ZOONOSES MONITORING

CZECH REPUBLIC

The Report referred to in Article 5 of Directive 92/117/EEC

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

including information on foodborne outbreaks and antimicrobial resistance in zoonotic agents

IN 2004

INFORMATION ON THE REPORTING AND MONITORING SYSTEM

Country: **Czech Republic**

Reporting Year: **2004**

Institutions and laboratories involved in monitoring:

Laboratory name	Description	Contribution
Czech Agriculture and Food Inspection Authority (CAFIA)	Responsible for the control at wholesale and retail level of former foodstuffs including packaged meat and meat products.	
State Veterinary Administraion of the Czech Republic (SVA)	The SVA is responsible for monitoring of animal health situation and protection of consumers from products of animal origin.	Contact point for Commission in accordance with Article 3(2) Regulation 2003/99/EC.
National Institute of Public Health (NIPH)	Main tasks are health promotion and protection, disease prevention and follow-up of environmental impact on the health status of the population.	

PREFACE

This report is submitted to the European Commission in accordance with Article 5 of Council Directive 92/117/EEC[1]. 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 Czech Republic during the year 2004. The information covers the occurrence of these diseases and agents in humans, animals, foodstuffs and in some cases also in feedingstuffs. In addition the report includes data on antimicrobial resistance in some zoonotic agents and commensal bacteria as well as information on epidemiological investigations of foodborne outbreaks. Complementary data on susceptible animal populations in the country is also given.

The information given covers both zoonoses that are important for the public health in the whole European Community as well as zoonoses, which are relevant on the basis of the national epidemiological situation.

The report describes the monitoring systems in place and the prevention and control strategies applied in the country. For some zoonoses this monitoring is based on legal requirements laid down by the Community Legislation, while for the other zoonoses national approaches are applied.

The report presents the results of the examinations carried out in the reporting year. A national evaluation of the epidemiological situation, with special reference to trends and sources of zoonotic infections, is given. Whenever possible, the relevance of findings in foodstuffs and animals to zoonoses cases in humans is evaluated.

The information covered by this report is used in the annual Community Summary Report on zoonoses that is published each year by EFSA.

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[1] Council Directive 92/117/ECC of 17 December 1992 concerning measures for protection against specified zoonoses and specified zoonotic agents in animals and products of animal origin in order to prevent outbreaks of foodborne infections and intoxications, OJ L 62, 15.3.1993, p. 38

LIST OF CONTENTS

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:

Czech Statistical Office
Official statistics from Central Register of Animals in the Czech Republic which is performing in accordance with Breeding Act No. 154/2000 as amended.
Data from Regional Veterinary Administrations

Dates the figures relate to and the content of the figures:

Numbers of animals and holdings related to 31. 12. 2004

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

Report involves numbers of animals and numbers of holdings. At the time we have no data about numbers of herds and flocks.

National evaluation of the numbers of susceptible population and trends in these figures:

The numbers of farm animals are going down, except of sheep and goats.

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

The geographical distribution is on the whole territory in the Czech Republic.

Table 14.1 Susceptible animal populations: number of herds and holdings rearing animals

* Only if different than current reporting year

Animal species	Category of animals	Number of herds or flocks	Year*	Number of holdings	Year*
Cattle (bovine animals)	dairy cows and heifers			3228	
	mixed herds			24578	
	in total			27806	
Ducks	elite birds			2	
	grandparent birds			2	
	meat production animals			13	
	mixed flocks/holdings			0	
	breeding animals - in total			22	
	parent birds			18	
	in total			35	
Gallus gallus	breeding animals - in total			93	
	breeding animals for meat production line - in total			81	
	elite birds for egg production line			3	
	elite birds for meat production line			0	
	grandparent birds - in total			7	
	grandparent birds for egg production line			3	
	grandparent birds for meat production line			4	
	broilers			377	
	laying hens			90	
	parent birds for meat production line			77	
	parent birds for egg production line			6	
	parent birds - in total			83	
	breeding animals for egg production line - in total			6	
	mixed flocks/holdings			0	
	elite birds - in total			3	
	in total			360	
Geese	elite birds			2	
	parent birds			10	
	meat production animals			4	
	mixed flocks/holdings			0	
	breeding animals - in total			13	
	grandparent birds			1	
	in total			17	
Goats	animals over 1 year			130	
	animals under 1 year			601	
	in total			731	
Pigs	in total			10311	
Sheep	animals under 1 year (lambs)			3543	
	in total			3828	
Solipeds	horses - in total			7300	
Turkeys	elite birds			0	
	meat production animals			113	
	mixed flocks/holdings			0	
	breeding animals - in total			5	
	parent birds			5	
	grandparent birds			0	
	in total			118	
Farmed deer	in total			265	

Table 14.2 Susceptible animal populations: number of animals

* Only if different than current reporting year

Animal species	Category of animals	Livestock numbers (live animals)	Year*	Number of slaughtered animals	Year*
Cattle (bovine animals)	calves (under 1 year)	420584		15812	
	dairy cows and heifers	653235		193917	
	meat production animals	354510		159751	
	in total	1428329		353668	
Ducks	elite birds	7000			
	parent birds	44000			
	meat production animals	53205			
	breeding animals - in total	53205			
	grandparent birds	7000			
	in total	3224065			
Gallus gallus	breeding animals - in total	2201385			
	elite birds - in total	15000			
	elite birds for egg production line	15000			
	parent birds - in total	2151385			
	grandparent birds for meat production line	35000			
	grandparent birds for egg production line	25000			
	grandparent birds - in total	60000			
	elite birds for meat production line	0			
	breeding animals for egg production line - in total	181411			
	broilers	176009350		134705427	
	laying hens	7513650			
	parent birds for meat production line	1984974			
	parent birds for egg production line	141411			
	breeding animals for meat production line - in total	2019974			
	in total	185724385		142571274	
Geese	elite birds	8000			
	parent birds	22000			
	meat production animals	30094			
	breeding animals - in total	30094			
	grandparent birds	8000			
	in total (1)	257079		1924456	
Goats	milk goats	8012			
	in total (2)	18912		1030	
Pigs	sows and gilts	384101		130982	
	breeding animals	355318			
	fattening pigs	1073363			
	in total	3126539		4228961	
Sheep	milk ewes	1514			
	meat production animals	723393			
	in total	115852		15624	
Solipeds	horses - in total	20371		338	
Turkeys	elite birds	0			
	parent birds	31318			
	meat production animals	806100			
	breeding animals - in total	31318			
	grandparent birds	0			
	in total	837418		1828850	

(1): The number of slaughtered animals contains slaughtered ducks and geese together
(2): The number of slaughtered animals contains slaughtered ducks and geese together

2. INFORMATION ON SPECIFIC ZOONOSES AND ZOONOTIC AGENTS

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

2.1. SALMONELLOSIS

2.1.1. General evaluation of the national situation

A. General evaluation

History of the disease and/or infection in the country

Bacteriological examination (monitoring) of salmonellae (S. enteritidis and S. typhimurium) had been carried out since the year 1996 in the Czech Republic; the monitoring was carried out according to Council Directive 92/117/EEC. As adequate register of poultry keepers and registration of flocks were not available, the examination was carried out according to poultry holdings.
Pre-conditions for the registration of holdings and of the number of particular poultry flocks have been created currently and so the monitoring may be already carried out and monitored according to individual criteria.
As within the previously performed monitoring reproduction flocks of meat poultry and laying poultry combinations, as well as production flocks of laying hens producing table eggs were not distinguished, no results from the past distinguished in such a way are available.
In the case of proven positive results in breeding flocks and grandparents flocks, slaughtering of poultry or safe disposal thereof by destruction and subsequent processing at rendering plants were applied; in the case of parents flocks of meat poultry and laying poultry combinations, as well as in the case of laying hens producing table eggs, antibiotic treatment based on antibiogramme, followed by use of probiotics or by acidifying of feed or water, were applied.
No monitoring was carried out in holdings with broilers (Gallus gallus, turkeys).
The monitoring was recorded according to particular sampling criteria. As within the past period changes of territorial arrangement and of recorded codes took place, incomparable data would by compared.

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

The number of salmonelosis in human is decreasing due to control which is performed by the state institutions. The main sources of infection in humans are products form eggs and poultry meet.

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

There is a sporadic relevance between finding in animals and finding in human. The main source of infection is through to foodstuffs of animal origin.

Recent actions taken to control the zoonoses

Actions taken for control the zoonoses are in accordance with national legislations mainly Veterinary Act and in accordance with Community legislation (mainly 99/2003/EC and 2160/2003/EC).

2.1.2. Salmonellosis in humans

A. Salmonellosis in humans

Reporting system in place for the human cases

Infectious diseases (all infections including parasitary) are notified on legal basis. (20/1966, 258/2000) Any physician is obliged to notify the diagnosed disease and data are collected by the net of Regional Public Health Institutes with their district branch offices. The data are centrally collected and processed by the National Institute of Public health.

Case definition

Clinical picture compatible with salmonellosis, e.g. diarrhoea, abdominal pain, nausea and sometimes vomiting.
The organism may cause extraintestinal infections.

Diagnostic/analytical methods used

Microbiological investigation, cultivation, serotyping, phagetyping

Notification system in place

Infectious diseases (all infections including parasitary) are notified on legal basis. (20/1966, 258/2000) Any physician is obliged to notify the diagnosed disease and data are collected by the net of Regional Public Health Institutes with their district branch offices. The data are centrally collected and processed by the National Institute of Public health.

History of the disease and/or infection in the country

Incidence of salmonelloses was growing during the period from 1981 and got the plateau in late eighties. The brake was in 1989 when incidence reached three times higher levels than in previous years. The highest incidence rates were notified in 1995. Since 1998 the rates are steadily dropping down. Salmonelloses are unevenly distributed in our country. The highest rates were generally notified in agricultural districts in the east.

Results of the investigation

Less attention is paid to thermic processing of poultry and eggs and they became predominant risk food. Salmonella Enteritidis is the prevalent serotype (95% of all cases)in recent years.

Table 3.4.1.A Salmonellosis in man - species/serotype distribution

Salmonella	Cases	Cases Inc	Autochtone cases	Autochtone Inc	Imported cases	Imported Inc	unknown status
	30724	297	30476	296	248	0	0
S. Agona	19	0,1863	15	0,147	4		
S. Derby	10	0,098	9	0,0882	1		
S. Enteritidis	29762	291,76	29595	290,12	167		
S. Hadar	6	0,0588	5	0,049	1		
S. Heidelberg	6	0,0588	5	0,049	1		
S. Infantis	90	0,8823	82	0,8038	8		
S. Kentucky	11	0,1078	7	0,0686	4		
S. Montevideo	9	0,0882	7	0,0686	2		
S. Muenchen	6	0,0588	6	0,0588	0		
S. Newport	12	0,1176	9	0,0882	3		
S. Ohio	18	0,1765	18	0,1765	0		
S. Tennessee	9	0,0882	9	0,0882	0		
S. Typhimurium	457	4,48	448	4,3917	9		
S. Virchow	13	0,1274	9	0,0882	4		
other serovars	296	2,9017	252	2,4704	44		

Footnote

There is no evidence of foreign population count, so we are not able to calculate incidence rates for foreigners separately.

