



BULGARIA

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

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

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

IN 2007

INFORMATION ON THE REPORTING AND MONITORING SYSTEMCountry: **Bulgaria**Reporting Year: **2007****Institutions and laboratories involved in reporting and monitoring:**

Laboratory name	Description	Contribution
		Brucelloses, Bruceloidoses, Leptospirosis, Malleus, Enzoitic Bovine Leucosis, Salmonellosis, Trichinellosis, Anthrax, TSE, CSF, Rabies, Tubercullosis
		Brucelloses, Bruceloidoses, Leptospirosis, Malleus, Enzoitic Bovine Leucosis, Salmonellosis, Trichinellosis, Anthrax, TSE, CSF, Rabies, Tubercullosis
		Brucelloses, Bruceloidoses, Leptospirosis, Malleus, Enzoitic Bovine Leucosis, Salmonellosis, Trichinellosis, Anthrax, TSE, CSF, Rabies, Tubercullosis
		Brucelloses, Bruceloidoses, Leptospirosis, Malleus, Enzoitic Bovine Leucosis, Salmonellosis, Trichinellosis, Anthrax
		Brucelloses, Bruceloidoses, Leptospirosis, Malleus, Enzoitic Bovine Leucosis, Salmonellosis, Trichinellosis, Anthrax
		Brucelloses, Bruceloidoses, Leptospirosis, Malleus, Enzoitic Bovine Leucosis, Salmonellosis, Trichinellosis, Anthrax
		Brucelloses, Bruceloidoses, Leptospirosis, Malleus, Enzoitic Bovine Leucosis, Salmonellosis, Trichinellosis, Anthrax
		Brucelloses, Bruceloidoses, Leptospirosis, Malleus, Enzoitic Bovine Leucosis, Salmonellosis, Trichinellosis, Anthrax

PREFACE

This report is submitted to the European Commission in accordance with Article 9 of Council Directive 2003/99/EC¹. 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 2007. 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.

¹ 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 diostriacts. 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

Animal species	Category of animals	Number of herds or flocks		Number of slaughtered animals		Livestock numbers (live animals)		Number of holdings	
			Year*		Year*		Year*		Year*
Cattle (bovine animals)	dairy cows and heifers					377068			
	calves (under 1 year)					184722			
	in total			32054		56868		199165	2008
Ducks	in total					1806950		111	2007
Gallus gallus (fowl)	breeding flocks for meat production line - in total							29	2007
	laying hens					4186178		115	2007
	broilers					8565207		138	2007
	in total			47035551					
Geese	in total			4444642		111074			
Goats	milk goats					483743			
	animals under 1 year					264333			
Pigs	in total			25392		754051			
	in total			515466		710569	2008	41068	2008
Sheep	milk ewes					1391974	2008		
	animals under 1 year (lambs)					667807	2008		
	in total			769298		2075862	2008	122581	2008
Solipeds, domestic	horses - in total					175899	2008		
Turkeys	breeding flocks, unspecified - in total							6	2007
	in total			23963		32074		6	2007
Wild boars	farmed - in total	57646				57646			

Footnote

The number of sheep holdings include also goat's holdings - we don't have separate data.
About the existing breeding flocks in accordance with p.17, there are no data available.

2. INFORMATION ON SPECIFIC ZOOSES AND ZOOBOTIC 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;

feecal 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 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.

B. 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

C. 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.

D. 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 monitorins 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

E. 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.

2.1.4. Salmonella in animals

A. Salmonella spp. in Gallus gallus - breeding flocks for egg production and flocks of laying hens

Monitoring system

Sampling strategy

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

SAMPLING CARRIED OUT BY THE OWNER OF THE HOLDING OR BY A PERSON AUTHORISED BY THE OWNER

1. Sampling at the hatchery – The sample for every breeding flock shall consist of at least one composite sample of faeces of one-day old chickens taken at random from five separate hatcher baskets or locations in the hatcher to reach a total of at least 1sq.m. When the hatching eggs from a breeding flock occupy more than one incubator, one composite sample shall be taken from each incubator. In cases where hatcher basket liners are not used, 10g broken eggshells shall be taken from 25 separate hatcher baskets, crushed, mixed and 25 g sub sample taken.

2. Sampling at the holding

– Within 4 weeks following moving to laying unit

– Towards the end of the laying phase but not earlier than 8 weeks before the end of the production cycle;

OFFICIAL CONTROL SAMPLING

- Sampling at the hatchery: at every two weeks

- Sampling at the holding: 0, 4, 16,26, 34 and every 8 weeks. The sampling shall cover the each production unit: parents, grandparents and elite.

