella in other feed matter

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified
Feed material of cereal grain origin - barley derived		Batch		1	0			
Feed material of cereal grain origin - wheat derived		Batch		1	0			
Feed material of oil seed or fruit origin - sunflower seed derived		Batch		24	0			

Table Salmonella in feed material of animal origin

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified
Feed material of land animal origin - dairy products		Batch		238	0			
Feed material of land animal origin - meat and bone meal		Batch		9	0			

2.1.6 Antimicrobial resistance in Salmonella isolates

A. Antimicrobial resistance in Salmonella in cattle

Sampling strategy used in monitoring

Frequency of the sampling

no data available

Type of specimen taken

no data available

Methods of sampling (description of sampling techniques)

no data available

Procedures for the selection of isolates for antimicrobial testing

no data available

Methods used for collecting data

no data available

Laboratory methodology used for identification of the microbial isolates

no data available

Laboratory used for detection for resistance

Antimicrobials included in monitoring

NDSRVMI -National Diagnostic Scientific Research Veterinary Medicine Institute,

Control program/mechanisms

The control program/strategies in place

no control program is drafted

Recent actions taken to control the zoonoses

no control program is drafted

Suggestions to the Community for the actions to be taken

no

Measures in case of the positive findings or single cases

The actions are in accordance with the Community legislation

Notification system in place

WAHIS

Results of the investigation

no data available

National evaluation of the recent situation, the trends and sources of infection

n/a

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

no data available

Additional information

no

B. Antimicrobial resistance in Salmonella in foodstuff derived from cattle

Sampling strategy used in monitoring

Frequency of the sampling

no data available

Type of specimen taken

no data available

Methods of sampling (description of sampling techniques)

no data available

Procedures for the selection of isolates for antimicrobial testing

no data available

Methods used for collecting data

no data available

Laboratory methodology used for identification of the microbial isolates

no data available

Laboratory used for detection for resistance

Antimicrobials included in monitoring

no data available

Cut-off values used in testing

no data available

Preventive measures in place

no data available

Control program/mechanisms

The control program/strategies in place

no data available

Recent actions taken to control the zoonoses

no data available

Suggestions to the Community for the actions to be taken

no data available

Measures in case of the positive findings or single cases

no data available

Notification system in place

WAHIS

Results of the investigation

no data available

National evaluation of the recent situation, the trends and sources of infection

no data available

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

no data available

Additional information

no

C. Antimicrobial resistance in Salmonella in foodstuff derived from pigs

Sampling strategy used in monitoring

Frequency of the sampling

The frequency of sampling is in accordance with the Regulation 2073/2005/EC

Methods of sampling (description of sampling techniques)

The methods of samling are in accordance with the Regulation 2073/2005/EC

Procedures for the selection of isolates for antimicrobial testing

In accordance with ISO 17604

Methods used for collecting data

With regard to the Community legislation

Laboratory used for detection for resistance

Antimicrobials included in monitoring

Erithoromycin
Ciprofoxacin
Tetracyclin
Streptomycin
Gentamycin

Preventive measures in place

The prevantive measures are in accordance with the Community legislation

Control program/mechanisms

The control program/strategies in place

In 2007 was implemented a control programmed for slaughter pigs. the results were reported to the EC

Recent actions taken to control the zoonoses

with regard to the Community legislation

Suggestions to the Community for the actions to be taken

no

Measures in case of the positive findings or single cases

The measures in case of the positive findings are in accordance wtih the European legislation

Notification system in place

WAHIS

National evaluation of the recent situation, the trends and sources of infection

n/a

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

n/a

Additional information

no

D. Antimicrobial resistance in Salmonella in foodstuff derived from poultry

Sampling strategy used in monitoring

Frequency of the sampling

In that sampling the ISO standard 18593 is used as a reference method.

Type of specimen taken

Samples are taken from processing areas and equipment used in food production, when such sampling is neces-sary for ensuring that the criteria are met

Methods of sampling (description of sampling techniques)

In that sampling the ISO standard 18593 is used as a reference method.

Laboratory used for detection for resistance

Antimicrobials included in monitoring

Erithromycin
Ciprofolaxacin
tetracyclin
Streptomycin
Gentamycin

Preventive measures in place

In accordance with the EU legislation

Control program/mechanisms

The control program/strategies in place

no

Recent actions taken to control the zoonoses

in accordance with the legislation

Suggestions to the Community for the actions to be taken

no

Measures in case of the positive findings or single cases

the measures are with regard to the Community legislation

Notification system in place

WAHIS

Results of the investigation

n/a

National evaluation of the recent situation, the trends and sources of infection

n/a

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

n/a

Additional information

no

E. Antimicrobial resistance in Salmonella in pigs

Sampling strategy used in monitoring

Frequency of the sampling

Sampling has to be differentiated by slaughterhouses that participate in the syrvey and proportional to their capacity. The NVS should categorize all slaughterhouses according to their admission capacities for fattening pigs during the preceding year. Thus the meat establishments in which 80% of all fattening pigs are slaughtered are defined.

The total number of pigs and slaughtered animals from which samples will be taken in each slaughterhouse included in the syrvey is to be forecasted by multiplying the number of the samples (for example 2400) by the ratio of the processed fattening pigs from the preceding year. For example, if the slaughterhousehas processed 25% slaughtered pigs from the selected slaughterhouses those that represent at least 80% of all slaughtered fattening pigs in the Member State), then (2400 Ã— 0,25) means 600 pigs from samples should be taken. This number has to be distributed evenly so that 50% are examined each month for a period of 12 months.

When a slaughterhouseis out of operation however because a new establishment has been opened or a significant change in the admission capacities of the establishment is envisaged for the period of the syrvey, the forecasted capacity is to be adjusted accordinggly.

Type of specimen taken

General sampling

â€“Packet of lymph nodes from the small intestines or at least five individual lymph nodes from the small intestines from all selected pigs. If possible, it is necessary to collect at least 25 g of lymph nodes free of fat and coonective tissue.

â€“Documentation shall be kept in the slaughterhouse for the date and time of each sampling, as well as date, time and name of the courier that has made the delivery.

Details concerning sampling from lymph nodes from the small intestines

It is necessary to rupture the mesentery between the blind gut and the part of the small intestines that is closest to the blind gut in such a manner that the lymph nodes from the small intestines show themselves in the ruptured and open area. Without usage of knife, only by fingers wrapped in a glove, the lymph nodes shall be taken directly from the mesentery thus opened, if individual lymph nodes are collected. The lymph nodes or the pack of them shall be placed in nylon envelope marked with the date, time, identification number of the slaughterhouseand the identification number of the sample.

Procedures for the selection of isolates for antimicrobial testing

n/a

Methods used for collecting data

All isolated strains should be kept in the national reference laboratories of the both Member States because only they guarantee the integrity of the strains for minimal period of 5 years.

Laboratory methodology used for identification of the microbial isolates

In cases where the sensibility to antimicrobic substances (option), it is necessary to use established and controlled test metod, such as the methods reccomended by the National Committee for Clinical Laboratory Standards (NCCLS, and after 1 January 2005 popular under the name Clinical Laboratory Standards Institute â€” CLSI).

The method of dilution in agar is accepted, as well as the broth dilution method. Results shall be reported as quantative data (minimal supressing concentrations) for the methods using solutions and diameter of the retaining zone for diffusion methods) and as qualitative data (proportionally resistant isolates).

The qualitative data should be based on interpretation against the epidemiological reduced values represented by the European Committee for Antimicrobic Substances Sensibility Testing (EUCAST) on Internet address: http://www.eucast.org.