Table 3.4.1.B Salmonellosis in man - age distribution

Age Distribution	S. Enteritidis			S. Typhimurium			Salmonella spp.		
	All	M	F	All	M	F	All	M	F
<1 year	1395	728	997	36	20	16			
1 to 4 years	7625	4074	3551	152	77	75			
5 to 14 years	5734	3104	2630	92	49	43			
15 to 24 years	3062	1488	1574	33	12	21			
25 to 44 years	5517	2412	3105	83	36	47			
45 to 64 years	4179	1641	2538	45	24	21			
65 years and older	2250	749	1501	16	8	8			
Age unknown	0	0	0	0	0	0			
Total :	29762	14196	15896	457	226	231	0	0	0

Table 3.4.2 Salmonellosis in man - seasonal distribution

Month	S. Enteritidis	S. Typhimurium	Salmonella spp.
	Cases	Cases	Cases
January	980	31	
February	823	29	
March	1099	27	
April	1355	17	
May	2361	39	
June	2995	26	
July	3294	23	
August	4201	50	
September	4163	94	
October	4159	62	
November	2756	41	
December	1576	18	
not known	0	0	
Total :	29762	457	0

2.1.3. Salmonella in foodstuffs

A. Salmonella spp in eggs and egg products

Monitoring system

Sampling strategy

The samples shall be sampled of each produced batch in raw material for egg products according to Regulation 89/437/EHS.

Frequency of the sampling

Eggs at egg packing centres (foodstuff based approach)

Other: is not performed

Eggs at retail

Other: is not performed

Raw material for egg products (at production plant)

Every batch is sampled

Egg products (at production plant and at retail)

Other: is not performed

Type of specimen taken

Eggs at egg packing centres (foodstuff based approach)

Other: is not performed

Eggs at retail

Other: is not performed

Raw material for egg products (at production plant)

Egg products: liquid eggs

Egg products (at production plant and at retail)

Other: is not performed

Methods of sampling (description of sampling techniques)

Eggs at egg packing centres (foodstuff based approach)

is not performed

Eggs at retail

is not performed

Raw material for egg products (at production plant)

the samples must be aseptically sampled and placed into a sample container

Egg products (at production plant and at retail)

is not performed

Definition of positive finding

Eggs at egg packing centres (foodstuff based approach)

>=1cfu/25 g

Eggs at retail

>=1cfu/25 g

Raw material for egg products (at production plant)

>=1cfu/25 g

Egg products (at production plant and at retail)

>=1cfu/25 g

Diagnostic/analytical methods used

Eggs at egg packing centres (foodstuff based approach)

Bacteriological method: ISO 6579:2002

Eggs at retail

Bacteriological method: ISO 6579:2002

Raw material for egg products (at production plant)

Bacteriological method: ISO 6579:2002

Egg products (at production plant and at retail)

Bacteriological method: ISO 6579:2002

Preventive measures in place

Operators of meat establishments must conduct regular checks on the general conditions of production in their establishment - GHP, GMP HACCP,

Control program/mechanisms

The control program/strategies in place

The checks must cover utensils, fittings and machinery at all stages of production. The operator of a meat establishment shall conduct regular checks on the general hygiene conditions of production, by implementing and maintaining a permanent procedure developed in accordance with the HACCP principles

Recent actions taken to control the zoonoses

On the level of Regional Veterinary Administrations and appropriate veterinary inspectorates are developed sampling plans for bacteriological analyses in row materials and foodstuffs of animal origin including salmonellas monitoring and typization.

Measures in case of the positive findings

In case of positive findings in monitoring following measures are taken:
- Withdrawal of all goods from stores and market
- Heat treatment of detained consignments of raw material
- Disposal of final products

Notification system in place

All the defaults founded are placed on record on control finding based on which an administrative procedure is initiated. The administrative procedure results in obligatory instructions where the terms are detailed for clearing up the defaults. Observance of the terms for clearing up the defaults is checked by the official veterinarian

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

Incidence of salmonellas in eggs and eggs products is in our territory lower than in last years which indicate elevation of hygiene level in pig keeping.

B. Salmonella spp. in broiler meat and products thereof

Monitoring system

Sampling strategy

At slaughterhouse and cutting plant

The sampling is carry out in carcasses at the slaughter. The samples taken off accordance with Directive 64/433/EHS and Commision Decision 2001/471/EC. Samples shall be taken from the most consistently contaminanted sites of carcass in half way through the slaughter day and before chilling commences

At meat processing plant

The samples taken off accordance with Directive 64/433/EHS and Commision Decision 2001/471/EC.The final products shall be taken after treatment.

At retail

The samples taken off accordance with Directive 64/433/EHS and Commision Decision 2001/471/EC.The final products shall be taken random or when is the

suspicion on the incidence of Salmonella.

Frequency of the sampling

At slaughterhouse and cutting plant

Once a week

At meat processing plant

Once a week

At retail

Other: random

Type of specimen taken

At slaughterhouse and cutting plant

Fresh meat

At meat processing plant

Other: final product

At retail

Other: final product

Methods of sampling (description of sampling techniques)

At slaughterhouse and cutting plant

For the 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 obtain from each carcasse. On each occasion the neck skin samples from three carcasses shall pooled before examination in order to form 5 x 25 g final samples.

At meat processing plant

the samples must be aseptically cutting and placed aseptically into a sample container

At retail

the samples must be aseptically cutting and placed aseptically into a sample container

Definition of positive finding

At slaughterhouse and cutting plant

>=1cfu/25 g

At meat processing plant

>=1cfu/25 g

At retail

>=1cfu/25 g

Diagnostic/analytical methods used

At slaughterhouse and cutting plant

Bacteriological method: ISO 6579:2002

At meat processing plant

Bacteriological method: ISO 6579:2002

At retail

Bacteriological method: ISO 6579:2002

Preventive measures in place

Operators of meat establishments must conduct regular checks on the general conditions of production in their establishment - GHP, HACCP accordance with Direction 93/43,

Control program/mechanisms

The control program/strategies in place

The checks must cover utensils, fittings and machinery at all stages of production. The operator of a meat establishment shall conduct regular checks on the general hygiene conditions of production, by implementing and maintaining a permanent procedure developed in accordance with the HACCP principles.

Recent actions taken to control the zoonoses

On the level of Regional Veterinary Administrations and appropriate veterinary inspectorates are developed sampling plans for bacteriological analyses in row materials and foodstuffs of animal origin including salmonellas monitoring and typization.

Measures in case of the positive findings or single cases

In case of positive findings in monitoring following measures are taken:
- Withdrawal of all goods from stores and market
- Disposal of final products

Notification system in place

All the defaults founded are placed on record on control finding based on which an administrative procedure is initiated. The administrative procedure results in obligatory

instructions where the terms are detailed for clearing up the defaults. Observance of the terms for clearing up the defaults is checked by the official veterinarian

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

Incidence of catchment of salmonella in poultry is in Czech Republic in last years on the same level.

C. Salmonella spp. in turkey meat and products thereof

Monitoring system

Sampling strategy

At slaughterhouse and cutting plant

The sampling is carry out in carcasses at the slaughter. The samples taken off accordance with Directive 64/433/EHS and Commision Decision 2001/471/EC. Samples shall be taken from the most consistently contaminanted sites of carcass in half way through the slaughter day and before chilling commences.

At meat processing plant

The samples taken off accordance with Directive 64/433/EHS and Commision Decision 2001/471/EC.The final products shall be taken after treatment.

At retail

The samples taken off accordance with Directive 64/433/EHS and Commision Decision 2001/471/EC.The final products shall be taken random or when is the suspicion on the incidence of Salmonella.

Frequency of the sampling

At slaughterhouse and cutting plant

Once a week

At meat processing plant

Once a week

At retail

Other: random

Type of specimen taken

At slaughterhouse and cutting plant

Fresh meat

At meat processing plant

Other: final product

At retail

Other: final product

Methods of sampling (description of sampling techniques)

At slaughterhouse and cutting plant

For the 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 obtain from each carcasse. On each occasion the neck skin samples from three carcasses shall pooled before examination in order to form 5 x 25 g final samples.

At meat processing plant

the samples must be aseptically cutting and placed aseptically into a sample container

At retail

the samples must be aseptically cutting and placed aseptically into a sample container

Definition of positive finding

At slaughterhouse and cutting plant

>=1cfu/25 g

At meat processing plant

>=1cfu/25 g

At retail

>=1cfu/25 g

Diagnostic/analytical methods used

At slaughterhouse and cutting plant

Bacteriological method: ISO 6579:2002

At meat processing plant

Bacteriological method: ISO 6579:2002

At retail

Bacteriological method: ISO 6579:2002

Preventive measures in place

Operators of meat establishments must conduct regular checks on the general conditions of production in their establishment - GHP, HACCP accordance with Directive 93/43,

Control program/mechanisms

The control program/strategies in place

The checks must cover utensils, fittings and machinery at all stages of production. The operator of a meat establishment shall conduct regular checks on the general hygiene conditions of production, by implementing and maintaining a permanent procedure developed in accordance with the HACCP principles accordance with Directive 93/43,

Recent actions taken to control the zoonoses

On the level of Regional Veterinary Administrations and appropriate veterinary inspectorates are developed sampling plans for bacteriological analyses in row materials and foodstuffs of animal origin including salmonellas monitoring and typization

Measures in case of the positive findings or single cases

In case of positive findings in monitoring following measures are taken:
- Withdrawal of all goods from stores and market
- Disposal of final products

Notification system in place

: All the defaults founded are placed on record on control finding based on which an administrative procedure is initiated. The administrative procedure results in obligatory instructions where the terms are detailed for clearing up the defaults. Observance of the terms for clearing up the defaults is checked by the official veterinarian

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

Incidence of catchment of salmonella in turkey is in Czech Republic in last years on the same level.

D. Salmonella spp. in pig meat and products thereof

Monitoring system

Sampling strategy

At slaughterhouse and cutting plant

The sampling is carry out in carcasses at the slaughter. The samples taken off accordance with Directive 64/433/EHS and Commision Decision 2001/471/EC. Samples shall be taken from the most consistently contaminanted sites of carcass in half way through the slaughter day and before chilling commences.

At meat processing plant

The samples taken off accordance with Directive 64/433/EHS and Commision Decision 2001/471/EC.The final products shall be taken after treatment.

At retail

The samples taken off accordance with Directive 64/433/EHS and Commision Decision 2001/471/EC.The final products shall be taken random or when is the suspicion on the incidence of Salmonella.

Frequency of the sampling

At slaughterhouse and cutting plant

Other: once in two weeks

At meat processing plant

Other: random or targeted

At retail

Other: random

Type of specimen taken

At slaughterhouse and cutting plant

Fresh meat

At meat processing plant

Other: final product

At retail

Other: final product

Methods of sampling (description of sampling techniques)

At slaughterhouse and cutting plant

For the sampling method four tissue samples representing a total of 20 cm2 should be obtained from the carcass after dressing but before chilling commences. Pieces of tissue may be cutting a slice of 5 cm2 and maximum thickness of 5 mm off the carcase with sterile instrument.
The samples must be aseptically cutting and placed aseptically into a sample container at the slaughterhouse, transfered to the laborathory and then homogenised.

At meat processing plant

the samples - one piece of final product must by placed aseptically into a sample container and transfered to the laborathory and then homogenised.

At retail

the samples - one piece of final product must by placed aseptically into a sample container transfered to the laborathory and then homogenised.

Definition of positive finding

At slaughterhouse and cutting plant

>=1cfu/25 g

At meat processing plant

>=1cfu/25 g

At retail

>=1cfu/25 g

Diagnostic/analytical methods used

At slaughterhouse and cutting plant

Bacteriological method: ISO 6579:2002

At meat processing plant

Bacteriological method: ISO 6579:2002

At retail

Bacteriological method: ISO 6579:2002

Preventive measures in place

Operators of meat establishments must conduct regular checks on the general conditions of production in their establishment - GHP, GMP HACCP, - accordance with Direction 93/43

Control program/mechanisms

The control program/strategies in place

The checks must cover utensils, fittings and machinery at all stages of production. The operator of a meat establishment shall conduct regular checks on the general hygiene conditions of production, by implementing and maintaining a permanent procedure developed in accordance with the HACCP principles accordance with Direction 93/43.