Laying hens flocks

SAMPLING CARRIED OUT BY THE OWNER OF THE HOLDING OR BY A PERSON AUTHORISED BY THE OWNER.

Laying flocks shall be sampled at the initiative of the food business operator (operator) and by the National Veterinary Service (NVS) of Bulgaria as a competent authority.

Sampling at the initiative of the operator shall take place at least every fifteen weeks.

The first sampling shall take place at the age of 24 ± 2 weeks.

OFFICIAL CONTROL SAMPLING

NVS shall take samples at least:

(a) in one flock per year per holding comprising at least 1 000 birds;

(b) at the age of 24 ± 2 weeks in laying flocks housed in buildings where salmonella was detected in the preceding flock;

(c) in any case of suspicion of Salmonella Enteritidis or Salmonella Typhimurium infection, as a result of the epidemiological investigation of food-borne outbreaks in accordance with Article 8 of Directive 2003/ 99/ EC of the European Parliament and of the Council (1);

(d) in all other laying flocks on the holding in case Salmonella Enteritidis or

Salmonella Typhimurium are detected in one laying flock on the holding;
(e) in cases where the NVS considers it appropriate.

Methods of sampling (description of sampling techniques)

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

Faecal sampling to detect Salmonella in case that there is 1% prevalence within the flock, with 95% confidence limit is effected by:

I. Pooled faeces made up of separate samples of fresh faeces each weighing not less than 1 g, taken at random from a number of sites in the building in which the birds are kept.

If the birds are kept in several buildings a pooled sample shall be taken from each building. Faeces shall be pooled for analyses up to a minimum of two pools.

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

1. Sampling at the hatchery – The sample for every breeding flock shall consist of at least one composite sample of faeces of one-day old chickens taken at random from five separate hatcher baskets or locations in the hatcher to reach a total of at least 1sq.m. When the hatching eggs from a breeding flock occupy more than one incubator, one composite sample shall be taken from each incubator. In cases where hatcher basket liners are not used, 10g broken eggshells shall be taken from 25 separate hatcher baskets, crushed, mixed and 25 g sub sample taken.

2. Sampling at the holding

– Within 4 weeks following moving to laying unit

– Towards the end of the laying phase but not earlier than 8 weeks before the end of the production cycle;

OFFICIAL CONTROL SAMPLING

- Sampling at the hatchery: at every two weeks

or

- Sampling at the holding: 0, 4, 16, 26, 34 and every 8 weeks. The sampling shall cover the each production unit: parents, grandparents and elite.

Where Salmonella is detected in hatchery additional samples shall be taken from the holding for confirmation. The laboratory shall notify the NVS about the testing results.

Laying hens: Day-old chicks

Sampling at the hatchery – The sample for every breeding flock shall consist of at least one composite sample of faeces of one-day old chickens taken at random from five separate hatcher baskets or locations in the hatcher to reach a total of at least 1sq.m. When the hatching eggs from a breeding flock occupy more than one incubator, one composite sample shall be taken from each incubator. In cases where hatcher basket liners are not used, 10g broken eggshells shall be taken from 25 separate hatcher baskets, crushed, mixed and 25 g sub sample taken

Laying hens: Rearing period

SAMPLING CARRIED OUT BY THE OWNER OF THE HOLDING OR BY A PERSON AUTHORISED BY THE OWNER.

Laying flocks shall be sampled at the initiative of the food business operator (operator) and by the National Veterinary Service (NVS) of Bulgaria as a competent authority.

Sampling at the initiative of the operator shall take place at least every fifteen weeks.

The first sampling shall take place at the age of 24 ± 2 weeks.

OFFICIAL CONTROL SAMPLING

NVS shall take samples at least:

- (a) in one flock per year per holding comprising at least 1 000 birds;
- (b) at the age of 24 ± 2 weeks in laying flocks housed in buildings where salmonella was detected in the preceding flock;
- (c) in any case of suspicion of Salmonella Enteritidis or Salmonella Typhimurium infection, as a result of the epidemiological investigation of food-borne outbreaks in accordance with Article 8 of Directive 2003/ 99/ EC of the European Parliament and of the Council (1);
- (d) in all other laying flocks on the holding in case Salmonella Enteritidis or Salmonella Typhimurium are detected in one laying flock on the holding;
- (e) in cases where the NVS considers it appropriate.