Laboratory used for detection for resistance

Antimicrobials included in monitoring

â€“Ampicillin or Amoxicillin,
â€“Tetracycline,
â€“Chloramphenicol,
â€“Florfenicol,
â€“Nalidixic acid,
â€“Ciprofloxacin (preferred) or Enrofloxacin,
â€“Sulphonamide (Sulfametoxazole preferred),
â€“Sulphonamide/Trimethoprim or Trimethoprim,
â€“Gentamicin,
â€“Streptomycin,
â€“Kanamycin (preferred) or Neomycin,
â€“Third generation Cephalosporin, (Cefotaxime preferred),
â€“Colistin (option).

Cut-off values used in testing

n/a

Preventive measures in place

in accordance with the EU legislation

Control program/mechanisms

The control program/strategies in place

in 2007 was implemented the baseline survey for slaughter pigs

Recent actions taken to control the zoonoses

in accordance with the EU legislation

Suggestions to the Community for the actions to be taken

no

Measures in case of the positive findings or single cases

in accordance with the EU legislation

Notification system in place

WAHIS

Results of the investigation

The results were reported to EU

National evaluation of the recent situation, the trends and sources of infection

n/a

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

n/a

Additional information

no

F. Antimicrobial resistance in Salmonella in poultry

Sampling strategy used in monitoring

Frequency of the sampling

Sampling frame

â€¢within three weeks before the birds are moved to the slaughterhouse;

â€¢sampling shall include each year at least one flock of broilers on 10 % of the holdings with more than 5 000 birds.

Methods of sampling (description of sampling techniques)

boot swabs

Procedures for the selection of isolates for antimicrobial testing

n/a

Laboratory used for detection for resistance

Antimicrobials included in monitoring

Erythromycin
Ciprofloxacin
Tetracycline
Streptomycin
Gentamicin

Preventive measures in place

The birds must be destroyed or may be used for human consumption if they are treated in a manner that guarantees the elimination of Salmonella enteritidis and Salmonella typhimurium in accordance with Community legislation on food hygiene.

Control program/mechanisms

The control program/strategies in place

1. Antimicrobials shall not be used as a specific method to control Salmonella in pultry.
2. Antimicrobials may be used in the following exceptional circumstances:
â€¢poultry presenting salmonella infection with clinical signs in a way likely to cause undue suffering to the animals;
â€¢the infected flocks treated with antimicrobials shall still be considered infected with salmonella;
â€¢authorisation given by the NVS on a case-by-case basis for purposes other than salmonella control in a flock suspect of salmonella infection, in particular following the epidemiological investigation of a food-borne outbreak or the detection of salmonella at the holding;
3. The use of antimicrobials shall be subject to supervision of and reporting to the NVS. This use shall be based wherever possible on the results of bacteriological sampling and of susceptibility testing.

Suggestions to the Community for the actions to be taken

no

Measures in case of the positive findings or single cases

Control measures and notification of positive results

In case of suspicion or conformation of Salmonella enteritidis or Salmonella typhimurium the NRL shall notify immediately the NVS.

In case of suspicion of infection the NVS and the relevant authorities:

- prohibited the movement of broilers
- take additional samples for conformation of infection

When the broilers are confirmed for the presence of Salmonella enteritidis or Salmonella typhimurium:

1. Fresh meat from broilers may be placed on the market on the condition that it meets the requirement of absence of Salmonella in 25 grams from the meat.
2. The requirement laid down in point 1 does not apply to fresh poultry meat destined for heat treatment or another treatment to eliminate salmonella in accordance with Community legislation on food hygiene.
3. The criterion laid down in point 1 does not apply to fresh poultry meat destined for industrial heat treatment or another treatment to eliminate salmonella in accordance with Community legislation on food hygiene.

Results of the investigation

n/a

National evaluation of the recent situation, the trends and sources of infection

The samples taken and analysed for the purpose of control of salmonellosis in Republic of Bulgaria have been selected on the basis of risk analysis, the programmes being developed by the owners of industrial farms.

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

n/a

Additional information

no

Table Cut-off values for antibiotic resistance testing of Salmonella in Animals

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Amphenicols	Chloramphenicol		16	
Tetracyclines	Tetracycline		8	
Fluoroquinolones	Ciprofloxacin		0.06	
Quinolones	Nalidixic acid		16	
Trimethoprim	Trimethoprim		2	
Sulfonamides	Sulfonamides		256	
Aminoglycosides	Streptomycin		32	
	Gentamicin		2	
Cephalosporins	Cefotaxim		0.5	
Penicillins	Ampicillin		4	

Table Cut-off values for antibiotic resistance testing of Salmonella in Food

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Amphenicols	Chloramphenicol		16	
Tetracyclines	Tetracycline		8	
Fluoroquinolones	Ciprofloxacin		0.06	
Quinolones	Nalidixic acid		16	
Trimethoprim	Trimethoprim		2	
Sulfonamides	Sulfonamides		256	
Aminoglycosides	Streptomycin		32	
	Gentamicin		2	
Cephalosporins	Cefotaxim		0.5	
Penicillins	Ampicillin		4	

Table Cut-off values for antibiotic resistance testing of Salmonella in Feed

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Amphenicols	Chloramphenicol		16	
Tetracyclines	Tetracycline		8	
Fluoroquinolones	Ciprofloxacin		0.06	
Quinolones	Nalidixic acid		16	
Trimethoprim	Trimethoprim		2	
Sulfonamides	Sulfonamides		256	
Aminoglycosides	Streptomycin		32	
	Gentamicin		2	
Cephalosporins	Cefotaxim		0.5	
Penicillins	Ampicillin		4	

2.2 CAMPYLOBACTERIOSIS

2.2.1 General evaluation of the national situation

A. Thermophilic Campylobacter general evaluation

History of the disease and/or infection in the country

Bulgaria not tested for Campylobacter

2.2.2 Campylobacteriosis in humans

A. Thermophilic Campylobacter in humans

Reporting system in place for the human cases

A competent authority is a Ministry of health.

2.2.3 Campylobacter in foodstuffs

A. Thermophilic Campylobacter in Broiler meat and products thereof

Monitoring system

Sampling strategy

At slaughterhouse and cutting plant

Bulgaria not tested for Campylobacter

2.2.4 Campylobacter in animals

A. Thermophilic Campylobacter in Gallus gallus

Monitoring system

Sampling strategy

Bulgaria not tested for Campylobacter

Table Campylobacter in animals

	Source of information	Sampling unit	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni	C. lari	C. upsaliensis	Thermophilic Campylobacter spp., unspecified
Cattle (bovine animals) - dairy cows		Animal	222	0					

2.2.5 Antimicrobial resistance in Campylobacter isolates

A. Antimicrobial resistance in Campylobacter jejuni and coli in cattle

Sampling strategy used in monitoring

Frequency of the sampling

no data available

B. Antimicrobial resistance in Campylobacter jejuni and coli in foodstuff derived from cattle

Sampling strategy used in monitoring

Frequency of the sampling

no data available

C. Antimicrobial resistance in Campylobacter jejuni and coli in foodstuff derived from pigs

Sampling strategy used in monitoring

Frequency of the sampling

no data available

D. Antimicrobial resistance in Campylobacter jejuni and coli in foodstuff derived from poultry

Sampling strategy used in monitoring

Frequency of the sampling

no data available

E. Antimicrobial resistance in Campylobacter jejuni and coli in pigs

Sampling strategy used in monitoring

Frequency of the sampling

no data available

F. Antimicrobial resistance in Campylobacter jejuni and coli in poultry

Sampling strategy used in monitoring

Frequency of the sampling

no data available

Table Cut-off values used for antimicrobial susceptibility testing of Campylobacter in Animals

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Tetracyclines	Tetracycline		2	
Fluoroquinolones	Ciprofloxacin		1	
Aminoglycosides	Gentamicin		1	
	Streptomycin		2	
Macrolides	Erythromycin		4	

Table Cut-off values used for antimicrobial susceptibility testing of Campylobacter in Food

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Tetracyclines	Tetracycline		2	
Fluoroquinolones	Ciprofloxacin		1	
Aminoglycosides	Gentamicin		1	
	Streptomycin		2	
Macrolides	Erythromycin		4	

Table Cut-off values used for antimicrobial susceptibility testing of Campylobacter in Feed

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Tetracyclines	Tetracycline		2	
Fluoroquinolones	Ciprofloxacin		1	
Aminoglycosides	Gentamicin		1	
	Streptomycin		2	
Macrolides	Erythromycin		4	

2.3 LISTERIOSIS

2.3.1 General evaluation of the national situation

A. Listeriosis general evaluation

History of the disease and/or infection in the country

Last case 2004 - 23 sheep in Bourgas region

Recent actions taken to control the zoonoses

Annual vaccination in period Oct.-Feb. for all sheep in affected settlements

Suggestions to the Community for the actions to be taken

not yet

Additional information

no

2.3.2 Listeriosis in humans

A. Listeriosis in humans

Reporting system in place for the human cases

No data available.