Recent actions taken to control the zoonoses

On the level of Regional Veterinary Administrations and appropriate veterinary inspectorates are developed sampling plans for bacteriological analyses in raw materials and foodstuffs of animal origin including salmonellas monitoring and typization.

Measures in case of the positive findings or single cases

In case of positive findings in monitoring following measures are taken:
- Withdrawal of all goods from stores and market
- Heat treatment of detained consignments of raw material
- Disposal of final products

Notification system in place

All the defaults founded are placed on record on control finding based on which an administrative procedure is initiated. The administrative procedure results in obligatory instructions where the terms are detailed for clearing up the defaults. Observance of the terms for clearing up the defaults is checked by the official veterinarian

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

Incidence of salmonellas in swine is in Czech Republic lower than in last years which indicate elevation of hygiene level in pig keeping.

E. Salmonella spp in bovine meat and products thereof

Monitoring system

Sampling strategy

At slaughterhouse and cutting plant

The sampling is carry out in carcasses at the slaughter. The samples taken off accordance with Directive 64/433/EHS. Samples shall be taken from the most consistently contaminanted sites of carcass in half way through the slaughter day and before chilling commences.

At meat processing plant

The samples taken off accordance with Directive 64/433/EHS.The final products shall be taken after treatment.

At retail

The samples taken off accordance with Directive 64/433/EHS.The final products shall be taken random or when is the suspicion on the incidence of Salmonella.

Frequency of the sampling

At slaughterhouse and cutting plant

Other: once in two weeks

At meat processing plant

Other: random or targeted

At retail

Other: random

Type of specimen taken

At slaughterhouse and cutting plant

Fresh meat

At meat processing plant

Other: final product

At retail

Other: final product

Methods of sampling (description of sampling techniques)

At slaughterhouse and cutting plant

For the sampling method four tissue samples representing a total of 20 cm2 should be obtained from the carcass after dressing but before chilling commences. Pieces of tissue may be cutting a slice of 5 cm2 and maximum thickness of 5 mm off the carcase with sterile instrument.
The samples must be aseptically cutting and placed aseptically into a sample container at the slaughterhouse, transfered to the laborathory and then homogenised.

At meat processing plant

the samples - one piece of final product must by placed aseptically into a sample container and transfered to the laborathory and then homogenised.

At retail

the samples - one piece of final product must by placed aseptically into a sample container and transfered to the laborathory and then homogenised.

Definition of positive finding

At slaughterhouse and cutting plant

>=1cfu/25 g

At meat processing plant

>=1cfu/25 g

At retail

>=1cfu/25 g

Diagnostic/analytical methods used

At slaughterhouse and cutting plant

Bacteriological method: ISO 6579:2002

At meat processing plant

Bacteriological method: ISO 6579:2002

At retail

Bacteriological method: ISO 6579:2002

Preventive measures in place

Operators of meat establishments must conduct regular checks on the general conditions of production in their establishment - GHP, GMP HACCP accordance with to Direction 93/43/ECC.

Control program/mechanisms

The control program/strategies in place

The checks must cover utensils, fittings and machinery at all stages of production. The operator of a meat establishment shall conduct regular checks on the general hygiene conditions of production, by implementing and maintaining a permanent procedure developed in accordance with the HACCP principles accordance with Direction 93/43/ECC.

Recent actions taken to control the zoonoses

On the level of Regional Veterinary Administrations and appropriate veterinary inspectorates are developed sampling plans for bacteriological analyses in raw materials and foodstuffs of animal origin including salmonellas monitoring and typization.

Measures in case of the positive findings or single cases

In case of positive findings in monitoring following measures are taken:
- Withdrawal of all goods from stores and market
- Heat treatment of detained consignments of raw material
- Disposal of final products

Notification system in place

All the defaults founded are placed on record on control finding based on which an administrative procedure is initiated. The administrative procedure results in obligatory instructions where the terms are detailed for clearing up the defaults. Observance of the terms for clearing up the defaults is checked by the official veterinarian.

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

Incidence of salmonellas in bovine is in the Czech Republic in last years on the same level.

F. Salmonella spp. in food - Other food - food non animal origin - at retail - official food or feed controls - random sampling

Monitoring system

Sampling strategy

Czech Agriculture and Food Inspection Authority inspectors take samples of the individual product lots during the inspection randomly at retail according to Decree of the Ministry of Health No. 132/2004 Coll., on microbiological requirements for foodstuffs, on means of their inspection and evaluation; RASFF notifications; Commission Recommendation concerning a coordinated programme for the official control of foodstuffs; Inspection of food business operators and monitoring of consumer complaints.

Frequency of the sampling

Based on requirements determined in guides to GMP, GHP published by the Ministry of Agriculture and on the history of previous controls (at least once a year). Inspections are performed more frequently in production plants and shops that do not comply with the requirements.

Type of specimen taken

Other: food non animal origin

Methods of sampling (description of sampling techniques)

Sample of one hundred grams minimum each is taken in a sterile way, into clean and dry plastic bag, which is closed, sealed and stamped with a stamp of the Czech Agriculture and Food Inspection Authority (CAFIA). The sample is placed into refrigerated container and immediately sent to the laboratory for analysis.

Definition of positive finding

present in 25 g of tested sample

Diagnostic/analytical methods used

EN/ISO 6579 standard

Preventive measures in place

HACCP and GHP systems created

Control program/mechanisms

The control program/strategies in place

The control programs / strategies in place: check of records and documents within the HACCP system.

Recent actions taken to control the zoonoses

Monitoring of zoonoses according to the Decree of the Ministry of Health No. 132/2004 Coll. and Commission Recommendation concerning a coordinated programme for the official control of foodstuffs for 2004 (monitoring of products with egg's filling, cheeses

made from raw or thermised milk, fish product ready-to-eat, processed fruit and vegetables, soft drink, mill products, baker's products, chocolate, cooling products, dehydrated products, ice cream, pasta, delicacy, spices, nuts (fruits)).

Suggestions to the Community for the actions to be taken

information about positive findings were communicated to the State Veterinary Office of the Czech Republic

Measures in case of the positive findings or single cases

On the basis of positive finding, the whole lot is recalled from circulation. A fine is imposed on the food business operator and he is ordered to remove the causes and to take such measures that would prevent recurrence of pathogens.

Notification system in place

According to Article 3 of Act No. 146/2002 Coll., on the Czech Agriculture and Food Inspection Authority and on amendments to some related Acts, the CAFIA a) imposes, by means of a measure, the obligation to remove identified deficiencies and determines a deadline for such removal, b) checks the observance of measures imposed to remove identified deficiencies.

Results of the investigation

12 positive samples out of the total number of 4262 samples tested by the Czech Agriculture and Food Inspection Authority (link to table 3.3.2.)

Table 3.3.1 Salmonella sp. in meat and meat products

	Source of information	Remarks	Epidemiological unit	Sample weight	Units tested	Units positive	S. Enteritidis	S. Typhimurium	S. Indiana
Bovine meat									
fresh									
- at slaughter	SVA		animal	25g	1328	26	20	6	
minced meat									
- at processing plant	SVA		lot	25g	796	0			
- at retail	CAFIA - according to 2004/24/EC		lot*	25g	326	1			1
meat products									
non-ready-to-eat									
- at processing plant	SVA		lot	25g	5818	9			
Pig meat									
fresh									
- at slaughter	SVA		animal	25g	741	0			
- at retail	NIPH			25	12	1	0	1	0
Broiler meat									
fresh									
- at slaughter	SVA		animal	25g	240	0			
- at retail	NIPH			25	48	7	7		
meat products									
non-ready-to-eat									
- at retail - official food or feed controls - random sampling	CAFIA - according to Decree No. 132/2004 Coll.		lot*	25g	22	0			
Turkey meat									
fresh									
- at slaughter	SVA		animal	25g	0	0			
Other meat									
fresh									
- at retail	NIPH	fish non RTE		25	12	1		1	
Fishery products									
ready-to-eat (1)	NIPH	smoked RTE		25	24	1	1		
Egg products (2)	NIPH	shell eggs		25	120	1	1		

(1) : at retail level

(2) : at retail level

Footnote

2004/24/EC - Commission Recommendation of 19 December 2003 concerning a coordinated programme for the oficial control of foodstuffs for 2004;
CAFIA - Czech Agriculture and Food Inspection Authority;
Decree No. 132/2004 Coll. - Decree of the Ministry of Health No. 132/2004 Coll., on microbiological requirements for foodstuffs, on means of their inspection and evaluation;
* Lot means an amount of units, identical in kind, that are produced under identical conditions.

Table 3.3.2 Salmonella sp. in other food

	Source of information	Remarks	Epidemiological unit	Sample weight	Units tested	Units positive	S. Enteritidis	S. Typhimurium
Dairy products								
ready-to-eat	CAFIA according to 2004/24/EC; (random sampling)		lot*	25g	136	0		
ice-cream								
made from pasteurized milk								
- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25g	204	0		
other products								
non-ready-to-eat								
- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25g	72	0		
Table eggs								
- at packing centre	SVA				0			
- at retail	SVA				0			
Egg products	SVA				0			
Raw material (liquid egg) for egg products	SVA		lot	25g	968	0		
Fishery products								
fish								
frozen								
- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25g	46	0		
Dehydrated products								
ready-to-eat								
flavoured								

- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25g	49	0		
Nut and nut products								
dry								
- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25g	13	0		
Spices and herbs								
- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25g	164	0		
Other processed food products								
pasta								
- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25g	5	0		
ready-to-eat								
delicatessen								
- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25g	1486	0		
Processed fruits and vegetables								
- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25g	14	0		
Chocolate								
- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25g	82	0		
Soft drinks								
- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25g	7	0		
Bakery products								
pastry								
with egg filling								

- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25g	1929	12	12	
bread								
- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25g	32	0		
Mill-products								
- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25g	23	0		

Footnote

2004/24/EC - Commission Recommendation of 19 December 2003 concerning a coordinated programme for the oficial control of foodstuffs for 2004;
CAFIA - Czech Agriculture and Food Inspection Authority;
Decree No. 132/2004 Coll. - Decree of the Ministry of Health No. 132/2004 Coll., on microbiological requirements for foodstuffs, on means of their inspection and evaluation;
* Lot means an amount of units, identical in kind, that are produced under identical conditions.

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)

The sampling strategy was in accordance with Council Directive 92/117/EEC of 17 December 1992 concerning measures for protection against specified zoonoses and specified zoonotic agents in animals and products of animal origin in order to prevent outbreaks of food-borne infections and intoxications (OJ L 62, 15.3.1993, p. 38).

Laying hens flocks

The owner must, at his own expense, have samples taken for analysis for the detection of Salmonella either in an approved national laboratory recognized by the competent authority, with the minimum levels of sampling indicated by the State veterinary administration.

Frequency of the sampling

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

Every flock is sampled

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

At the age of 4 weeks old chicks weeks

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

Every every 2 weeks during the laying period weeks

Laying hens: Day-old chicks

Every flock is sampled

Laying hens: Rearing period

At the age of 4 weeks old chicks weeks

Laying hens: Production period

Every 12 weeks during the laying period weeks

Type of specimen taken

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

Internal linings of delivery boxes

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

Faeces

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

Faeces

Laying hens: Day-old chicks

Internal linings of delivery boxes

Laying hens: Rearing period

Faeces

Laying hens: Production period

Faeces

Methods of sampling (description of sampling techniques)

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

At day-old chicks after transport are taken samples from internal wall of transport boxes, 10 swabs from each delivery. All fallen chicks (max. 60) were tested as well.