Laying hens: Production period

Faecal sampling to detect Salmonella in case that there is 1% prevalence within the flock, with 95% confidence limit is effected by:

I. Pooled faeces made up of separate samples of fresh faeces each weighing not less than 1 g, taken at random from a number of sites in the building in which the birds are kept.

If the birds are kept in several buildings a pooled sample shall be taken from each building. Faeces shall be pooled for analyses up to a minimum of two pools

Laying hens: Before slaughter at farm

- Boot swabs used shall be sufficiently absorptive to soak up moisture. Tube gauze "socks" are also acceptable.

The surface of the boot swabs shall be moistened using appropriate sterile diluent (such as 0, 8% sodium chloride, 0, 1% peptone)

Walking around shall be done in a manner which will sample representatively all parts of the sector, including littered and slatted areas. All separate pens within a house shall be included in sampling.

On completion of sampling in the chosen sector, boot swabs must be removed carefully so as not to dislodge adherent material for analyses.

The boot swabs shall be pooled into a minimum of two pools.

In cases of increased mortality carcass material is sent for testing of Salmonella and Salmonella infector.

Laying hens: At slaughter

The NVS take samples for Salmonellosis in slaughterhouses according with the

requirements of COMMISSION REGULATION (EC) No 2073/ 2005 of 15 November 2005 on microbiological criteria for foodstuffs.

Sampling rules for poultry carcasses:

For the Salmonella analyses, a minimum of 15 carcasses shall be sampled at random during each sampling session and after chilling. A piece of approximately 10 g from neck skin shall be obtained from each carcass. On each occasion the neck skin samples from three carcasses shall be pooled before examination in order to form 5 x 25 g final samples.

When the requirements for Salmonella in minced meat, meat preparations and meat products intended to be eaten cooked of all species are fulfilled, the batches of those products placed on the market must be clearly labelled by the manufacturer in order to inform the consumer of the need for thorough cooking prior to consumption.

Eggs at packing centre (flock based approach)

according Reg. 2160/ 2003/ EC

Vaccination policy

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

In Republic of Bulgaria the use of vaccines for the control of salmonella in poultry is not prohibited.

In the official register of veterinary medicine products there are registered and approved vaccines for Salmonella spp. for birds. The owners of the holdings could use only the approved by NVS vaccines in the way indicate by the official veterinarian responsible for the poultry holdings.

When the samples have been taken from vaccinated poultry, the letter accompanying any such samples to the laboratory must specify the type and time of vaccination. The objective is to ensure proper basis for differentiation between vaccination and field strain in accordance with Regulation (EC) 1177/ 2005.

B. Salmonella spp. in Gallus gallus - breeding flocks for meat production and broiler flocks

Monitoring system

Sampling strategy

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

we have common monitoring program for all breeding flocks (for meat production and for egg production) and the strategy is discribed in the previous table.

C. 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

D. 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.

E. 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.

F. 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 beginning of 2008

Fattening herds

The sampling strategy is in accordance with the Commission Decision (2007/ 219/ EO)

G. 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

Table Salmonella in breeding flocks of Gallus gallus

	Source of information	Sampling unit	Units tested	Total units positive for Salmonella spp.	S. Enteritidis	S. Typhimurium	S. Hadar	S. Infantis	S. Virchow	Salmonella spp., unspecified
Gallus gallus (fowl)										
parent breeding flocks for egg production line										
day-old chicks	NDRVI	flock	10	0						
during production period	NDRVI	flock	140	0						
parent breeding flocks for meat production line										
day-old chicks	NDRVI	flock	12	0						
during rearing period	NDRVI	flock	15	0						
during production period	NDRVI	flock	108	0						
parent breeding flocks, unspecified										
during production period	NDRVI	flock	12	0						

Table Salmonella in other poultry

	Source of information	Sampling unit	Units tested	Total units positive for Salmonella spp.	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified
Gallus gallus (fowl)							
laying hens							
day-old chicks	NDRVI	flock	11	0			
during rearing period	NDRVI	flock	1511	0			
during production period	NDRVI	flock	10	0			
broilers							
day-old chicks	NDRVI	flock	5	0			
during rearing period	NDRVI	flock	766	0			
unspecified							
during production period	NDRVI	flock	4	0			
Ducks							
meat production flocks	NDRVI	animal	77	64			64
Turkeys							
meat production flocks		animal	6	6			6

Table Salmonella in other birds

	Source of information	Sampling unit	Units tested	Total units positive for Salmonella spp.	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified
Pigeons		animal	7	0			
Quails		animal	3	3			3
Pheasants		animal	1	0			
Partridges		animal	28	28			28
Ostriches		animal	1	1			1
Starlings							
- in total - Survey		animal	2	0			