Case definition

No data available.

Diagnostic/analytical methods used

No data available.

Notification system in place

No data available.

History of the disease and/or infection in the country

No data available.

Results of the investigation

No data available.

National evaluation of the recent situation, the trends and sources of infection

No data available.

Relevance as zoonotic disease

No data available.

Additional information

no

2.3.3 Listeria in foodstuffs

Table Listeria monocytogenes in other foods

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Listeria	Units tested with detection method	Listeria monocytogenes presence in x g	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Crustaceans - unspecified - cooked - at retail		Batch		50	0	21	0	29	0	0
Fish - smoked - at retail		Batch		207	3	42	3	165		
Meat from bovine animals - fresh		Batch		430	0	76	0	354	0	0
Meat from bovine animals - meat products - cooked, ready-to-eat - at retail		Batch		970	0	243	0	727	0	0
Meat from broilers (Gallus gallus) - fresh		Batch		2472	0	456	0	2016	0	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at retail		Batch		1721	3	324	3	1397		
Meat from pig - fresh		Batch		2379	2	598	2	1781		
Meat from pig - meat products - cooked, ready-to-eat - at retail		Batch		6517	3	945	3	5572		
Molluscan shellfish - cooked - at retail		Batch		10	0	3	0	7	0	0

Table Listeria monocytogenes in milk and dairy products

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Listeria	Units tested with detection method	Listeria monocytogenes presence in x g	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Cheeses made from cows' milk - hard - made from pasteurised milk - at retail		Batch		6929	0	1141	0	5788	0	0
Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - at retail		Batch		761	0	190	0	571	0	0
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at retail		Batch		2460	0	410	0	2050	0	0
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at retail		Batch		526	0	105	0	421	0	0
Cheeses made from goats' milk - hard - made from pasteurised milk - at retail		Batch		623	0	156	0	467	0	0
Cheeses made from goats' milk - hard - made from raw or low heat-treated milk - at retail		Batch		23	0	7	0	16	0	0
Cheeses made from goats' milk - soft and semi-soft - made from pasteurised milk - at retail		Batch		376	0	60	0	316	0	0
Cheeses made from goats' milk - soft and semi-soft - made from raw or low heat-treated milk - at retail		Batch		14	0	5	0	9	0	0
Cheeses made from sheep's milk - hard - made from pasteurised milk - at retail		Batch		1757	0	350	0	1407	0	0
Cheeses made from sheep's milk - hard - made from raw or low heat-treated milk - at retail		Batch		118	0	23	0	95	0	0
Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - at retail		Batch		413	0	54	0	359	0	0
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - at retail		Batch		25	0	6	0	19	0	0

Table Listeria monocytogenes in milk and dairy products

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Listeria	Units tested with detection method	Listeria monocytogenes presence in x g	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Dairy products (excluding cheeses) - butter - at retail		Batch		364	0	96	0	268	0	0
Dairy products (excluding cheeses) - cream - at retail		Batch		82	0	16	0	66	0	0
Milk, cows'		Batch		45	2	12	2	33		
Milk, cows' - pasteurised milk - at retail		Batch		2814	0	687	0	2127	0	0
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products		Batch		10	0	3	0	7	0	0

2.3.4 Listeria in animals

Table Listeria in animals

	Source of information	Sampling unit	Units tested	Total units positive for Listeria	L. monocytogenes	Listeria spp., unspecified
Cattle (bovine animals)		Animal	3	0		
Cattle (bovine animals) - dairy cows		Animal	6	0		
Gallus gallus (fowl)		Animal	46	0		
Goats		Animal	20	0		
Pigs		Animal	27	0		
Sheep		Animal	17	0		
Turkeys		Animal	1	0		

2.4 E. COLI INFECTIONS

2.4.1 General evaluation of the national situation

2.4.2 Escherichia coli, pathogenic in foodstuffs

Table VT E. coli in food

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Verotoxigenic E. coli (VTEC)	Verotoxigenic E. coli (VTEC) - VTEC O157	Verotoxigenic E. coli (VTEC) - VTEC non-O157	Verotoxigenic E. coli (VTEC) - VTEC, unspecified
Meat from bovine animals		Batch		20	0			
Meat from bovine animals - fresh - at retail		Batch		77	0			
Meat from bovine animals - minced meat - intended to be eaten raw - at retail		Batch		11	1			1
Meat from broilers (Gallus gallus)		Batch		75	0			
Meat from broilers (Gallus gallus) - fresh		Batch		393	0			
Meat from pig		Batch		50	0			
Meat from pig - fresh		Batch		247	0			
Meat from pig - minced meat - intended to be eaten raw		Batch		5	0			
Meat from turkey		Batch		15	0			
Milk, goats' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products		Batch		2950	0			

2.4.3 Escherichia coli, pathogenic in animals

Table VT E. coli in animals

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Verotoxigenic E. coli (VTEC)	Verotoxigenic E. coli (VTEC) - VTEC O157	Verotoxigenic E. coli (VTEC) - VTEC non-O157	Verotoxigenic E. coli (VTEC) - VTEC, unspecified
Cattle (bovine animals)		Animal		4	1			1
Cattle (bovine animals) - calves (under 1 year)		Animal		1	0			
Cattle (bovine animals) - dairy cows - at farm		Animal		1	1	1		
Poultry, unspecified		Animal		1	0			
Sheep - at farm		Animal		8	0			

2.5 TUBERCULOSIS, MYCOBACTERIAL DISEASES

2.5.1 General evaluation of the national situation

2.5.2 Mycobacterium in animals

A. Mycobacterium bovis in bovine animals

Status as officially free of bovine tuberculosis during the reporting year

The entire country free

Bulgaria still is not recognised as an officially free from tuberculosis country.

Free regions

no

Additional information

In 2000 5 new outbreaks of bovine tuberculosis were registered - 3 in Dobrich Region, 1 in Kardjali and 1 in Silistra.
In 2001 no new infections with bovine tuberculosis were found.
In 2002 2 outbreaks of bovine tuberculosis were found, 1 in Kardjali Region and 1 in VelkoTarnovo Region.
In 2003 no outbreak of bovine tuberculosis were registered.
In 2004 only one outbreak of bovine tuberculosis was found in Pazardjik Region.
In 2005 only one outbreak was found in the village of Lenovo, Plovdiv Region.
In 2006 there was no outbreak of bovine tuberculosis.
In 2007 there was no outbreak of bovine tuberculosis.

Monitoring system

Sampling strategy

Until 2004 the bovine herbs were examined for bovine tuberculosis twice a year. Since the beginning of 2005 subject to annual testing have been all bovine animals over 42 days of age, during spring, and during autumn - only the newborn calves over 42-days age, in accordance with the requirements of Annex B to Directive 97/12.