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

Pooled samples from faces with regard on the number of birds in the building. 1 - 20 birds 1 - 20 samples, 21 - 29 birds 20 samples, 30 - 39 birds 25 samples, 40 - 49 birds 30 samples, 50 - 59 birds 35 samples, 60 - 89 birds 40 samples, 90 - 199 birds 50 samples, 200 - 499 birds 55 samples, 500 and more birds 60 samples.

Breeding flocks: Production period

Pooled samples from faces with regard on the number of birds in the building. 1 - 20 birds 1 - 20 samples, 21 - 29 birds 20 samples, 30 - 39 birds 25 samples, 40 - 49 birds 30 samples, 50 - 59 birds 35 samples, 60 - 89 birds 40 samples, 90 - 199

birds 50 samples, 200 - 499 birds 55 samples, 500 and more birds 60 samples.

Laying hens: Day-old chicks

At one day-old chicks after transport are taken samples from internal wall of transport boxes, 10 swabs from each delivery. All fallen chicks (max. 60) were tested as well.

Laying hens: Rearing period

Pooled samples from faces with regard on the number of birds in the building. 1 - 20 birds 1 - 20 samples, 21 - 29 birds 20 samples, 30 - 39 birds 25 samples, 40 - 49 birds 30 samples, 50 - 59 birds 35 samples, 60 - 89 birds 40 samples, 90 - 199 birds 50 samples, 200 - 499 birds 55 samples, 500 and more birds 60 samples.

Laying hens: Production period

Pooled samples from faces with regard on the number of birds in the building. 1 - 20 birds 1 - 20 samples, 21 - 29 birds 20 samples, 30 - 39 birds 25 samples, 40 - 49 birds 30 samples, 50 - 59 birds 35 samples, 60 - 89 birds 40 samples, 90 - 199 birds 50 samples, 200 - 499 birds 55 samples, 500 and more birds 60 samples.

Case definition

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

Where the result of monitoring detected presence of Salmonella enteritidis or Salmonella typhimurium in a breeding flock, notification of result was performed. The person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the flock shall notify the results to the competent authority.
The competent authority performed officially sampling in order to confirm the initial results. A sample of birds must be taken at
random from within each house of birds on the farm. For the
purposes of examination, the birds from each house must be grouped into batches of five and samples of liver, ovary and intestines taken from each bird in the batch must be examined for salmonella.

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

Where the result of monitoring detected presence of Salmonella enteritidis or Salmonella typhimurium in a breeding flock, notification of result was performed. The person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the flock shall notify the results to the competent authority.
The competent authority performed officially sampling in order to confirm the initial results. A sample of birds must be taken at
random from within each house of birds on the farm. For the

purposes of examination, the birds from each house must be grouped into batches of five and samples of liver, ovary and intestines taken from each bird in the batch must be examined for salmonella.

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

Where the result of monitoring detected presence of Salmonella enteritidis or Salmonella typhimurium in a breeding flock, notification of result was performed. The person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the flock shall notify the results to the competent authority.
The competent authority performed officially sampling in order to confirm the initial results. A sample of birds must be taken at
random from within each house of birds on the farm. For the
purposes of examination, the birds from each house must be grouped into batches of five and samples of liver, ovary and intestines taken from each bird in the batch must be examined for salmonella.

Laying hens: Day-old chicks

Where the result of monitoring detected presence of Salmonella enteritidis or Salmonella typhimurium in a breeding flock, notification of result was performed. The person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the flock shall notify the results to the competent authority.
The competent authority performed officially sampling in order to confirm the initial results. A sample of birds must be taken at
random from within each house of birds on the farm. For the
purposes of examination, the birds from each house must be grouped into batches of five and samples of liver, ovary and intestines taken from each bird in the batch must be examined for salmonella.

Laying hens: Rearing period

Where the result of monitoring detected presence of Salmonella enteritidis or Salmonella typhimurium in a breeding flock, notification of result was performed. The person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the flock shall notify the results to the competent authority.
The competent authority performed officially sampling in order to confirm the initial results. A sample of birds must be taken at
random from within each house of birds on the farm. For the
purposes of examination, the birds from each house must be grouped into batches of five and samples of liver, ovary and intestines taken from each bird in the batch must be examined for salmonella.

Laying hens: Production period

Where the result of monitoring detected presence of Salmonella enteritidis or Salmonella typhimurium in a breeding flock, notification of result was performed. The person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the flock shall notify the results to the competent authority.
The competent authority performed officially sampling in order to confirm the initial results. A sample of birds must be taken at
random from within each house of birds on the farm. For the
purposes of examination, the birds from each house must be grouped into batches of five and samples of liver, ovary and intestines taken from each bird in the batch must be examined for salmonella.

Diagnostic/analytical methods used

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

Bacteriological method: ISO 6579:2002

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

Bacteriological method: ISO 6579:2002

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

Bacteriological method: ISO 6579:2002

Laying hens: Day-old chicks

Bacteriological method: ISO 6579:2002

Laying hens: Rearing period

Bacteriological method: ISO 6579:2002

Laying hens: Production period

Bacteriological method: ISO 6579:2002

Laying hens: Before slaughter at farm

Bacteriological method: ISO 6579:2002

Vaccination policy

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

Vaccination is voluntary.

Laying hens flocks

Vaccination is voluntary.

Control program/mechanisms

The control program/strategies in place

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

The control program in breeding flocks was in accordance with Council Directive 92/117/EEC of 17 December 1992 concerning measures for protection against specified zoonoses and specified zoonotic agents in animals and products of animal origin in order to prevent outbreaks of food-borne infections and intoxications (OJ L 62, 15.3.1993, p. 38).

Laying hens flocks

The central authority competent for supervising and coordinating all activities in veterinary care is the State Veterinary Administration, which performs its powers at the whole territory of the Czech Republic (§ 47, Veterinary Act No 166/1999 Col. of Acts). SVA of the CR coordinates the activities of Regional Veterinary Administrations and lay down Methodology for Animal Health Control.
The Methodology of Animal Health Control and Specific Prophylaxis of Contagious Diseases lay down basic principles of the system. This methodology is updated annually and it is binding for all animal breeders, based on its approval by the Ministry of Agriculture of the Czech Republic and its publication in the official Journal of the Ministry of Agriculture.

Measures in case of the positive findings or single cases

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

Measures in case of the positive finding was in accordance with Council Directive 92/117/EEC, Annex II.

Laying hens flocks

The Veterinary measures are imposed by the Regional Veterinary Administration.
No bird may leave the house with the exception of:
1, all birds in the house are slaughtered (official veterinarian of the slaughterhouse must be informed about the decision of the RVA.
2, all birds in the house are slaughtered and destroyed
All birds with clinical signs are destroyed and other birds are treated.
Table eggs from this holding must be processing by heat treating.
After the house occupied by a flock infected with Salmonella enteritidis or Salmonella typhimurium has been emptied of birds, effective cleaning and disinfection must be carried out, including safe disposal of manure or litter in accordance with procedures laid down by the Regional Veterinary Administration.

Notification system in place

Notification system is lay down by the Act No. 166/1999 of 13 July 1999 on veterinary care and amending certain related laws (Veterinary Act), as amended.

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)

The sampling strategy was in accordance with Council Directive 92/117/EEC of 17 December 1992 concerning measures for protection against specified zoonoses and specified zoonotic agents in animals and products of animal origin in order to prevent outbreaks of food-borne infections and intoxications (OJ L 62, 15.3.1993, p. 38).

Broiler flocks

In the year 2004 there was no monitoring programme for Salmonella in broiler flocks.

Frequency of the sampling

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

Every flock is sampled

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

At the age of 4 weeks weeks

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

Other: Pullets 2 weeks prior to the laying phase and than every 14 days during the laying period

Methods of sampling (description of sampling techniques)

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

Samples are taken from internal wall of transport boxes, 10 swabs from each delivery. All fallen chicks (maximum 60 chicks) were tested as well.

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

Pooled samples from faces with regard on the number of birds in the building. 1 - 20 birds 1 - 20 samples, 21 - 29 birds 20 samples, 30 - 39 birds 25 samples, 40 - 49 birds 30 samples, 50 - 59 birds 35 samples, 60 - 89 birds 40 samples, 90 - 199 birds 50 samples, 200 - 499 birds 55 samples, 500 and more birds 60 samples.

Breeding flocks: Production period

Pooled samples from faces with regard on the number of birds in the building. 1 - 20 birds 1 - 20 samples, 21 - 29 birds 20 samples, 30 - 39 birds 25 samples, 40 - 49 birds 30 samples, 50 - 59 birds 35 samples, 60 - 89 birds 40 samples, 90 - 199 birds 50 samples, 200 - 499 birds 55 samples, 500 and more birds 60 samples.

Case definition

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

Where the result of monitoring detected presence of Salmonella enteritidis or Salmonella typhimurium in a breeding flock, notification of result was performed. The person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the flock shall notify the results to the competent authority.
The competent authority performed officially sampling in order to confirm the initial results. A sample of birds must be taken at
random from within each house of birds on the farm. For the
purposes of examination, the birds from each house must be grouped into batches of five and samples of liver, ovary and intestines taken from each bird in the batch must be examined for salmonella.

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

Where the result of monitoring detected presence of Salmonella enteritidis or Salmonella typhimurium in a breeding flock, notification of result was performed. The person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the flock shall notify the results to the competent authority.
The competent authority performed officially sampling in order to confirm the initial results. A sample of birds must be taken at
random from within each house of birds on the farm. For the
purposes of examination, the birds from each house must be grouped into batches of five and samples of liver, ovary and intestines taken from each bird in the batch must be examined for salmonella.

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

Where the result of monitoring detected presence of Salmonella enteritidis or Salmonella typhimurium in a breeding flock, notification of result was performed. The person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the flock shall notify the results to the competent authority.
The competent authority performed officially sampling in order to confirm the initial results. A sample of birds must be taken at
random from within each house of birds on the farm. For the
purposes of examination, the birds from each house must be grouped into batches of five and samples of liver, ovary and intestines taken from each bird in the batch must be examined for salmonella.

Diagnostic/analytical methods used

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

Bacteriological method: ISO 6579:2002

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

Bacteriological method: ISO 6579:2002

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

Bacteriological method: ISO 6579:2002

Vaccination policy

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

Vaccination is voluntary.

Broiler flocks

Vaccination is voluntary.

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)

There was no official and approval monitoring and control program for Salmonella spp. in the year 2004. The sampling is carrying out in animals with

clinical signs or in the suspected herds. The samples were taken either in holdings and/or in slaughterhouse. The samples from clinically ill or suspected animals were taken by private veterinarians.

Meat production flocks

There was no official and approval monitoring and control program for Salmonella spp. in the year 2004. The sampling is carrying out in animals with clinical signs or in the suspected herds. The samples were taken either in holdings and/or in slaughterhouse. The samples from clinically ill or suspected animals were taken by private veterinarians.

Frequency of the sampling

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

Other: at clinically ill or at suspected animals

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

Other: at clinically ill or at suspected animals

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

Other: at clinically ill or at suspected animals

Meat production flocks: Day-old chicks

Other: at clinically ill or at suspected animals

Meat production flocks: Rearing period

Other: at clinically ill or at suspected animals

Meat production flocks: Before slaughter at farm

Other: at clinically ill or at suspected animals

Meat production flocks: At slaughter (flock based approach)

Other: at clinically ill or at suspected animals

Methods of sampling (description of sampling techniques)

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

For sampling are usually used swabs or faeces.

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

necessary): Rearing period

For sampling are usually used swabs or faeces.

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

For sampling are usually used swabs or faeces.

Meat production flocks: Day-old chicks

For sampling are usually used swabs or faeces.

Meat production flocks: Rearing period

For sampling are usually used swabs or faeces.

Meat production flocks: Before slaughter at farm

For sampling are usually used swabs or faeces.

Meat production flocks: At slaughter (flock based approach)

For sampling are usually used swabs or faeces.