Table Salmonella in other animals

	Source of information	Sampling unit	Units tested	Total units positive for Salmonella spp.	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified
Cattle (bovine animals)		animal	27	0			
calves (under 1 year)		animal	19	0			
adult cattle over 2 years	NDRVI	animal	6	0			
Sheep	NDRVI	animal	22	0			
Goats	NDRVI	animal	6	0			
Pigs	NDRVI	animal	26	0			
fattening pigs	NDRVI	animal	17	0			
Solipeds, domestic		animal					
horses							
- in total - Surveillance		animal	1	0			
Deer							
farmed							
- from hunting - Survey		animal	12	0			
Rabbits							
- in total - Surveillance		animal	3	0			
Wild boars							
- in total - Survey		animal	27	0			

2.1.5. Salmonella in feedingstuffs

Table Salmonella in feed material of animal origin

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella spp.	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified
Feed material of land animal origin								
dairy products		batch	500g	2928				
meat and bone meal		batch	500g	35				
poultry offal meal		animal		5				
animal fat		batch	25g	2				
Feed material of marine animal origin								
fish meal		batch	500g	5				

Table Salmonella in other feed matter

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella spp.	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified
Feed material of cereal grain origin								
barley derived		batch	25g	1				
other cereal grain derived		batch	25g	1				
Feed material of oil seed or fruit origin								
sunflower seed derived		batch	25g	9				
Other feed material								
legume seeds and similar products		batch	25g	1				
forages and roughages		batch	1kg	5				
other plants		batch	1kg	1				

Table Salmonella in compound feedingstuffs

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella spp.	S. Typhimurium	S. Enteritidis	Salmonella spp., unspecified
Compound feedingstuffs for cattle								
process control		single		18	0			
final product		single	1000g	6	0			
Compound feedingstuffs for pigs								
final product		single		1	0			
Compound feedingstuffs for poultry (non specified)								
final product		single		1	0			
Pet food								
dog snacks (pig ears, chewing bones)		single	25g	9	0			

2.1.6. Salmonella serovars and phagetype distribution

The methods of collecting, isolating and testing of the Salmonella isolates are described in the chapters above respectively for each animal species, foodstuffs and humans. The serotype and phagetype distributions can be used to investigate the sources of the Salmonella infections in humans. Findings of same serovars and phagetypes in human cases and in foodstuffs or animals may indicate that the food category or animal species in question serves as a source of human infections. However as information is not available from all potential sources of infections, conclusions have to be drawn with caution.

2.1.7. Antimicrobial resistance in Salmonella isolates

Antimicrobial resistance is the ability of certain microorganisms to survive or grow in the presence of a given concentration of antimicrobial agent that usually would kill or inhibit the microorganism species in question. Antimicrobial resistant Salmonella strains may be transferred from animals or foodstuffs to humans.

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 pigs

Sampling strategy used in monitoring

Frequency of the sampling

Sampling has to be differentiated by slaughterhouses that participate in the survey 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 survey 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 slaughterhouse has processed 25% slaughtered pigs from the selected slaughterhouses those that represent at least 80% of all slaughtered fattening pigs in the Member State), then $(2400 \times 0,25)$ 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 slaughterhouse is 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 survey, the forecasted capacity is to be adjusted accordingly.

Type of specimen taken

General sampling

– 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 connective tissue.

– 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 slaughterhouse and 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 antimicrobial substances (option), it is necessary to use established and controlled test method, such as the methods recommended by the National Committee for Clinical Laboratory Standards (NCCLS, and after 1 January 2005 popular under the name Clinical Laboratory Standards Institute — CLSI).

The method of dilution in agar is accepted, as well as the broth dilution method. Results shall be reported as quantitative data (minimal suppressing 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 Antimicrobial Substances Sensibility Testing (EUCAST) on Internet address: [http:// www.eucast.org](http://www.eucast.org).

Laboratory used for detection for resistance

Antimicrobials included in monitoring

- Ampicillin or Amoxicillin,
- Tetracycline,
- Chloramphenicol,
- Florfenicol,
- Nalidixic acid,
- Ciprofloxacin (preferred) or Enrofloxacin,
- Sulphonamide (Sulfametoxazole preferred),
- Sulphonamide/ Trimethoprim or Trimethoprim,
- Gentamicin,
- Streptomycin,
- Kanamycin (preferred) or Neomycin,

- Third generation Cephalosporin, (Cefotaxime preferred),
- Colistin (option).