Description of the submitted programme:
-Testing of bovines in animal holdings over 42 days of age;
-Differential tuberculization 42 days later of all suspect and positive animals using bovine or poultry tuberculine;
-Examination after 69 days with double dose of tuberculine (0,2 ml);
-Detailed epizootic survey;
-Slaughter of positive bovines;
-Payment of compensations to the owners of compulsory slaughtered animals;
-Placing on the market of the products obtained from the slaughtered animals.

Frequency of the sampling

every time of slaughter of positive bovines.

Methods of sampling (description of sampling techniques)

lymph nodes in afected area

Case definition

In 2007 there was no outbreak of bovine tuberculosis.

Diagnostic/analytical methods used

the laboratory examination for bovine tuberculosis shall be carried out in the Diagnostics Reference Laboratory for Tuberculosis at the National Research Veterinary Institute (NRVI), Sofia

Vaccination policy

no - intradermal examinations with bovine tuberculine (tuberculization)

Other preventive measures than vaccination in place

differential examination (with bovine and poultry tuberculine) and examinations with double dose of tuberculine (0,2 ml)

Control program/mechanisms

The control program/strategies in place

have control program in place

Recent actions taken to control the zoonoses

-Testing of bovines in animal holdings over 42 days of age;
-Differential tuberculization 42 days later of all suspect and positive animals using bovine or poultry tuberculine;
-Examination after 69 days with double dose of tuberculine (0,2 ml);
-Detailed epizootic survey;
-Slaughter of positive bovines;
-Payment of compensations to the owners of compulsory slaughtered animals;
-Placing on the market of the products obtained from the slaughtered animals

Suggestions to the Community for the actions to be taken

no

Measures in case of the positive findings or single cases

-Detailed epizootic survey;
-Slaughter of positive bovines;
-Payment of compensations to the owners of compulsory slaughtered animals;
-Placing on the market of the products obtained from the slaughtered animals

Notification system in place

WAHIS

Results of the investigation

In 2007 there was no outbreak of bovine tuberculosis

National evaluation of the recent situation, the trends and sources of infection

Bulgaria would like to become a status as a tuberculosis free country

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

no data available

Additional information

no

B. Mycobacterium bovis in farmed deer

Monitoring system

Sampling strategy

BG haven't monitoring strategy for farmed deers

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

Region	Total number of existing bovine		Officially free herds		Infected herds		Routine tuberculin testing		Number of tuberculin tests carried out before the introduction into the herds (Annex A(I)(2)(c) third indent (1) of Directive 64/432/EEC)	Number of animals with suspicious lesions of tuberculosis examined and submitted to histopathological and bacteriological	Number of animals detected positive in bacteriological examination
	Herds	Animals	Number of herds	%	Number of herds	%	Interval between routine tuberculin tests	Number of animals tested			
Belgique-België	12760	1127803	0	0	0	0	once a year	116937		7	
Total : [1)]	12760	1127803	0	0	0	0	N.A.	116937	0	7	0

Comments:

[1)] N.A.

2.6 BRUCELLOSIS

2.6.1 General evaluation of the national situation

A. Brucellosis general evaluation

History of the disease and/or infection in the country

The Republic of Bulgaria has been free of the Bovine Brucellosis since 1958.

From the date of eradication of the disease till 1998 subject to mandatory annual testing were all bovine animals over 12 months of age. In 1998 the surveillance scheme for Bovine Brucellosis was changed to cover the testing of 100% of the animals reared in the border municipalities along the borders with the Republic of Turkey, the Republic of Greece, Macedonia (FYROM) and the Republic of Serbia, 50% of the bovine animals reared in the regions bordering the abovementioned countries and 25% of the bovine animals reared in the regions inside the country.
For the other municipalities of the country the testing for brucellosis is carried out in accordance with Annex A, Chapter I, paragraph B. Maintenance of the status of Council Directive 91/68.

In 2003 and 2004 100% of the bovine animals over 12 months of age were tested for Bovine Brucellosis as the Republic of Bulgaria was in process of EU accession.

In 2005 all bovine animals over 24 months of age were tested pursuant to the requirements of Annex A, Section II, Subparagraph 8 of Directive 1997/12 aimed at maintaining the status of a region officially free of bovine brucellosis (Brucella abortus).

In 2007 all bovine animals over 12 months of age are subject to testing.

Since 1958 all test results for Brucella abortus have been negative. The animals tested in the last 7 years they are as follows:
2000 â€“ 157 427 bovine animals;
2001 â€“ 126 836 bovine animals;
2002 â€“ 126 633 bovine animals;
2003 â€“ 359 770 bovine animals;
2004 â€“ 339 657 bovine animals;
2005 - 327 311 bovine animals;
2006 â€“ 357 809 bovine animals;

Since 2005 the abortions of bovine animals are subject to mandatory notification and testing pursuant to the requirements of Directive 64/432/Ð•Ð¡, whereas the cows that have had an abortion are tested serologically immediately after the abortion and a second time 15 days after that. For 2005 the number of the cows that had had an abortion was 92 bovine animals, for 2006 â€“ 96 bovine animals whereas all of them have had negative results for the presence of Brucella abortus.

National evaluation of the recent situation, the trends and sources of infection

Contact between Bulgarian ruminants and ruminants from neighboring countries

Illegal import of ruminants from neighboring countries to Bulgaria

Relevance of the findings in animals, feedingstuffs and foodstuffs to human cases (as a source of infection)

n/a

Recent actions taken to control the zoonoses

No

Suggestions to the Community for the actions to be taken

No

Additional information

no

2.6.2 Brucella in animals

A. Brucella abortus in bovine animals

Status as officially free of bovine brucellosis during the reporting year

The entire country free

Bulgaria is not recognized as officially free of bovine brucellosis during 2008

Free regions

Bulgaria is not recognized as officially free of bovine brucellosis during 2008

Additional information

no

Monitoring system

Sampling strategy

In Bulgaria the samling strategy is an individual testing of 100% of the bovine animals over 12 months of age.

Frequency of the sampling

The frequency of testing is according to:
- the salughtering of all bovine animals over 12 months of age and -Slaughtering of the animals that have shown a positive reaction for enzootic bovine leucosis.
- testing twice of all animals with slipping- after the slipping and 15- 20 days after that.
-twice serological sampling of male animals
- serological sampling of all imported from third countries animals.

Case definition

The reporting of positive cases is through WAHIS system

Diagnostic/analytical methods used

rose bengal, SAT, Complement fixation test and ELISA

Vaccination policy

No vaccination is carried out

Other preventive measures than vaccination in place

No

Control program/mechanisms

The control program/strategies in place

In the year 2008 the PROGRAM will be implemented by the National Veterinary Service of the Republic of Bulgaria for Bovine Brucellosis diagnostics aimed at maintaining the status of a country officially free from Bovine Brucellosis

Recent actions taken to control the zoonoses

All positive animals are stampt out. After kiling of animals, premices are disinfected. All killed animals are destructed in the randering plants.

Suggestions to the Community for the actions to be taken

NO

Notification system in place

WAHIS

National evaluation of the recent situation, the trends and sources of infection

The presumed source of infection is illegal trade of large rumminance between BG and Greece.

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

No data available

Additional information

No

B. Brucella melitensis in goats

Status as officially free of caprine brucellosis during the reporting year

The entire country free

The Republic of Bulgaria is not recognized as officially free country

Free regions

n/a

Monitoring system

Sampling strategy

With regard to the State Prophylaxis Programme all small and large ruminants, and equines bred on the territory of the border municipalities next to Republic of Turkey, Republic of Greece, Former Yugoslav Republic of Macedonia and Republic of Serbia have to be tested for Brucellosis once a year.
For the other municipalities of the country the testing for brucellosis is carried out in accordance with Annex A, Chapter I, paragraph B. Maintenance of the status of Council Directive 91/68.