Case definition

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

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

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

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Meat production flocks: Day-old chicks

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Meat production flocks: Rearing period

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Meat production flocks: Before slaughter at farm

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Meat production flocks: At slaughter (flock based approach)

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Diagnostic/analytical methods used

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

Bacteriological method: ISO 6579:2002

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

Bacteriological method: ISO 6579:2002

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

Bacteriological method: ISO 6579:2002

Meat production flocks: Day-old chicks

Bacteriological method: ISO 6579:2002

Meat production flocks: Rearing period

Bacteriological method: ISO 6579:2002

Meat production flocks: Before slaughter at farm

Bacteriological method: ISO 6579:2002

Meat production flocks: At slaughter (flock based approach)

Bacteriological method: ISO 6579:2002

Vaccination policy

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

Vaccination is voluntary.

Meat production flocks

Vaccination is voluntary.

Control program/mechanisms

The control program/strategies in place

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

There is no regional or national control program.

Meat production flocks

There is no regional or national control program.

Measures in case of the positive findings or single cases

In the case of positive results of examination for invasive Salmonella serotype, the appropriate RVA shall issue emergency veterinary measures in accordance with Veterinary Act.

Notification system in place

Notification system is lay down by the Act No. 166/1999 on veterinary care and amending certain related laws (Veterinary Act), as amended.

Results of the investigation

If the result of investigation is positive for Salmonella enteritidis or Salmonella typhimurium in holding, the person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the animals shall notify the results to the competent authority.

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

At the time we have only sporadic finding in turkeys with decreasing tendency. A total of 249 samples were analysed during the year 2004. A total of 48 (19,2%) samples were found positive for Salmonella spp. As regard the prevalence of serotypes. Dominant serotype was Salmonella Enteritidis 19(40%) and Salmonella Heidelberg 8 (17%) and to a lesser extend Typhimurium 5 (10%), Sandiego 2 (4%), Saintpaul 1 (2%), Reading 1 (2%) and nontypable 12 (25%). Similar situation was in the previous years. In the year 2003, there were 223 samples and a total of 54 (24,2%) Salmonella strains from turkeys were analysed. Serotype Heidlelberg 19 (35%) was the most frequent. Also serotypes Typhimurium 7 (13%), Zanzibar 5 (9%), Saintpaul 4 (7%), Enteritidis 2 (4%), Gallinarum 1 (2%) and untypable isolate 16 (30%) were found. In the year 2002, there were 555 samples and a total of 134 (24,1%) Salmonella strains from turkeys were analysed. Serotypes Typhimurium 44 (33%), Enteritidis 43 (32%) and Heidelberg 42 (31%) were the most frequent. Also serotype Saintpaul 4 (6%) was found.

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

There are not relevancies of the findings to human cases as a source of infection.

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

Monitoring system

Sampling strategy

Breeding flocks

There was no official and approval monitoring and control program for Salmonella spp. in the year 2004. The sampling is carrying out in animals with clinical signs or in the suspected herds. The samples were taken either in holdings and/or in slaughterhouse. The samples from clinically ill or suspected animals were taken by private veterinarians.

Frequency of the sampling

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

Other: at clinically ill or at suspected animals

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

Other: at clinically ill or at suspected animals

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

Other: at clinically ill or at suspected animals

Meat production flocks: Day-old chicks

Other: at clinically ill or at suspected animals

Meat production flocks: Rearing period

Other: at clinically ill or at suspected animals

Meat production flocks: Before slaughter at farm

Other: at clinically ill or at suspected animals

Meat production flocks: At slaughter (flock based approach)

Other: at clinically ill or at suspected animals

Methods of sampling (description of sampling techniques)

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

For sampling are usually used swabs or faeces.

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

For sampling are usually used swabs or faeces.

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

For sampling are usually used swabs or faeces.

Meat production flocks: Day-old chicks

For sampling are usually used swabs or faeces.

Meat production flocks: Rearing period

For sampling are usually used swabs or faeces.

Meat production flocks: Before slaughter at farm

For sampling are usually used swabs or faeces.

Meat production flocks: At slaughter (flock based approach)

For sampling are usually used swabs or faeces.

Case definition

Breeding flocks: Day-old chicks

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Breeding flocks: Rearing period

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Breeding flocks: Production period

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Meat production flocks: Day-old chicks

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Meat production flocks: Rearing period

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Meat production flocks: Before slaughter at farm

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Meat production flocks: At slaughter (flock based approach)

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Diagnostic/analytical methods used

Breeding flocks: Day-old chicks

Bacteriological method: ISO 6579:2002

Breeding flocks: Rearing period

Bacteriological method: ISO 6579:2002

Breeding flocks: Production period

Bacteriological method: ISO 6579:2002

Meat production flocks: Day-old chicks

Bacteriological method: ISO 6579:2002

Meat production flocks: Rearing period

Bacteriological method: ISO 6579:2002

Meat production flocks: Before slaughter at farm

Bacteriological method: ISO 6579:2002

Meat production flocks: At slaughter (flock based approach)

Bacteriological method: ISO 6579:2002

Vaccination policy

Breeding flocks

Vaccination is voluntary.

Meat production flocks

Vaccination is voluntary.

Control program/mechanisms

The control program/strategies in place

Breeding flocks

There is no regional or national control program.

Meat production flocks

There is no regional or national control program.

Measures in case of the positive findings or single cases

Breeding flocks

In the case of positive results of examination for invasive Salmonella serotype, the appropriate RVA shall issue emergency veterinary measures in accordance with Veterinary Act.

Meat Production flocks

In the case of positive results of examination for invasive Salmonella serotype, the appropriate RVA shall issue emergency veterinary measures in accordance with Veterinary Act.

Notification system in place

Notification system is lay down by the Act No. 166/1999 on veterinary care and amending certain related laws (Veterinary Act), as amended.

Results of the investigation

If the result of investigation is positive for Salmonella enteritidis or Salmonella typhimurium in holding, the person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the animals shall notify the results to the competent authority.

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

At the time we have only sporadic finding in geese. A total of 7 samples were analysed during the year 2004. A total of 1(14,3%) sample were found positive for Salmonella Typhimurium. In the year 2003, there were 15 samples without positive finding. In the year 2002, there were 19 samples without positive finding.

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

There are not relevancies of the findings to human cases as a source of infection.

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

Monitoring system

Sampling strategy

Breeding flocks

There was no official and approval monitoring and control program for Salmonella spp. in the year 2004. The sampling is carrying out in animals with clinical signs or in the suspected herds. The samples were taken either in holdings and/or in slaughterhouse. The samples from clinically ill or suspected animals were taken by private veterinarians.

Meat production flocks

There was no official and approval monitoring and control program for Salmonella spp. in the year 2004. The sampling is carrying out in animals with clinical signs or in the suspected herds. The samples were taken either in holdings and/or in slaughterhouse. The samples from clinically ill or suspected animals were taken by private veterinarians.

Frequency of the sampling

Breeding flocks: Day-old chicks

Other: at clinically ill or at suspected animals

Breeding flocks: Rearing period

Other: at clinically ill or at suspected animals

Breeding flocks: Production period

Other: at clinically ill or at suspected animals

Meat production flocks: Day-old chicks

Other: at clinically ill or at suspected animals

Meat production flocks: Rearing period

Other: at clinically ill or at suspected animals

Meat production flocks: Before slaughter at farm

Other: at clinically ill or at suspected animals

Meat production flocks: At slaughter (flock based approach)

Other: at clinically ill or at suspected animals

Type of specimen taken

Breeding flocks: Day-old chicks

Meconium

Breeding flocks: Rearing period

Faeces

Breeding flocks: Production period

Faeces

Meat production flocks: Day-old chicks

Faeces

Meat production flocks: Rearing period

Faeces

Meat production flocks: Before slaughter at farm

Faeces

Meat production flocks: At slaughter (flock based approach)

Faeces

Methods of sampling (description of sampling techniques)

Breeding flocks: Day-old chicks

For sampling are usually used swabs or meconium.

Breeding flocks: Rearing period

For sampling are usually used swabs or faeces.

Breeding flocks: Production period

For sampling are usually used swabs or faeces.

Meat production flocks: Day-old chicks

For sampling are usually used swabs or faeces.

Meat production flocks: Rearing period

For sampling are usually used swabs or faeces.

Meat production flocks: Before slaughter at farm

For sampling are usually used swabs or faeces.

Meat production flocks: At slaughter (flock based approach)

For sampling are usually used swabs or faeces.

Case definition

Breeding flocks: Day-old chicks

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Breeding flocks: Rearing period

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Breeding flocks: Production period

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Meat production flocks: Day-old chicks

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Meat production flocks: Rearing period

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Meat production flocks: Before slaughter at farm

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Meat production flocks: At slaughter (flock based approach)

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Diagnostic/analytical methods used

Breeding flocks: Day-old chicks

Bacteriological method: ISO 6579:2002

Breeding flocks: Rearing period

Bacteriological method: ISO 6579:2002

Breeding flocks: Production period

Bacteriological method: ISO 6579:2002

Meat production flocks: Day-old chicks

Bacteriological method: ISO 6579:2002

Meat production flocks: Rearing period

Bacteriological method: ISO 6579:2002

Meat production flocks: Before slaughter at farm

Bacteriological method: ISO 6579:2002

Meat production flocks: At slaughter (flock based approach)

Bacteriological method: ISO 6579:2002

Vaccination policy

Breeding flocks

Vaccination is voluntary.

Meat production flocks

Vaccination is voluntary.

Other preventive measures than vaccination in place

Breeding flocks

Vaccination is voluntary.

Meat production flocks

Vaccination is voluntary.

Control program/mechanisms

The control program/strategies in place

Breeding flocks

There is no regional or national control program.

Meat production flocks

There is no regional or national control program.

Measures in case of the positive findings or single cases

In the case of positive results of examination for invasive Salmonella serotype, the appropriate

RVA shall issue emergency veterinary measures in accordance with Veterinary Act.

Notification system in place

Notification system is lay down by the Act No. 166/1999 on veterinary care and amending certain related laws (Veterinary Act), as amended.

Results of the investigation

If the result of investigation is positive for Salmonella enteritidis or Salmonella typhimurium in holding, the person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the animals shall notify the results to the competent authority.

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

At the time there are only sporadic finding in ducks. A total of 152 samples were analysed during the year 2004. A total of 5 (3,3%) samples were found positive for Salmonella spp. As regard the prevalence of serotypes. Dominant serotype was Salmonella Typhimurium 4 (80%) and to a lesser extends Newport 1 (20%). Similar situation was in the previous years. In the year 2003, there were 114 samples without positive finding. In the year 2002, there were 162 samples and a total of 2 (1,2 %) Salmonella strains from ducks were analysed. Serotypes Typhimurium 1 (50%) and Enteritidis 1 (50%) were found.

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

There are not relevancies of the findings to human cases as a source of infection.

F. Salmonella spp in pigs

Monitoring system

Sampling strategy

Breeding herds

There was no official and approval monitoring and control program for Salmonella spp. in the year 2004. The sampling is carrying out in animals with clinical signs or in the suspected herds. The samples were taken either in holdings and/or in slaughterhouse. The samples from clinically ill or suspected animals were taken by private veterinarians.

Multiplying herds

There was no official and approval monitoring and control program for Salmonella spp. in the year 2004. The sampling is carrying out in animals with clinical signs or in the suspected herds. The samples were taken either in holdings and/or in slaughterhouse. The samples from clinically ill or suspected animals were taken by private veterinarians.

Fattening herds

There was no official and approval monitoring and control program for Salmonella spp. in the year 2004. The sampling is carrying out in animals with clinical signs or in the suspected herds. The samples were taken either in holdings and/or in slaughterhouse. The samples from clinically ill or suspected animals were taken by private veterinarians.