Breakpoints 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

C. Antimicrobial resistance in Salmonella in poultry

Sampling strategy used in monitoring

Frequency of the sampling

Sampling frame

- within three weeks before the birds are moved to the slaughterhouse;
- 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 poultry.
2. Antimicrobials may be used in the following exceptional circumstances:
 - poultry presenting salmonella infection with clinical signs in a way likely to cause undue suffering to the animals;
 - the infected flocks treated with antimicrobials shall still be considered infected with salmonella;
 - 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

D. 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

Breakpoints 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

E. 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 sampling 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 preventive 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 with 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

F. 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 necessary 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

Table Breakpoints for antibiotic resistance testing in Feedingstuff

Test Method Used _____

Standards used for testing _____

Salmonella	Standard for breakpoint	Breakpoint concentration (microg/ ml)			Range tested concentration (microg/ ml)		Disk content microg	Breakpoint Zone diameter (mm)		
		Susceptible <=	Intermediate	Resistant >	lowest	highest		Susceptible >=	Intermediate	Resistant <=
Amphenicols										
	Chloramphenicol									
	Florfenicol									
Tetracyclines										
	Tetracyclin									
Fluoroquinolones										
	Ciprofloxacin									
	Enrofloxacin									
Quinolones										
	Nalidixic acid									
Trimethoprim										
Sulfonamides										
	Sulfonamide									
Aminoglycosides										
	Streptomycin									
	Gentamicin									
	Neomycin									
	Kanamycin									
Trimethoprim + sulfonamides										
Cephalosporins										
	3rd generation cephalosporins									
Penicillins										
	Ampicillin									

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

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 pigs

Sampling strategy used in monitoring

Frequency of the sampling

no data available

C. Antimicrobial resistance in Campylobacter jejuni and coli in poultry

Sampling strategy used in monitoring

Frequency of the sampling

no data available

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

Sampling strategy used in monitoring

Frequency of the sampling

no data available

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

Sampling strategy used in monitoring

Frequency of the sampling

no data available

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

Sampling strategy used in monitoring

Frequency of the sampling

no data available

Table Breakpoints used for antimicrobial susceptibility testing in Feedingstuff

Test Method Used _____

Standards used for testing _____

Campylobacter	Standard for breakpoint	Breakpoint concentration (microg/ ml)			Range tested concentration (microg/ ml)		Disk content microg	Breakpoint Zone diameter (mm)		
		Susceptible <=	Intermediate	Resistant >	lowest	highest		Susceptible >=	Intermediate	Resistant <=
Tetracyclines										
Tetracyclin										
Fluoroquinolones										
Ciprofloxacin										
Quinolones										
Nalidixic acid										
Aminoglycosides										
Gentamicin										
Macrolides										
Erythromycin										
Penicillins										
Ampicillin										

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 milk and dairy products

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for L.monocytogenes	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
Milk, cows'		batch	200ml	25	1	25	1	0		
raw milk for manufacture										
intended for manufacture of raw or low heat-treated products		batch	200ml.	387	0	387		0		
pasteurised milk										
- at processing plant		batch	250ml.	479	0	479		0		
Cheeses made from cows' milk										
soft and semi-soft										
made from raw or low heat-treated milk										
- at processing plant		single	200g	3314	3	3314	3	0		
made from pasteurised milk										
- at processing plant		single	250g	1282	0	1282		0		
hard										
made from raw or low heat-treated milk										
- at processing plant		single	200g	334	0	334		0		
made from pasteurised milk										
- at processing plant		single	200g	3089	0	3089		0		
Cheeses made from goats' milk										
soft and semi-soft										
made from raw or low heat-treated milk										
- at processing plant		single	200g	5	0	5		0		
made from pasteurised milk										
- at processing plant		single	200g	68	0	68		0		
hard										
made from raw or low heat-treated milk										
- at processing plant		single	250g	1	0	1		0		

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made from pasteurised milk - at processing plant									
	single	250	91	0	91		0		
Cheeses made from sheep's milk									
soft and semi-soft									
made from raw or low heat-treated milk - at processing plant	single	200g	170	0	170		0		
made from pasteurised milk - at processing plant	single	200g	275	0	275		0		
hard									
made from raw or low heat-treated milk - at processing plant	single	200g	404	0	404		0		
made from pasteurised milk - at processing plant	single	200g	53	0	53		0		
Dairy products (excluding cheeses)									
butter - at processing plant	single	150g	231	0	231		0		
cream - at processing plant	single	150g	446	0	446		0		
yoghurt - at processing plant - Monitoring	single	400g	1180	0	1180		0		
ice-cream - at processing plant - Monitoring	single	200g	68	0	68		0		