Methods of sampling (description of sampling techniques)

Blood samples; faetus and placenta

Case definition

Outbreak of brucella melitensis in the the village of Valchio pole, municipality of Lubimets, administrative district of Haskovo

Date of confirmation â€“ 20.08.2007
Affected 22 small ruminants kept in 11 backyards of private subsistence farmer living in that village.
In the village of Valche pole there are totally 648 small ruminants (263 goats, 8 billy- goats, 365 sheep and 12 rams), 43 large ruminants and 92 equidae.
All large ruminants and equines gave negative results for brucellosis.

Diagnostic/analytical methods used

ELISA, Rose bengal test, CFT

Vaccination policy

Not implemented

Other preventive measures than vaccination in place

n/a

Control program/mechanisms

The control program/strategies in place

National Veterinary Service has taken all the measures in accordance with the Council Directive 91/68/Đ•Đ¡ namely:
ban of movement of the small, large ruminants and equidae to and out of the village Valche pole;
Counting of all susceptible animals in the village;
Serological testing of all susceptible animals;
ban of movement of milk, dairy products, feeding staff and etc;
the isolation of all positive animals and their destruction after the Laboratory conformation;

Information to the public of all risks, with regard to the disease and the measures which have to be taken of the prevention.
On 21.08.2007, 129 small ruminants and 1 dog kept in the affected 11 backyards were killed and send to the rendering plant Varna, town of Varna.

Suggestions to the Community for the actions to be taken

no

Measures in case of the positive findings or single cases

After the case of Brucellosis in village of Valche pole a team of experts from NVS in Sofia made large epidemiological investigation.
This investigation showed us that in town of Harmanli in 2005 were collected stolen goats from border regions of Greece.
Those goats were collected in non-registered farm and for this reason they were not tested for Brucellosis under the National Prophylaxis Program for 2005 and 2006.
On 11.09.2007 after total serological sample taken of whole population of small ruminants we found 43 positive animals in town of Harmanli.

Notification system in place

WAHIS

National evaluation of the recent situation, the trends and sources of infection

Contact between Bulgarian ruminants and ruminants from neighboring countries

Illegal import of ruminants from neighboring countries to Bulgaria

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

n/a

Additional information

no

C. Brucella melitensis in sheep

Status as officially free of ovine brucellosis during the reporting year

The entire country free

The Republic of Bulgaria is not recognized as officially free of ovine brucellosis during the 2008.

Free regions

-

Monitoring system

Sampling strategy

female ovine and caprine animals in breeding age and non-castrated male animals more than 6 months old

Frequency of the sampling

Taking samples of:
-all female animals near the borders with Greece and Turkey
- 25 % of all female animals in each herd
- in herds with less then 50 female animals the saples are taken of each female animal
- all male animals of age more then 6 mounths.
-serological testing of all slipping animals- after the slipping and 15 days after that
- serological testin of all animals imported from third countries due to quarantine period

Methods of sampling (description of sampling techniques)

Blood samples for serological testing

Diagnostic/analytical methods used

rose bengal, SAT and Complement fixation test

Vaccination policy

No vaccination in Bulgaria

Other preventive measures than vaccination in place

no

Control program/mechanisms

The control program/strategies in place

in the year 2008 is implemented the PROGRAM by the National Veterinary Service of the Republic of Bulgaria for Ovine Brucellosis diagnostics aimed at maintaining the status of a country officially free of Ovine Brucellosis

Suggestions to the Community for the actions to be taken

No

Notification system in place

WAHIS

Additional information

the information is given in the previous table

Table Brucellosis in other animals

	Source of information	Sampling unit	Units tested	Total units positive for Brucella	B. abortus	B. melitensis	B. suis	Brucella spp., unspecified
Pigs		Animal	90107	1			1	
Zoo animals, all - at AI station		Animal	5	1				1

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

Region	Total number of existing		Officially free herds		Infected herds		Surveillance			Investigations of suspect cases				
	Herds	Animals	Number of herds	%	Number of herds	%	Number of herds tested	Number of animals tested	Number of infected herds	Number of animals tested with serological blood tests	Number of animals positive serologically	Number of animals examined microbio logically	Number of animals positive microbio logically	Number of suspended herds
Belgique-België	27478	4234357	0	0	0	0	27675	404984	0	133301	0	0	0	0
Total : [1)]	27478	4234357	0	0	0	0	27675	404984	0	133301	0	0	0	0

Comments:

[1)] N.A.

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

Region	Total number of existing bovine		Officially free herds		Infected herds		Surveillance						Investigations of suspect cases								
							Serological tests			Examination of bulk milk			Information about			Epidemiological investigation					
	Herds	Animals	Number of herds	%	Number of herds	%	Number of bovine herds tested	Number of animals tested	Number of infected herds	Number of bovine herds tested	Number of animals or pools tested	Number of infected herds	Number of notified abortions whatever cause	Number of isolations of Brucella infection	Number of abortions due to Brucella abortus	Number of animals tested with serological blood tests	Number of suspended herds	Number of positive animals		Number of animals examined microbio logically	Number of animals positive microbio logically
																		Sero logically	BST		
Belgique-België	127060	1127803	0	0	0	0	33507	207888								36419					
Total : [1)]	127060	1127803	0	0	0	0	33507	207888	0	0	0	0	0	0	0	36419	0	0	0	0	0

Comments:

[1)] N.A.

2.7 YERSINIOSIS

2.7.1 General evaluation of the national situation

A. Yersinia enterocolitica general evaluation

History of the disease and/or infection in the country

no data available

National evaluation of the recent situation, the trends and sources of infection

no data available

Relevance of the findings in animals, feedingstuffs and foodstuffs to human cases (as a source of infection)

no data available

Recent actions taken to control the zoonoses

no data available

Suggestions to the Community for the actions to be taken

no

Additional information

no

2.7.2 Yersiniosis in humans

A. Yersinosis in humans

Reporting system in place for the human cases

no data available

Case definition

no data available

Diagnostic/analytical methods used

no data available

Notification system in place

no data available

History of the disease and/or infection in the country

no data available

Results of the investigation

no data available

National evaluation of the recent situation, the trends and sources of infection

no data available

Relevance as zoonotic disease

no data available

Additional information

no

2.7.3 Yersinia in animals

A. Yersinia enterocolitica in pigs

Monitoring system

Sampling strategy

Animals at farm

no monitoring system in place

Animals at slaughter (herd based approach)

no monitoring system in place

Methods of sampling (description of sampling techniques)

Animals at farm

no monitoring system in place

Animals at slaughter (herd based approach)

no monitoring system in place

Case definition

Animals at farm

no monitoring system in place

Animals at slaughter (herd based approach)

no monitoring system in place

Vaccination policy

no vaccination policy in place

Other preventive measures than vaccination in place

no prevantive measures in place

Control program/mechanisms

The control program/strategies in place

no control program in place

Recent actions taken to control the zoonoses

no

Suggestions to the Community for the actions to be taken

not yet

Measures in case of the positive findings or single cases

no positive cases

Notification system in place

no

Results of the investigation

no invastigation

National evaluation of the recent situation, the trends and sources of infection

no control program on place

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

no data available

Additional information

no

2.8 TRICHINELLOSIS

2.8.1 General evaluation of the national situation

A. Trichinellosis general evaluation

National evaluation of the recent situation, the trends and sources of infection

mandatory testing for all slaughtered pigs and aquine;
mandatory testing for all hunted boars (wild pigs), bears and badger.

Relevance of the findings in animals, feedingstuffs and foodstuffs to human cases (as a source of infection)

no data available.

Recent actions taken to control the zoonoses

mandatory testing for all slaughtered pigs and aquine;
mandatory testing for all hunted boars (wild pigs), bears and badger.