Frequency of the sampling

Breeding herds

Other: at clinically ill or at suspected animals

Multiplying herds

Other: at clinically ill or at suspected animals

Fattening herds at farm

Other: at clinically ill or at suspected animals

Fattening herds at slaughterhouse (herd based approach)

Other: at clinically ill or at suspected animals

Type of specimen taken

Breeding herds

Faeces

Multiplying herds

Faeces

Fattening herds at farm

Faeces

Fattening herds at slaughterhouse (herd based approach)

Faeces

Methods of sampling (description of sampling techniques)

Breeding herds

For sampling are usually used swabs or faeces.

Multiplying herds

For sampling are usually used swabs or faeces.

Fattening herds at farm

For sampling are usually used swabs or faeces.

Fattening herds at slaughterhouse (herd based approach)

For sampling are usually used swabs or faeces.

Case definition

Breeding herds

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Multiplying herds

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Fattening herds at farm

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Fattening herds at slaughterhouse (herd based approach)

The positive finding must be confirmed by the bacteriological laboratory investigation with positive results for Salmonella Enteritidis or Salmonella Typhimurium.

Diagnostic/analytical methods used

Breeding herds

Bacteriological method: ISO 6579:2002

Multiplying herds

Bacteriological method: ISO 6579:2002

Fattening herds at farm

Bacteriological method: ISO 6579:2002

Fattening herds at slaughterhouse (herd based approach)

Bacteriological method: ISO 6579:2002

Vaccination policy

Breeding herds

Vaccination is voluntary.

Multiplying herds

Vaccination is voluntary.

Fattening herds

Vaccination is voluntary.

Control program/mechanisms

The control program/strategies in place

Breeding herds

There is no regional or national control program.

Multiplying herds

There is no regional or national control program.

Fattening herds

There is no regional or national control program.

Measures in case of the positive findings or single cases

In the case of positive results of examination for invasive Salmonella serotype, the appropriate RVA shall issue emergency veterinary measures in accordance with Veterinary Act.

Notification system in place

Notification system is lay down by the Act No. 166/1999 on veterinary care and amending certain related laws (Veterinary Act), as amended.

Results of the investigation

If the result of investigation is positive for Salmonella enteritidis or Salmonella typhimurium in holding, the person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the animals shall notify the results to the competent authority.

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

At the time we have only sporadic finding in pigs. A total of 1424 samples were analysed during the year 2004. A total of 51(3,6%) samples were found positive for Salmonella spp. As regard the prevalence of serotypes. Dominant serotype was Salmonella Typhimurium 29(57%) and Salmonella Eneteritidis 8 (16%) and to a lesser extend Derby 6 (11%), Infantis 2 (4%), Give 1 (2%), montevideo 1 (2%) and nontypable 4 (8%). Similar situation was in the previous years. In the year 2003, there were 1537 samples and a total of 35(2,3%) Salmonella strains from pigs were analysed. Serotypes Typhimurium 21 (60%) and Enteritidis 4 (11%) were the most frequent. Also serotypes Derby 3 (9%), Hiedelberg 1 (3%), serological group B 1 (3%) and untypable isolate 5 (14%) were found. In the year 2002, there were 1610 samples and a total of 63 (4%) Salmonella strains from pigs were analysed. Serotypes Typhimurium 38 (60%) and

Enteritidis 10 (16%) were the most frequent. Also serotypes Derby 4 (6%), Agona 6 (10%), Arizone 1 (2%) and untypable isolate 4 (6%) were found.

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

There are not relevancies of the findings to human cases as a source of infection.

G. Salmonella spp. in bovine animals

Monitoring system

Sampling strategy

There was no active monitoring system for Salmonella spp. in cattle. The sampling was carry out in clinically infected animals and in the suspected herds. The samples were taken either in holdings or in slaughterhouse. The samples from clinically ill or suspected animals were taken by private veterinarians. When the result of investigation was positive for Salmonella enteritidis or Typhimurium, local competent authority - RVA (Regional Veterinary Administration) must be informed. The laboratory where the positive results were taken has to inform appropriate RVA as well. In the slaughterhouse is sampling perform by inspector of the RVA at clinically or suspected animals.

Frequency of the sampling

Animals at farm

Other: at clinically ill or at suspected animals

Animals at slaughter (herd based approach)

Other: at clinically ill or at suspected animals

Type of specimen taken

Animals at farm

Other: swabs

Animals at slaughter (herd based approach)

Faeces

Methods of sampling (description of sampling techniques)

Animals at farm

For sampling are usually used swabs or faeces.

Animals at slaughter (herd based approach)

For sampling are usually used swabs faeces or organs.

Case definition

Animals at farm

Positive bacteriological finding Salmonella Enteritidis or Salmonella Typhimurium by cultivation.

Animals at slaughter (herd based approach)

Positive bacteriological finding Salmonella Enteritidis or Salmonella Typhimurium by cultivation.

Diagnostic/analytical methods used

Animals at farm

Bacteriological method: ISO 6579:2002

Animals at slaughter (herd based approach)

Bacteriological method: ISO 6579:2002

Vaccination policy

Vaccination is voluntary

Control program/mechanisms

The control program/strategies in place

The Czech Republic has not monitoring and control programme for Salmonella in bovine animals.

Measures in case of the positive findings or single cases

Measures and controls of contagious diseases and zoonoses are laid down in the Veterinary Act No. 166/1999 as amended, Article 10 - 17.

Notification system in place

Notification system is lay down by the Act No. 166/1999 on veterinary care and amending certain related laws (Veterinary Act), as amended.

Results of the investigation

If the result of investigation is positive for Salmonella enteritidis or Salmonella typhimurium in holding, the person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the animals shall notify the results to the competent authority.

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

At the time we have only sporadic finding in bovine animals. A total of 639 samples were anylysed during the year 2004. A total of 26 (4%) samples were found positive for Salmonella

spp. As regard the prevalence of serotypes. Dominant serotype was Salmonella Typhimurium 18 (69%) and Salmonella Eneteritidis 4 (15%) and to a lesser extend Derby 1 (4%), Anatum 1 (4%), serological group C1 1 (4%) and nontypable 1 (4%). Similar situation was in the previous years. In the year 2003, there were 888 samples and a total of 65 (7,3%) Salmonella strains from catlle were anylyzed. Serotypes Typhimurium 45 (69%) and Enteritidis 17 (26%) were the most frequent. Also serotypes Agona 1 (1,5%), Schwarzengrund 1 (1,5%) and untypable isolate 1 (1,5%) were found. In the year 2002, there were 747 samples and a total of 69 (9,2%) Salmonella strains from catlle were anylyzed. Serotypes Typhimurium 45 (64%) and Enteritidis 12 (17%) were the most frequent. Also serotypes Derby 3 (4,5%), London 4 (7%), serological group B 3 (4,5%) and untypable isolate 2 (2%) were found.

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

There aro no relevances of the findings to human cases as a source of infection.

Table 3.2.1 Salmonella sp. in Poultry breeding flocks (Gallus gallus)

	Source of information	Remarks	Epidemiological unit	Flocks tested	Flocks positive	S. Enteritidis	S. Typhimurium
Gallus gallus							
elite breeding flocks for egg production line	SVA		holding	3	0		
grandparent breeding flocks for egg production line	SVA		holding	3	0		
parent breeding flocks for egg production line	SVA		holding	9	7	7	
day-old chicks	SVA		holding	9	1	1	
- during production period	SVA		holding	9	3	3	
- during rearing period	SVA		holding	9	3	3	
elite breeding flocks for meat prodcution line (1)	SVA		holding	0	0	0	
grandparent breeding flocks for meat production line	SVA		holding	5	0		
parent breeding flocks for meat production line	SVA		holding	80	4	4	
day-old chicks	SVA		holding	80	3	3	
- during rearing period	SVA		holding	80	0		
- during production period	SVA		holding	80	1	1	

(1) : There are no Elite flocs in the Czech Republic.

Footnote

MAH - Methodology of Animal Health
SVA - State Veterinary Administration

Table 3.2.2 Salmonella sp. in other commercial poultry

	Source of information	Remarks	Epidemiological unit	Flocks tested	Flocks positive	S. Enteritidis	S. Typhimurium
Gallus gallus							
laying hens							
day-old chicks	SVA		holding	90	5	5	
- during rearing period	SVA		holding	90	10	10	
- during production period	SVA		holding	90	3	3	
broilers							
day-old chicks	SVA		holding	0			
- during rearing period	SVA		holding	0			
unspecified	SVA		holding	0			
Ducks							
breeding flocks, unspecified	SVA		holding	0			
- during production period	SVA		holding	0			
Geese							
breeding flocks, unspecified	SVA		holding	0			
- during production period	SVA		holding	0			
Turkeys							
breeding flocks, unspecified	SVA		holding	0			
- during production period	SVA		holding	0			

Table 3.2.3 Salmonella sp. in non-commercial poultry and birds

	Source of information	Remarks	Epidemiological unit	Flocks tested	Flocks positive	S. Enteritidis	S. Typhimurium
Pigeons	SVA		holding	5	1		1
Quails	SVA		holding	2	0		
Pheasants	SVA		holding	52	0		
Ostriches	SVA		holding	13	0		

Table 3.2.4 Salmonella sp. in animals (non poultry)

	Source of information	Remarks	Epidemiological unit	Units tested	Units positive	S. Enteritidis	S. Typhimurium	S. Derby	S. Montevideo	S. Infantis	S. Anatum	other serovars
Cattle (bovine animals)	SVA		animal	639	26	4	18	1			1	2
Pigs												
unspecified	SVA		animal	1424	51	8	29	6	1	2		4
Farmed deer	SVA		animal	2	0							

2.1.5. Salmonella in feedstuffs

Table 3.1.1 Salmonella sp. in feed material of animal origin

	Source of information	Remarks	Epidemiological unit	Sample weight	Units tested	Units positive	S. Enteritidis	S. Typhimurium
Feed material of land animal origin								
Dairy products	SVA		lot	25 g	1	0		
Meat and bone meal	SVA		lot	25 g	60	0		
Poultry offal meal	SVA		lot	25 g	11	0		
Feed material of marine animal origin								
Fish meal	SVA		lot	25 g	16	0		

Table 3.1.2 Salmonella sp. in feed of vegetable origin

	Source of information	Remarks	Epidemiological unit	Sample weight	Units tested	Units positive	S. Enteritidis	S. Typhimurium
Feed material of cereal grain origin								
Wheat derived	SVA		lot	25 g	1	0		
Maize	SVA		lot	25 g	4	0		
Feed material of oil seed or fruit origin								
Rape seed derived	SVA		lot	25 g	7	0		
Soya (bean) derived	SVA		lot	25 g	29	0		
Sunflower seed derived	SVA		lot	25 g	6	0		

Table 3.1.3 Salmonella sp. in compound feedingstuff

	Source of information	Remarks	Epidemiological unit	Sample weight	Units tested	Units positive	S. Enteritidis	S. Typhimurium
Compound feedingstuffs for pigs								
Final product	SVA		lot	25 g	5	0		
Compound feedingstuffs for poultry -breeders								
Final product	SVA		lot	25 g	1	0		
Compund feedingstuffs for poultry - broilers								
Final Product	SVA		lot	25 g	1	0		
Pet food								
Dog snacks (pig ears, chewing bones)	SVA		lot	25 g	210	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.