Table Listeria monocytogenes in other foods

	Source of information	Sampling unit	Sample weight	Units tested	Total units positive for L.monocytogenes	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
Meat from broilers (Gallus gallus)										
fresh		single	1kg	4661	15	4661	15	0		
meat products										
cooked, ready-to-eat										
- at processing plant		single	300g	171	0	171		0		
Meat from pig										
fresh		single	300g	394	7	394	7	0		
meat products										
cooked, ready-to-eat										
- at processing plant		single	300g	4174	11	4174		0		
Meat from bovine animals										
fresh		single	100g	213	0	213		0		
meat products										
cooked, ready-to-eat										
- at processing plant		single	100g	138	0	138		0		
Fish										
smoked										
- at processing plant		single	200g	130	2	130	2	0		
Crustaceans										
unspecified										
cooked										
- at processing plant		single	200g	150	0	150		0		
Other products of animal origin										
- at retail - Monitoring (other ready-to-eat meat products)		single	100g	4793	8	4793		0		

2.3.4. Listeria in animals

Table Listeria in animals

	Source of information	Sampling unit	Units tested	Total units positive for Listeria spp.	L. monocytogenes	Listeria spp., unspecified
Cattle (bovine animals)						
dairy cows	RDVI- Stara Zagora	animal	3			
Ducks						
- Surveillance	RDVI- Stara Zagora	animal	31			

2.4. E. COLI INFECTIONS**2.4.1. General evaluation of the national situation****2.4.2. E. Coli Infections in humans****2.4.3. Escherichia coli, pathogenic in foodstuffs****Table VT E. coli in food**

	Source of information	Sampling unit	Sample weight	Units tested	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 broilers (Gallus gallus)		single	1kg	962	1			1
Meat from pig								
fresh		single	300g	270				
minced meat								
intended to be eaten raw		single	200g	1944	4			4
Meat from bovine animals								
fresh								
- at slaughterhouse		single	200g	148				
minced meat								
intended to be eaten raw								
- at processing plant		single	200g	1529	4			4
Milk, cows'								
raw		single	100g	11				

2.4.4. Escherichia coli, pathogenic in animals

Table VT E. coli in animals

	Source of information	Sampling unit	Sample weight	Units tested	Verotoxigenic E. coli (VTEC)	Verotoxigenic E. coli (VTEC) - VTEC O157	Verotoxigenic E. coli (VTEC) - VTEC non-O157	Verotoxigenic E. coli (VTEC) - VTEC, unspecified
Poultry, unspecified		animal		158	2			2
Dogs		animal		1	0			

2.5. TUBERCULOSIS, MYCOBACTERIAL DISEASES

2.5.1. General evaluation of the national situation

2.5.2. Tuberculosis, Mycobacterial Diseases in humans

2.5.3. 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 herds 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 affected 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 tuberculin (tuberculization)

Other preventive measures than vaccination in place

differential examination (with bovine and poultry tuberculin) and examinations with double dose of tuberculin (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 tuberculin;
- Examination after 69 days with double dose of tuberculin (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 Tuberculosis in other animals

	Source of information	Sampling unit	Units tested	Total units positive for Mycobacterium spp.	M. bovis	M. tuberculosis	Mycobacterium spp., unspecified
Pigs	NDRI	single	1	0	0		

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 – 157 427 bovine animals;

2001 – 126 836 bovine animals;

2002 – 126 633 bovine animals;

2003 – 359 770 bovine animals;

2004 – 339 657 bovine animals;

2005 - 327 311 bovine animals;

2006 – 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/ EC, 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 – 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. Brucellosis in humans

2.6.3. Brucella in foodstuffs

2.6.4. 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 2007

Free regions

Bulgaria is not recognized as officially free of bovine brucellosis during 2007

Additional information

no

Monitoring system

Sampling strategy

In Bulgaria the sampling 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 slaughtering 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 stamp out. After killing of animals, premises are disinfected. All killed animals are destructed in the rendering 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 ruminance 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 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 2007.