Suggestions to the Community for the actions to be taken

no

Additional information

no

2.8.2 Trichinellosis in humans

A. Trichinellosis in humans

Reporting system in place for the human cases

no data available

Case definition

no data available

Diagnostic/analytical methods used

no data available

Notification system in place

no data available

History of the disease and/or infection in the country

no data available

Results of the investigation

no data available

Description of the positive cases detected during the reporting year

no data available

National evaluation of the recent situation, the trends and sources of infection

no data available

Relevance as zoonotic disease

no data available

Additional information

no

2.8.3 Trichinella in animals

A. Trichinella in horses

Monitoring system

Sampling strategy

mandatory testing for all slaughtered equine;

Frequency of the sampling

depens of slaughtering

Type of specimen taken

masseters, musculus intracostalis

Methods of sampling (description of sampling techniques)

destructive and compresion method

Case definition

not defined

Diagnostic/analytical methods used

only postmortem investigation

Results of the investigation including the origin of the positive animals

no positive animals

Control program/mechanisms

The control program/strategies in place

no control program in place

Recent actions taken to control the zoonoses

no control program in place

Suggestions to the Community for the actions to be taken

no

Measures in case of the positive findings or single cases

carcase destruction in randering plant, disinfection and deratisation in place of origin.

Notification system in place

WAHIS

Monitoring system

Sampling strategy

For categories of holdings officially recognised Trichinella-free

no control program in place

Bulgaria is not recognised like Trichinella-free country

National evaluation of the recent situation, the trends and sources of infection

no control program in place

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

no data available

Additional information

no

B. Trichinella in pigs

Number of officially recognised Trichinella-free holdings

0

Categories of holdings officially recognised Trichinella-free

0

Officially recognised regions with negligible Trichinella risk

0

Monitoring system

Sampling strategy

General

testing of all slaughtered domestic and East- Balkan pigs;
testing of all hunted wild pigs

For Trichinella free holdings

no monitoring system

For categories of holdings officially recognised Trichinella-free

no monitoring system

For regions with negligible Trichinella risk

no monitoring system

Frequency of the sampling

General

no monitoring system

For Trichinella free holdings

no monitoring system

For categories of holdings officially recognised Trichinella-free

no monitoring system

For regions with negligible Trichinella risk

no monitoring system

Type of specimen taken

General

diafragm muscle

For Trichinella free holdings

diafragm muscle

For categories of holdings officially recognised Trichinella-free

diafragm muscle

For regions with negligible Trichinella risk

diafragm muscle

Methods of sampling (description of sampling techniques)

General

compresion method,
destructive method

For Trichinella free holdings

no monitoring system

compresion method,
destructive method

For categories of holdings officially recognised Trichinella-free

no monitoring system

compresion method,
destructive method

For regions with negligible Trichinella risk

no monitoring system

compresion method,
destructive method

Case definition

General

no monitoring system

For Trichinella free holdings

no monitoring system

For categories of holdings officially recognised Trichinella-free

no monitoring system

For regions with negligible Trichinella risk

no monitoring system

Diagnostic/analytical methods used

General

no monitoring system

compresion method,
destructive method

For Trichinella free holdings

no monitoring system

compresion method,
destructive method

For categories of holdings officially recognised Trichinella-free

no monitoring system

compresion method,
destructive method

For regions with negligible Trichinella risk

no monitoring system

compresion method,
destructive method

Preventive measures in place

no

Control program/mechanisms

The control program/strategies in place

no

Summary results of the inspections of Trichinella-free holdings including information on farmer compliance

no control program

Recent actions taken to control the zoonoses

no control program

Suggestions to the Community for the actions to be taken

no

Measures in case of the positive findings or single cases

destruction of carcases in randering plants, deratisations

The contingency plan in place

no

Notification system in place

WAHIS

Results of the investigation including description of the positive cases and the verification of the Trichinella species

Fattening pigs raised under controlled housing conditions in integrated production system

We not found Trichinela in Bulgaria in those kind of farms.

Fattening pigs not raised under controlled housing conditions in integrated production system

We found only Trichinela spiralis in Bulgaria in those kind of farms.

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

no data available

Additional information

no

Table Trichinella in animals

	Source of information	Sampling unit	Units tested	Total units positive for Trichinella	T. spiralis	Trichinella spp., unspecified
Bears		Animal	1	0		
Pigs		Animal	35427	4	4	
Pigs - breeding animals - unspecified - sows and boars		Animal	6519	37	2	35
Pigs - fattening pigs - not raised under controlled housing conditions in integrated production system		Animal	926	9	2	7
Pigs - fattening pigs - raised under controlled housing conditions in integrated production system		Animal	341424	1	1	
Solipeds, domestic - horses		Single	5519	0		
Wild boars - farmed		Single	67	0		
Wild boars - wild		Single	6780	0		

2.9 ECHINOCOCCOSIS

2.9.1 General evaluation of the national situation

A. Echinococcus spp. general evaluation

History of the disease and/or infection in the country

Invastigation for this disease start after 1950.Until 1995, human case of Echinococcus decrease.
From 1996 start again increasing of cases.

Echinococcus have in whole country, but highly affected are the next regions:
for bovine - Sofia - 37%, Bourgas - 31.6%, Haskovo - 28%;
for sheep - Vratza - 29%, Pernik - 24%, Sliven - 23%, Varna - 32%.

National evaluation of the recent situation, the trends and sources of infection

Echinococcus is big problem for Bulgaria.

Analisis of the situation after 2000 in inspected carcases in slaughter houses shows increasing of cases:
bovine - from 9.17% to 17.91%;
sheep - from 5.17% to 7.5%;
swine - from 0.8% to 2.19%.

carrier:
sheep dogs - 78%, strey dogs - 57%, home dogs - 31%, hunter dogs - 16%

Relevance of the findings in animals, feedingstuffs and foodstuffs to human cases (as a source of infection)

Main reasons for big number of human cases are:
1. Partial registration of home dogs and not full dehelmentisation;
2. Many strey dogs, on practise - without dehelmentisation;
3. Not all infected viscera is destroed in randering plants.

Recent actions taken to control the zoonoses

we have national program for control of Echinococcus in humans and animals between 2004 and 2008.

Suggestions to the Community for the actions to be taken

no

Additional information

no

2.9.2 Echinococcus in animals

Table Echinococcus in animals

	Source of information	Sampling unit	Units tested	Total units positive for Echinococcus	E. granulosus	E. multilocularis	Echinococcus spp., unspecified
Cattle (bovine animals)		Animal	38300	1945	1945		
Dogs		Animal	90	0			
Goats		Animal	4149	434	434		
Pigs		Animal	531631	574	574		
Reindeers		Animal	245	0			
Sheep		Animal	581285	40538	40538		
Solipeds, domestic		Animal	6647	0			

2.10 TOXOPLASMOSIS

2.10.1 General evaluation of the national situation

2.10.2 Toxoplasma in animals

Table Toxoplasma in animals

	Source of information	Sampling unit	Units tested	Total units positive for Toxoplasma	T. gondii
Cats		Animal	11	0	

2.11 RABIES

2.11.1 General evaluation of the national situation

A. Rabies general evaluation

History of the disease and/or infection in the country

In our country rabies disease has been spreading mainly in North Bulgaria. The total number of cases confirmed in Bulgaria since the beginning of 1988 up to the end of 2005 is 507, of which 484 cases (95.5%) are in North Bulgaria (to the north of Stara Planina mountain chain that divides the country into two) and only 23 (4.5%) are the cases identified in South Bulgaria, not a single case of rabies being identified in South Bulgaria during all the previous 8 years (see Table 1 in the Annex).