Table 3.3.3 Salmonella serovars in animals

Serovars		Cattle (bovine animals)		Pigs		Gallus gallus		Other poultry		Pigeons		Zoo animals		all animals	
Sources of isolates		M(*)	C(*)	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)
Number of isolates in the laboratory	N=														
Number of isolates serotyped	N=	26	1	51	6	108	4	6			1		5	304	
Number of isolates per type															
S. Ablogame														2	
S. Agona														7	
S. Ahuza														1	
S. Albany														1	
S. Amsterdam														2	
S. Anatum															
S. Arechavaleta														1	
S. Bareilly														5	
S. Bispebjerg														2	
S. Charlottenburg															
S. Corvallis														1	
S. Derby				6											
S. Durban														1	
S. Enteritidis				8	2	90	4						2	95	
S. Epinay														1	
S. Give				1											

S. Goma													2	
S. Heidelberg					3								8	
S. Infantis			2		1									
S. Kibi													1	
S. Montevideo			1										6	
S. Newport							1						16	
S. Typhimurium			29	1	1	0	5			1		1	50	
S. Gallinarum biovar Pullorum					6									
Total of typed *Salmonella*isolates														

Footnote

(*) M : Monitor, C : Clinical

Table 3.3.4 Salmonella serovars in food

Serovars		Bakery products - pastry - with egg filling		Bovine meat		Pig meat		Broiler meat		Other poultry		Other products of animal origin	
Sources of isolates		M(*)	C(*)	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)
Number of isolates in the laboratory	N=	12		1									
Number of isolates serotyped	N=	10		1									
Number of isolates per type													
S. Enteritidis		4											
S. Indiana				1									
S. group D		6											
Total of typed *Salmonella*isolates													

Footnote

(*) M : Monitor, C : Clinical

Table 3.3.5 S.Enteridis phagetypes in animals

Phagetype		all animals		Cattle (bovine animals)		Pigs		Gallus gallus		Other poultry	
Sources of isolates		M(*)	C(*)	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)
Number of isolates in the laboratory	N=		8		2		4		23		
Number of isolates serotyped	N=										
Number of isolates per type											
PT 4			2		0		0		3		0
PT 6			0		0		1		2		0
PT 8			2		1		1		8		0
PT 14b			0		0		0		6		0
Not typable			1		1		1		1		0
PT 13a			1		0		0		0		0
PT 35											
Total of typed *Salmonella*isolates											

Footnote

(*) M : Monitor, C : Clinical

Table 3.3.6 S.Enteridis phagetypes in food

Phagetype		Bovine meat		Pig meat		Broiler meat		Other poultry		Other products of animal origin	
Sources of isolates		M(*)	C(*)	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)
Number of isolates in the laboratory	N=		0		0		5		1		1
Number of isolates serotyped	N=										
Number of isolates per type											
PT 1											
PT 8			0		0		4		0		0
PT 14b			0		0		0		1		0
PT 6b			0		0		0		0		1
Total of typed *Salmonella*isolates											

Footnote

(*) M : Monitor, C : Clinical

Table 3.3.7 Salmonella Typhimurium phagetypes in animals

Phagetype	Cattle (bovine animals)		Pigs		Gallus gallus		Other poultry		Other animals	
Sources of isolates	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)
Number of isolates in the laboratory N=		7		15				1		20
Number of isolates serotyped N=										
Number of isolates per type										
DT 1		0		0		0		0		5
DT 2		0		0		0		1		8
DT 12		0		0		0		0		1
DT 104		6		12		0		0		4
DT 120		1		2		0		0		0
Total of typed *Salmonella*isolates										

Footnote

(*) M : Monitor, C : Clinical

Table 3.3.8 Salmonella Typhimurium phagetypes in food

Phagetype		Bovine meat		Pig meat		Broiler meat		Other poultry		Other products of animal origin	
Sources of isolates		M(*)	C(*)	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)	M(*)	C(*)
Number of isolates in the laboratory	N=				1		0		0		3
Number of isolates serotyped	N=										
Number of isolates per type											
DT 1			0		0		0		0		1
DT 104			0		1		0		0		1
Total of typed *Salmonella*isolates											

Footnote

(*) M : Monitor, C : Clinical

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

In the Czech Republic there was no monitoring system for sampling and for testing of antimicrobial resistance in Salmonella in cattle.

Type of specimen taken

For laboratory investigation are taken swabs or faeces.

Methods of sampling (description of sampling techniques)

In the case of clinical cases are taken appropriate samples, mainly swabs, faeces and organs.

Procedures for the selection of isolates for antimicrobial testing

All strains of Salmonella spp. which were isolated from clinical samples are tested for antimicrobial resistance.

Methods used for collecting data

Antimicrobial resistance is tested by disk diffusion method in each laboratory and then are collected only data about results of these investigations. The data are collected by IT Labsys in information centrum of the State Veterinary Administration.

Laboratory used for detection for resistance

Breakpoints used in testing

NCCLS standard

B. Antimicrobial resistance in Salmonella in poultry

Sampling strategy used in monitoring

Frequency of the sampling

There was no monitoring program for antimicrobial resistance.

Table 3.2.5.2 Antimicrobial susceptibility testing of S.Enteritidis in animals

	S. Enteritidis							
	Cattle (bovine animals)		**Pigs**		**Gallus gallus**		**Turkeys**	
Isolates out of a monitoring program	yes		yes		yes		yes	
Number of isolates available in the laboratory	0		0		21		3	
Antimicrobials:	**N**	**%R**	**N**	**%R**	**N**	**%R**	**N**	**%R**
Amphenicols								
Chloramphenicol					21	0%	3	0%
Penicillins								
Ampicillin					21	0%	3	0%

Table 3.2.5.3 Antimicrobial susceptibility testing of S.Typhimurium in animals

	S. Typhimurium							
	Cattle (bovine animals)		**Pigs**		**Gallus gallus**		**Turkeys**	
Isolates out of a monitoring program	yes		yes		yes		yes	
Number of isolates available in the laboratory	1		5		1		0	
Antimicrobials:	**N**	**%R**	**N**	**%R**	**N**	**%R**	**N**	**%R**
Amphenicols								
Chloramphenicol	1	0%	5	100%	1	0%		
Fluoroquinolones								
Enrofloxacin	1	0%	5	0%	1	0%		
Aminoglycosides								
Streptomycin	1	0%	5	100%	1	0%		
Gentamicin	1	0%	5	0%	1	0%		
Neomycin	1	0%	5	0%	1	0%		
Penicillins								
Amoxicillin/ clavulanic acid	1	0%	5	0%	1	0%		
Ampicillin	1	0%	5	100%	1	0%		
Number of multiresistant isolates								
fully sensitives	1	100%			1	100%		
resistant to 4 antimicrobials			5	100%				
Number of multiresistant DT104								
with penta resistance	0	0%	0	0%	0	0%		

Table 3.2.5.1 Antimicrobial susceptibility testing of Salmonella spp. in animals

	Salmonella spp.							
	Cattle (bovine animals)		**Pigs**		**Gallus gallus**		**Turkeys**	
Isolates out of a monitoring program	yes		yes		yes		yes	
Number of isolates available in the laboratory	2		8		31		3	
Antimicrobials:	**N**	**%R**	**N**	**%R**	**N**	**%R**	**N**	**%R**
Amphenicols								
Chloramphenicol	2	50%	8	62,5%	31	3,2%	3	0%
Fluoroquinolones								
Enrofloxacin	2	0%	8	0%	31	0%	3	0%
Aminoglycosides								
Streptomycin	2	50%	8	62,5%	31	12,9%	3	0%
Gentamicin	2	0%	8	0%	31	0%	3	0%
Neomycin	2	50%	8	0%	31	3,2%	3	0%
Penicillins								
Amoxicillin/ clavulanic acid	2	0%	8	0%	31	0%	3	0%
Ampicillin	2	50%	8	62,5%	31	3,2%	3	0%
Number of multiresistant isolates								
fully sensitives	1	50%	3	37,5%	25	80,65%	3	100%
resistant to 1 antimicrobial					4	12,9%		
resistant to 2 antimicrobials					3	6,45%		
resistant to >4 antimicrobials	1	50%	5	62,5%				

Table 3.2.6 Breakpoints for antibiotic resistance of Salmonella in Animals

Test Method Used

Disc diffusion
Agar dilution
Broth dilution
E-test

Standards used for testing

NCCLS
CASFM

Subject to quality control

Salmonella	Standard for breakpoint	Breakpoint concentration (microg/ml)			Range tested concentration (microg/ml)		disk content	breakpoint Zone diameter (mm)		
		Susceptible <=	Intermediate	Resistant >	lowest	highest	microg	Susceptible >=	Intermediate	Resistant <=
Tetracycline										
Tetracyclin	NCCLS	4	8	16			30	19	15,18	14
Amphenicols										
Chloramphenicol	NCCLS	8	16	32			30	18	13,17	12
Florfenicol	NCCLS	8	16	32			30	18	13,17	12
Cephalosporin										
Cephalothin	NCCLS	8	16	32			30	18	15,17	14
Cefotaxim	NCCLS	8	16	32			30	23	15,22	14
3rd generation cephalosporins										
Fluoroquinolones										
Ciprofloxacin	NCCLS	1	2	4			5	21	16,20	15
Enrofloxacin	NCCLS	0,5	1	2			5	20	17,19	16
Quinolones										
Nalidixic acid	NCCLS	8	16	32			30	19	14,18	13
Trimethoprim	NCCLS	2	4	8			5	16	11,15	10
Sulfonamides										
Sulfonamide	NCCLS	2	4	8			25	16	11,15	10
Aminoglycosides										
Streptomycin	NCCLS						10	15	12,14	11
Gentamicin	NCCLS	4	8	16			10	15	13,14	12
Neomycin	NCCLS						30	17	13,16	12
Kanamycin	NCCLS	16	32	64			30	18	14,17	13
Trimethoprim + sulfonamides										
Trimethoprim + Sulfamethoxazol	NCCLS	2	4	8			25	16	11,15	10
Penicillins										
Amoxicillin/ clavulanic acid	NCCLS	8	16	32			20,10	18	14,17	13
Ampicillin	NCCLS	8	16	32			10	17	14,16	13

2.2. CAMPYLOBACTERIOSIS

2.2.1. General evaluation of the national situation

2.2.2. Campylobacteriosis in humans

A. Thermophilic Campylobacter in humans

Reporting system in place for the human cases

Infectious diseases (all infections including parasitary) are notified on legal basis. (20/1966, 258/2000) Any physician is obliged to notify the diagnosed disease and data are collected by the net of Regional Public Health Institutes with their district branch offices. The data are centrally collected and processed by the National Institute of Public health.

Case definition

Clinical picture compatible with campylobacteriosis, e.g. diarrhoeal illness of variable severity.

Notification system in place

Infectious diseases (all infections including parasitary) are notified on legal basis. (20/1966, 258/2000) Any physician is obliged to notify the diagnosed disease and data are collected by the net of Regional Public Health Institutes with their district branch offices. The data are centrally collected and processed by the National Institute of Public health.

History of the disease and/or infection in the country

Campylobacter is routinely diagnosed only in recent years and we observe typical seasonal variation in its incidence. The increaing trend in incidence was partly due to spread of diagnostic in all country. Campylobacterioses have importance comparable with salmonelloses.

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

The highest increase in morbidity is recorded for the lowest age groups that is indicative of worsening conditions in food processing (particularly in households). Almost three fourts of cases were infected via poultry products.