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 samples are taken of each female animal
- all male animals of age more then 6 months.
- serological testing of all slipping animals- after the slipping and 15 days after that
- serological testing 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 will be 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

C. 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 – 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/ EC 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

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. Yersiniosis 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 foodstuffs

2.7.4. 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 preventive 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 investigation

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 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 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

diaaphragm muscle

For Trichinella free holdings

diaaphragm muscle

For categories of holdings officially recognised Trichinella-free

diaaphragm muscle

For regions with negligible Trichinella risk

diaaphragm muscle

Methods of sampling (description of sampling techniques)

General

compression method,
destructive method

For Trichinella free holdings

no monitoring system
compression method,
destructive method

For categories of holdings officially recognised Trichinella-free

no monitoring system
compression method,
destructive method

For regions with negligible Trichinella risk

no monitoring system
compression 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

compression method,

destructive method

For Trichinella free holdings

no monitoring system

compression method,

destructive method

For categories of holdings officially recognised Trichinella-free

no monitoring system

compression method,

destructive method

For regions with negligible Trichinella risk

no monitoring system

compression 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 carcasses in rendering 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 Trichinella in Bulgaria in those kind of farms.

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

We found only Trichinella 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

B. Trichinella in horses

Monitoring system

Sampling strategy

mandatory testing for all slaughtered equine;

For categories of holdings officially recognised Trichinella-free

no control program in place

Bulgaria is not recognised like Trichinella-free country

Frequency of the sampling

depends of slaughtering - de facto for 2006 we haven't slaughtering

Type of specimen taken

masseters, musculus intracostalis

Methods of sampling (description of sampling techniques)

destructive and compression 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 rendering plant, disinfection and deratisation in place of origin.

Notification system in place

WAHIS

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

Table Trichinella in animals

	Source of information	Sampling unit	Units tested	Total units positive for Trichinella spp.	T. spiralis	Trichinella spp., unspecified
Pigs						
fattening pigs						
raised under controlled housing conditions in integrated production system		animal	31823	4	3	1
breeding animals unspecified						
sows and boars		animal	25565	1		1
Solipeds, domestic						
horses		animal	1			
Wild boars						
wild		animal	563	2		2
farmed		animal	1450	24	2	22
Bears		animal	1			

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

Investigation 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.

Analysis of the situation after 2000 in inspected carcasses 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%, stray 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 stray dogs, on practise - without dehelmentisation;
3. Not all infected viscera is destroyed in rendering 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. Echinococcosis in humans**2.9.3. Echinococcus in animals****Table Echinococcus in animals**

	Source of information	Sampling unit	Units tested	Total units positive for Echinococcus spp.	E. granulosus	E. multilocularis	Echinococcus spp., unspecified
Goats		animal	1	1			1
Reindeers		animal	67				
Dogs		animal	177	6			6

2.10. TOXOPLASMOSIS

2.10.1. General evaluation of the national situation

2.10.2. Toxoplasmosis in humans

2.10.3. Toxoplasma in animals

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 – 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 – 2005)

Year Total Domestic Animals / livestock/ Dogs Cats Foxes Jackals Other species

1988	84	39	3	-	42	-	-
1989	78	38	2	-	37	-	1
1990	35	11	6	-	18	-	-
1991	20	9	3	-	7	-	1
1992	23	16	-	-	7	-	-
1993	42	24	4	-	12	-	2
1994	14	10	-	-	4	-	-
1995	12	4	6	-	2	-	-
1996	30	10	3	2	15	-	-
1997	16	1	5	-	8	2	-
1998	9	4	1	1	2	1	-
1999	25	11	3	-	11	-	-
2000	23	11	4	1	4	3	-
2001	62	7	7	4	38	4	2
2002	16	-	-	-	3	1	12
2003	17	3	2	-	10	-	2
2004	11	5	-	1	4	-	1
2005	12	2	1	2	5	1	1

Общо: 529 205 50 11 229 12 22

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

Month I II III IV V VI VII VIII IX X XI XII

Rabies cases 17 20 16 34 15 17 10 14 10 13 19 14

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 also a land border of 130 km length that could enable passage of animals. To the west, Bulgaria'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 Species Wolves Jackals Foxes Stray Dogs

Numbers 902 13 450 17 723 10 427

For the period 01.01 – 07.12.2006 in Bulgaria were found 9 outbreaks of rabies on the territory of 5 regions (table 5, figure 1)