Wild predatory animals are the reservoir of rabies virus in our country, and these are mainly foxes and of less rates jackals. Of all the 529 animals found sick of rabies within the time-period 1988 â€“ 2005, 262 are wild animals (49.5%), 229 (87.4%) of which being foxes (Table 2).

TABLE 2. Types and numbers of rabies diseased animals (1988 â€“ 2005)

YearTotalDomestic Animals /livestock/DogsCatsFoxesJackalsOther species
198884393-42--
198978382-37-1
199035116-18--
19912093-7-1
19922316--7--
199342244-12-2
19941410--4--
19951246-2--
199630103215--
19971615-82-
1998941121-
199925113-11--
200023114143-
2001627743842
200216---3112
20031732-10-2
2004115-14-1
200512212511
ÐžÐ±Ñ‰Ð¾:52920550112291222

Highest is the number of rabies cases registered in spring and less are the cases registered in autumn-winter seasons, those identified in summer being the lowest (Table 3). This is due to ecological and biological specifics of the fox populations in our country. The spring pick of the disease is related to the reproduction period of foxes, while the autumn-winter rising trend is due to seeking and demand of living area manifested by young foxes.

TABLE 3

MonthIIIIIIIIVVVIVIIVIIIIXXXIXII
Rabies cases172016341517101410131914

The reason for the definitely predominant spread of rabies in North Bulgaria should be linked with geographic specifics of the country. North Bulgaria is separated from the Southern parts of the country through a natural geographic barrier, i.e. the Balkans Chain (Stara Planina mountain chain) and it acts as a natural barrier for the spread of rabies from north to south. Alongside the whole southern border line of Bulgaria with Turkey and Greece there is still an existing border-fencing facility (netted fence), which plays the role of a barrier preventing the passage of animals. The eastern areas of the country are also bordered by a natural geographic barrier, the Black Sea. To the north Bulgaria borders with Rumania through another natural water frontier, the river Danube, but there is a also a land border of 130 km length that could enable passage of animals. To the west, Bulgariaâ€™s land borders with Yugoslavia and Macedonia are predominantly of mountainous relief, but there are some areas of plane relief (Northwest Bulgaria).

National evaluation of the recent situation, the trends and sources of infection

As until now, there is not any individual administrative district (county) in North Bulgaria, where there has not been any rabies case confirmed. Observations show that each year there are rabies cases identified in an average of 6 to 7 of the total of 14 administrative districts of North Bulgaria.

Of the total of 529 animals found sick within the aforementioned time-period (1988-2005), 205 (38.7%) are livestock animals (cows, sheep, goats and horses). This high sickness rate among these type of animals is due to specifics of their keeping, since they spend substantial time grazing on pastures where the likelihood of contacts with wild animals is much higher (see Table 2).

The species and numbers of wild predatory animals in North Bulgaria are given in Table 4.

TABLE 4. Species and Numbers of Wild Predatory Animals in North Bulgaria

Animal SpeciesWolvesJackalsFoxesStray Dogs
Numbers90213 45017 72310 427

For the period 01.01 â€“ 07.12.2006 in Bulgaria were found 9 outbreaks of rabies on the territory of 5 regions (table 5, figure 1)
RVS:19881989199019911992199319941995199619971998199920002001200220032004 2005
Blagoevgrad----------
Burgas11----1----------
Varna----------3----
Vidin-177-121-211--81821
Vratsa148414572-114511211-
Veliko Tarnovo73---11-2-11-3-422
Gabrovo33---2----------
Dobrich-----11146--14--43
Kyustendil----------
Kardzhali----------
Lovech10189--7221--1-122--

Montana341311-9111-2-1214---3
Pazardzhik----------
Pernik----1--1----------
Pleven66-35-23411216173-1-
Plovdiv5-------1---------
Razgrad1-2--3-23----1----
Ruse-31---111---------
Silistra11----11-2--1----2
Sliven-2----------
Smolyan----------
Sofia-town----------
Sofia-district1-132----------
Stara Zagora------1----------
Targovishte13---7-1241--1242--
Haskovo-----1---1--------
Shumen----------3373---
Yambol----------
TOTAL:847835202342141223169142361151710 11

Relevance of the findings in animals, feedingstuffs and foodstuffs to human cases (as a source of infection)

n/a

Suggestions to the Community for the actions to be taken

not yet

Additional information

no

2.11.2 Lyssavirus (rabies) in animals

A. Rabies in dogs

Monitoring system

Sampling strategy

Samples shall be taken of all suspected, shown clinical signs and found dead dogs.

Frequency of the sampling

In any case of suspected, shown clinical signs and found dead dogs.

Methods of sampling (description of sampling techniques)

Laboratory control will be effected in the National Diagnostic and Research Veterinary Medical Institute (NDRVMI) in Sofia. The following is the method to be used for exercising this control:

IFT-test - direct immune-fluorescent test for detecting the presence of the rabies virus.

Case definition

Sick from Rabies animals are: animals, shown clinical signs for Rabies and the diagnose is confirmed from the laboratory.

Vaccination policy

All dogs in Bulgaria shall be vaccinated each year.
After lab confirmation of any case in animals, all dogs, cats and pastured animals in affected settlement should be vaccinated again.

Other preventive measures than vaccination in place

All dogs should be tied and could not leave alone yards.

Control program/mechanisms

The control program/strategies in place

Each year the minister of agriculture and food suply shall approve STATE PROFILAXIS PROGRAME, where is included all rabies control measures.

Recent actions taken to control the zoonoses

The information is included in previous pages.

Suggestions to the Community for the actions to be taken

not yet

Measures in case of the positive findings or single cases

After lab confirmation of any positive case in animals, all dogs, cats and pastured animals in affected settlement should be vaccinated again.

Notification system in place

All positive cases have been notified through a WAHIS system.

National evaluation of the recent situation, the trends and sources of infection

Wild predatory animals are the reservoir of rabies virus in our country, and these are mainly foxes and of less rates jackals. Of all the 529 animals found sick of rabies within the time-period 1988 â€“ 2005, 262 are wild animals (49.5%), 229 (87.4%) of which being foxes. Highest is the number of rabies cases

registered in spring and less are the cases registered in autumn-winter seasons, those identified in summer being the lowest. This is due to ecological and biological specifics of the fox populations in our country. The spring pick of the disease is related to the reproduction period of foxes, while the autumn-winter rising trend is due to seeking and demand of living area manifested by young foxes.

Additional information

No

Table Rabies in animals

	Source of information	Sampling unit	Units tested	Total units positive for Lyssavirus (rabies)	Lyssavirus, unspecified	Classical rabies virus (genotype 1)	European Bat Lyssavirus - unspecified
Bats - wild		Animal	1	0		0	
Cats		Animal	6	2		2	
Cats - stray cats		Animal	3	1		1	
Cattle (bovine animals)		Animal	3	1		1	
Deer - wild - fallow deer		Animal	1	0		0	
Dogs		Animal	23	3		3	
Dogs - stray dogs		Animal	25	0		0	
Foxes - wild		Animal	397	47		47	
Goats		Animal	6	1		1	
Sheep		Animal	34	2		2	
Jackals		Animal	8	2		2	

2.12 Q-FEVER

2.12.1 General evaluation of the national situation

A. Coxiella burnetii (Q-fever) general evaluation

History of the disease and/or infection in the country

The BG has information about the disease from 1997
1997
cattle: tested- 27820, possitive - 260
sheep: tested- 38027, possitive - 455
1998
cattle: tested- 26688, possitive - 375
sheep: tested- 3806, possitive - 15
1999
cattle: tested- 5740, possitive - 67
sheep: tested- 3923, possitive - 38
2000
cattle: tested- 3659, possitive - 8
sheep: tested- 2254, possitive - 25
2001
cattle: tested- 2528, possitive - 43
sheep: tested- 2658, possitive - 41
2002
cattle: tested- 2524, possitive - 166
sheep: tested- 2706, possitive - 238
2003
cattle: tested- 2961, possitive - 69
sheep: tested- 1813, possitive - 12
2004
cattle: tested- 3895, possitive - 125
sheep: tested- 4113, possitive - 94
2005
cattle: tested- 3296, possitive - 110
sheep: tested- 2758, possitive - 114
2006
cattle: tested- 2787, possitive - 67
sheep: tested- 2319, possitive - 35

National evaluation of the recent situation, the trends and sources of infection

In the BG the source of infection for the animals are the rodents. Each farm have to implement the stricct bio- security measures and to implement the rodent control.

Relevance of the findings in animals, feedingstuffs and foodstuffs to human cases (as a source of infection)

n/a

Recent actions taken to control the zoonoses

When a farm is inspected by an official veterinarian, the latter has also to perform a thorough check of all the actions concerning the rodent control in respective holding.

Suggestions to the Community for the actions to be taken

no

Additional information

no

2.12.2 Coxiella (Q-fever) in animals

Table Coxiella burnetii (Q fever) in animals

	Source of information	Sampling unit	Units tested	Total units positive for Coxiella (Q-fever)	C. burnetii
Cattle (bovine animals)		Animal	3353	161	161
Goats		Animal	774	58	58
Sheep		Animal	1709	116	116

3. INFORMATION ON SPECIFIC INDICATORS OF ANTIMICROBIAL RESISTANCE

3.1 ESCHERICHIA COLI, NON-PATHOGENIC

3.1.1 General evaluation of the national situation

3.1.2 Antimicrobial resistance in Escherichia coli, non-pathogenic

Table Cut-off values used for antimicrobial susceptibility testing of Escherichia coli, non-pathogenic in Animals

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Amphenicols	Chloramphenicol		16	
Tetracyclines	Tetracycline		8	
Fluoroquinolones	Ciprofloxacin		0.03	
Quinolones	Nalidixic acid		16	
Trimethoprim	Trimethoprim		2	
Sulfonamides	Sulfonamides		256	
Aminoglycosides	Streptomycin		16	
	Gentamicin		2	
Cephalosporins	Cefotaxim		0.25	

Table Cut-off values used for antimicrobial susceptibility testing of Escherichia coli, non-pathogenic in Animals

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Penicillins	Ampicillin		8	

Table Cut-off values used for antimicrobial susceptibility testing of Escherichia coli, non-pathogenic in Food

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Amphenicols	Chloramphenicol		16	
Tetracyclines	Tetracycline		8	
Fluoroquinolones	Ciprofloxacin		0.03	
Quinolones	Nalidixic acid		16	
Trimethoprim	Trimethoprim		2	
Sulfonamides	Sulfonamides		256	
Aminoglycosides	Streptomycin		16	
	Gentamicin		2	
Cephalosporins	Cefotaxim		0.25	
Penicillins	Ampicillin		8	

Table Cut-off values used for antimicrobial susceptibility testing of Escherichia coli, non-pathogenic in Feed

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Amphenicols	Chloramphenicol		16	
Tetracyclines	Tetracycline		8	
Fluoroquinolones	Ciprofloxacin		0.03	
Quinolones	Nalidixic acid		16	
Trimethoprim	Trimethoprim		2	
Sulfonamides	Sulfonamides		256	
Aminoglycosides	Streptomycin		16	
	Gentamicin		2	
Cephalosporins	Cefotaxim		0.25	
Penicillins	Ampicillin		8	

3.2 ENTEROCOCCUS, NON-PATHOGENIC

3.2.1 General evaluation of the national situation

3.2.2 Antimicrobial resistance in Enterococcus, non-pathogenic isolates

Table Cut-off values for antibiotic resistance of Enterococcus, non-pathogenic in Animals

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Streptomycin		512	
	Gentamicin		32	
Amphenicols	Chloramphenicol		32	
Penicillins	Ampicillin		4	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin		4	
Macrolides	Erythromycin		4	
Streptogramins	Quinupristin/Dalfopristin		32	
Tetracyclines	Tetracycline		2	
Oxazolidines	Linezolid		4	

Table Cut-off values for antibiotic resistance of Enterococcus, non-pathogenic in Food

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Streptomycin		512	
	Gentamicin		32	
Amphenicols	Chloramphenicol		32	
Penicillins	Ampicillin		4	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin		4	
Macrolides	Erythromycin		4	
Streptogramins	Quinupristin/Dalfopristin		32	
Tetracyclines	Tetracycline		2	
Oxazolidines	Linezolid		4	

Table Cut-off values for antibiotic resistance of Enterococcus, non-pathogenic in Feed

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Streptomycin		512	
	Gentamicin		32	
Amphenicols	Chloramphenicol		32	
Penicillins	Ampicillin		4	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin		4	
Macrolides	Erythromycin		4	
Streptogramins	Quinupristin/Dalfopristin		32	
Tetracyclines	Tetracycline		2	
Oxazolidines	Linezolid		4	

4. INFORMATION ON SPECIFIC MICROBIOLOGICAL AGENTS

4.1 ENTEROBACTER SAKAZAKII

4.1.1 General evaluation of the national situation

4.2 HISTAMINE

4.2.1 General evaluation of the national situation

4.2.2 Histamine in foodstuffs

Table Histamine in food

	Source of information	Sampling unit	Sample weight	Units tested	Total units in non-conformity	<= 100 mg/kg	>100 - <= 200 mg/kg	>200 - <= 400 mg/kg	> 400 mg/kg
Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme maturated [1)]		Batch		183	0	183			
Fish - Fishery products which have undergone enzyme maturation treatment in brine [2)]		Batch		76	0	76			

Comments:

[1)] no data for sampling weight

[2)] no data for sampling weight

4.3 STAPHYLOCOCCAL ENTEROTOXINS

4.3.1 General evaluation of the national situation

4.3.2 Staphylococcal enterotoxins in foodstuffs

Table Staphylococcal enterotoxins in food

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Staphylococcal enterotoxins
Cheeses made from cows' milk		Batch		1670	0
Cheeses made from cows' milk - hard		Batch		1833	0
Cheeses made from cows' milk - soft and semi-soft		Batch		140	0
Cheeses made from goats' milk		Batch		190	0
Cheeses made from goats' milk - hard		Batch		190	0
Cheeses made from sheep's milk		Batch		1875	0
Cheeses made from sheep's milk - hard - made from pasteurised milk		Batch		1709	0
Cheeses made from sheep's milk - soft and semi-soft		Batch		205	0

5. FOODBORNE

Foodborne outbreaks are incidences of two or more human cases of the same disease or infection where the cases are linked or are probably linked to the same food source. Situation, in which the observed human cases exceed the expected number of cases and where a same food source is suspected, is also indicative of a foodborne outbreak.

A. Foodborne outbreaks

System in place for identification, epidemological investigations and reporting of foodborne outbreaks

no data available

Table Foodborne Outbreaks: summarised data

	Total number of outbreaks	Outbreaks	Human cases	Hospitalized	Deaths	Number of verified outbreaks
Bacillus	0	0	unknown	unknown	unknown	0
Campylobacter	0	0	unknown	unknown	unknown	0
Clostridium	0	0	unknown	unknown	unknown	0
Escherichia coli, pathogenic	0	0	unknown	unknown	unknown	0
Foodborne viruses	0	0	unknown	unknown	unknown	0
Listeria	0	0	unknown	unknown	unknown	0
Other agents	0	0	unknown	unknown	unknown	0
Parasites	0	0	unknown	unknown	unknown	0
Salmonella	0	0	unknown	unknown	unknown	0
Staphylococcus	0	0	unknown	unknown	unknown	0
Unknown	0	0	unknown	unknown	unknown	0
Yersinia	0	0	unknown	unknown	unknown	0