RVS: 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005

Blagoevgrad	-----
Burgas	1 1 ---- 1 -----
Varna	----- 3 ----
Vidin	- 17 7 - 1 2 1 - 2 1 1 -- 8 1 8 2 1
Vratsa	14 8 4 14 5 7 2 - 1 1 4 5 1 1 2 1 1 -
Veliko Tarnovo	7 3 --- 1 1 - 2 - 1 1 - 3 - 4 2 2
Gabrovo	3 3 --- 2 -----
Dobrich	----- 1 1 1 4 6 -- 1 4 -- 4 3
Kyustendil	-----
Kardzhali	-----
Lovech	10 18 9 -- 7 2 2 1 -- 1 - 1 2 2 --
Montana	34 13 11 - 9 11 1 - 2 - 1 2 1 4 --- 3
Pazardzhik	-----
Pernik	---- 1 -- 1 -----
Pleven	6 6 - 3 5 - 2 3 4 1 1 2 16 17 3 - 1 -
Plovdiv	5 ----- 1 -----
Razgrad	1 - 2 -- 3 - 2 3 ----- 1 -----
Ruse	- 3 1 --- 1 1 1 -----
Silistra	1 1 ---- 1 1 - 2 -- 1 ---- 2
Sliven	- 2 -----
Smolyan	-----

Sofia-town - - - - -
Sofia-district 1 - 1 3 2 - - - - -
Stara Zagora - - - - - 1 - - - - -
Targovishte 1 3 - - - 7 - 1 2 4 1 - - 12 4 2 - -
Haskovo - - - - - 1 - - - 1 - - - - -
Shumen - - - - - - - - 3 3 7 3 - - -
Yambol - - - - - - - - - - - - -
TOTAL: 84 78 35 20 23 42 14 12 23 16 9 14 23 61 15 17 10 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

Il 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 – 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)	Unspecified Lyssavirus	European Bat Lyssavirus - unspecified	Classical rabies virus (genotype 1)
Cattle (bovine animals)	NDRVI	animal	11	0			
Sheep		animal	58	0			
Goats		animal	4	0			
Dogs		animal	49	7			7
Cats		animal	14	7			7
Foxes							
wild		animal	40	24			24
Wolves							
wild		animal	5	2			2
Marten							
wild		animal	3				
Wild boars							
wild		animal	3				
Deer		animal	1				

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, positive - 260

sheep: tested- 38027, positive - 455

1998

cattle: tested- 26688, positive - 375

sheep: tested- 3806, positive - 15

1999

cattle: tested- 5740, positive - 67

sheep: tested- 3923, positive - 38

2000

cattle: tested- 3659, positive - 8

sheep: tested- 2254, positive - 25

2001

cattle: tested- 2528, positive - 43

sheep: tested- 2658, positive - 41

2002

cattle: tested- 2524, positive - 166

sheep: tested- 2706, positive - 238

2003

cattle: tested- 2961, positive - 69

sheep: tested- 1813, positive - 12

2004

cattle: tested- 3895, positive - 125

sheep: tested- 4113, positive - 94

2005

cattle: tested- 3296, positive - 110

sheep: tested- 2758, positive - 114

2006

cattle: tested- 2787, positive - 67

sheep: tested- 2319, positive - 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 strict 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)	NDRVI	animal	3366	368	368
Sheep	NDRVI	animal	3410	381	381

3. INFORMATION ON SPECIFIC INDICATORS OF ANTIMICROBIAL RESISTANCE

3.1. ENTEROCOCCUS, NON-PATHOGENIC

3.1.1. General evaluation of the national situation

3.1.2. Antimicrobial resistance in Enterococcus, non-pathogenic isolates

3.2. *ESCHERICHIA COLI, NON-PATHOGENIC*

3.2.1. General evaluation of the national situation

3.2.2. Antimicrobial resistance in *Escherichia coli*, non-pathogenic isolates

4. INFORMATION ON SPECIFIC MICROBIOLOGICAL AGENTS

4.1. HISTAMINE

4.1.1. General evaluation of the national situation

4.1.2. Histamine in foodstuffs

4.2. ENTEROBACTER SAKAZAKII

4.2.1. General evaluation of the national situation

4.2.2. Enterobacter sakazakii in foodstuffs

4.3. STAPHYLOCOCCAL ENTEROTOXINS

4.3.1. General evaluation of the national situation

4.3.2. Staphylococcal enterotoxins in foodstuffs

5. FOODBORNE OUTBREAKS

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, epidemiological investigations and reporting of foodborne outbreaks

no data available

Bulgaria 2007 Report on trends and sources of zoonoses

Foodborne Outbreaks: summarized data

	Total number of outbreaks	Number of possible outbreaks	Number of verified outbreaks
Bacillus	0	0	0
Campylobacter	0	0	0
Clostridium	0	0	0
Escherichia coli, pathogenic	0	0	0
Foodborne viruses	0	0	0
Listeria	0	0	0
Other agents	0	0	0
Parasites	0	0	0
Salmonella	0	0	0
Staphylococcus	0	0	0
Unknown	0	0	0
Yersinia	0	0	0