Table 6.3.A Campylobacteriosis in man - species/serotype distribution

Campylobacter	Cases	Cases Inc	Autochtone cases	Autochtone Inc	Imported cases	Imported Inc	unknown status
	25492	248.663	25239	246	253	0	0
C. coli	127	1,24498	127	1,24498	0		
C. jejuni	23544	230,802	23308	228,488	236		
C. upsaliensis	0	0	0	0	0		
Campylobacter spp.	1821	17.663	1804	17,498	17		

Table 6.3.B Campylobacteriosis in man - age distribution

Age Distribution	C. coli			C. jejuni			Campylobacter spp.		
	All	M	F	All	M	F	All	M	F
<1 year	2	2	0	1021	577	444	75	31	44
1 to 4 years	26	14	12	5492	3000	2492	402	218	184
5 to 14 years	26	14	12	4842	2698	2144	366	219	147
15 to 24 years	20	8	12	3975	2038	1937	272	150	122
25 to 44 years	28	13	15	4612	2345	2267	390	185	205
45 to 64 years	21	11	10	2420	1094	1326	214	99	115
65 years and older	4	3	1	1182	456	726	102	40	62
Age unknown	0	0	0	0	0	0	0	0	0
Total :	127	65	62	23544	12208	11336	1821	942	879

Table 6.3.C Campylobacteriosis in man - seasonal distribution

Month	C. coli	C. jejuni	C. upsaliensis	Campylobacter spp.
	Cases	Cases	Cases	Cases
January	6	969		98
February	3	807		65
March	7	1191		94
April	6	1126		94
May	12	1870		133
June	18	2849		205
July	14	2901		203
August	14	3419		258
September	10	2866		210
October	22	2365		211
November	10	2096		148
December	5	1085		102
not known	0	0	0	0
Total :	127	23544	0	1821

2.2.3. Campylobacter in foodstuffs

A. Thermophilic Campylobacter in Broiler meat and products thereof

Monitoring system

Sampling strategy

At slaughterhouse and cutting plant

We had no active monitoring system in the year 2004 for Campylobacter. The sampling is carry out in carcasses at the slaughter. The samples taken off according to Directive 64/433/EHS.

At meat processing plant

We had no active monitoring system in year 2004 for Campylobacter.The samples taken off according to Directive 64/433/EHS.The final products shall be taken after treatment.

At retail

We had no active monitoring system in year 2004 for Campylobacter. The samples taken off according to Directive 64/433/EHS.The final products shall be taken random or when is the suspicion on the incidence of Salmonella.

Frequency of the sampling

At slaughterhouse and cutting plant

Other: random

At meat processing plant

Other: random

At retail

Other: random

Type of specimen taken

At slaughterhouse and cutting plant

Fresh meat

At retail

Minced meat

Methods of sampling (description of sampling techniques)

At slaughterhouse and cutting plant

the samples must be aseptically cutting and placed aseptically into a sample container

At meat processing plant

the samples must by placed aseptically into a sample container

At retail

the samples must by placed aseptically into a sample container

Definition of positive finding

At slaughterhouse and cutting plant

>=1cfu/25 g

At meat processing plant

>=1cfu/25 g

At retail

>=1cfu/25 g

Diagnostic/analytical methods used

At slaughterhouse and cutting plant

Bacteriological method: ISO 10272:1995

At meat processing plant

Bacteriological method: ISO 10272:1995

At retail

Bacteriological method: ISO 6579:2002

Preventive measures in place

Operators of meat establishments must conduct regular checks on the general conditions of production in their establishment - GHP, HACCP,

Control program/mechanisms

The control program/strategies in place

The checks must cover utensils, fittings and machinery at all stages of production. The operator of a meat establishment shall conduct regular checks on the general hygiene conditions of production, by implementing and maintaining a permanent procedure developed in accordance with the HACCP principles.

Recent actions taken to control the zoonoses

On the level of Regional Veterinary Administrations and appropriate veterinary inspectorates are developed sampling plans for bacteriological analyses in row materials and foodstuffs of animal origin including salmonellas monitoring and typization.

Measures in case of the positive findings or single cases

In case of positive findings in monitoring following measures are taken:
- Withdrawal of all goods from stores and market
- Disposal of final products

Notification system in place

All the defaults founded are placed on record on control finding based on which an administrative procedure is initiated. The administrative procedure results in obligatory instructions where the terms are detailed for clearing up the defaults. Observance of the terms for clearing up the defaults is checked by the official veterinarian

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

Incidence of catchment of campylobacter in poultry is in our territory in last years on the same level.

B. C. coli in food - Other poultry meat - fresh - at retail - official food or feed controls - random sampling

Monitoring system

Sampling strategy

Czech Agriculture and Food Inspection Authority inspectors take samples of the individual product lots during the inspection randomly at retail according to the Decree of the Ministry of Health No. 132/2004 Coll., on microbiological requirements for foodstuffs, on means of their inspection and evaluation; RASFF notifications; Commission Recommendation concerning a coordinated programme for the official control of foodstuffs; Inspection of food business operators and monitoring of consumer complaints

Frequency of the sampling

At retail: Based on requirements determined in guides to GMP, GHP published by the Ministry of Agriculture and on the history of previous controls (at least once a year). Inspections are performed more frequently in production plants and shops that do not comply with the requirements.

Type of specimen taken

Meat

Methods of sampling (description of sampling techniques)

At retail: Sample of one hundred grams minimum each is taken in a sterile way, into

clean and dry plastic bag, which is closed, sealed and stamped with a stamp of the Czech Agriculture and Food Inspection Authority (CAFIA). The sample is placed into refrigerated container and immediately sent to the laboratory for analysis.

Definition of positive finding

present in 25 g of tested sample

Diagnostic/analytical methods used

EN/ISO 10272: 1995 standard

Control program/mechanisms

The control program/strategies in place

The control programmes/ strategies in place check of records and documents within the HACCP system.

Recent actions taken to control the zoonoses

Monitoring of zoonoses according to the Decree of the Ministry of Health No. 132/2004 Coll. and Commission Recommendation concerning a coordinated programme for the official control of foodstuffs for 2004 (monitoring of fresh poultry).

Suggestions to the Community for the actions to be taken

information about positive findings were communicated to the State Veterinary Office of the Czech Republic.

Measures in case of the positive findings or single cases

On the basis of positive finding, the whole lot is recalled from circulation. A fine is imposed on the food business operator and he is ordered to remove the causes and to take such measures that would prevent recurrence of pathogens.

Notification system in place

According to Article 3 of Act No. 146/2002 Coll., on the Czech Agriculture and Food Inspection Authority and on amendments to some related Acts, the CAFIA a) imposes, by means of a measure, the obligation to remove identified deficiencies and determines a deadline for such removal, b) checks the observance of measures imposed to remove identified deficiencies.

Results of the investigation

13 positive sample out of the total number of 31 samples tested by the Czech Agriculture and Food Inspection Authority.

Table 6.2 Thermophilic Campylobacter spp. in food

	Source of information	Remarks	Epidemiological unit	Sample weight	Units tested	C. coli	C. lari	C. upsaliensis	C. jejuni	Campylobacter spp.
Bovine meat										
fresh										
- at slaughter	SVA		animal	25	42	0			5	
- at processing plant	SVA		lot	25	18				1	
Pig meat										
fresh										
- at retail	NIPH			25	12				1	
meat products										
non-ready-to-eat										
- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25	20	0	0	0	0	0
Poultry meat										
fresh										
- at retail	CAFIA - according to 2004/24/EC		lot*	25	31	0	0	0	13	0
Other meat										
fresh										
- at retail	NIPH			25	12					
cow milk										
raw	SVA		lot	250 ml	0	0	0			
Dairy products										
ready-to-eat	SVA		lot		22	0	0			
Fishery products										
fish	NIPH			25	12					0
Cheeses										
soft and semi soft										
made from raw or thermised milk										
- at retail - official food or feed controls	CAFIA - according to 2004/24/EC		lot*	25	62	0	0	0	0	0
Bakery products										
pastry										
with egg filling										

- at retail - official food or feed controls - random sampling	CAFIA according to Decree No. 132/2004 Coll.		lot*	25	1	0	0	0	0	0
Broiler meat										
fresh	NIPH			25	48	4	0	0	9	
Vegetables										
other	NIPH			25	12					

Footnote

CAFIA - Czech Agriculture and Food Inspection Authority;
NIPH - National Institute of Public Health;
SVA - State Veterinary Administrative;
2004/24/EC - Commission Recommendation of 19 December 2003 concerning a coordinated programme for the oficial control of foodstuffs for 2004;
Decree No. 132/2004 Coll. - Decree of the Ministry of Health No. 132/2004 Coll., on microbiological requirements for foodstuffs, on means of their inspection and evaluation;
* Lot means an amount of units, identical in kind, that are produced under identical conditions.

2.2.4. Campylobacter in animals

A. Thermophilic Campylobacter in Gallus gallus

Monitoring system

Sampling strategy

There was no official approval program for animals and testing of animals doesn't perform. There was no surveillance system for Campylobacter spp. in Gallus gallus and data about occurrence is missing.

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

We are not able to evaluate the recent situation because data about prevalence is missing.

Table 6.1.1 Thermophilic Campylobacter spp. in animals

	Source of information	Remarks	Epidemiological unit	Units tested	Units positive	C. jejuni	C. coli	C. lari	C. upsaliensis
Cattle (bovine animals)									
dairy cows	SVA			0					
others	SVA			0					
Sheep	SVA			0					
Goats	SVA			0					
Pigs	SVA			0					
Solipeds	SVA			0					
Gallus gallus									
broilers									
- at slaughter	NIPH			1	1	1			
Pet animals									
dogs	NIPH			1	1	1			
cats	NIPH			2	2	1	0	1	0
Wildlife	SVA			0					

2.2.5. Antimicrobial resistance in *Campylobacter* isolates

A. Antimicrobial resistance in Campylobacter jejuni and coli in cattle

Sampling strategy used in monitoring

Frequency of the sampling

The monitoring program of Campylobacter for the year 2004 was recommended. In that year we had passive monitoring plane within the general control.

B. Antimicrobial resistance in Campylobacter jejuni and coli in pigs

Sampling strategy used in monitoring

Frequency of the sampling

There was no surveillance system for Campylobacter spp. in pigs and data about occurrence is missing.

C. Antimicrobial resistance in Campylobacter jejuni and coli in poultry

Sampling strategy used in monitoring

Frequency of the sampling

There was no surveillance system for antimicrobial resistance in Campylobacter spp. in poultry and data about occurrence is missing.

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

There is no official National program for monitoring of Listeriosis at animals. Czech Agriculture and Food Inspection Authority performed control at retail according to Decree of the Ministry of Health No. 132/2004 Coll. Finding in human population are sporadic. From 8-23 registered cases per year per population of CR since 1994.

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

Trends are not changing, sources are unknown.

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

There are not relevancies of the findings to human cases as a source of infection.

2.3.2. Listeriosis in humans

Table 7.2.A Listeriosis in man - species/serotype distribution

Listeria	Cases	Cases Inc
	16	0
Listeria spp.	16	0,156848
congenital cases	0	0
deaths	2	0,019606

Table 7.2.B Listeriosis in man - age distribution

Age Distribution	L. monocytogenes			Listeria spp.		
	All	M	F	All	M	F
<1 year	0	0	0			
1 to 4 years	1	0	1			
5 to 14 years	1	1	0			
15 to 24 years	0	0	0			
25 to 44 years	4	3	1			
45 to 64 years	5	4	1			
65 years and older	5	3	2			
Age unknown	0	0	0			
Total :	16	11	5	0	0	0

2.3.3. Listeria in foodstuffs

A. L. monocytogenes in food - Other food - at retail - official food or feed controls - random sampling

Monitoring system

Sampling strategy

Czech Agriculture and Food Inspection Authority inspectors take samples of the individual product lots during the inspection randomly at retail according to Decree of the Ministry of Health No. 132/2004 Coll., on microbiological requirements for foodstuffs, on means of their inspection and evaluation; RASFF notifications; Commission Recommendation concerning a coordinated programme for the official control of foodstuffs; Inspection of food business operators and monitoring of consumer complaints.

Frequency of the sampling

At retail

Once a year

Type of specimen taken

At retail

according to Decree of the Ministry of Health No. 132/2004 Coll
Monitoring of Ministry of Health

Methods of sampling (description of sampling techniques)

At retail

Sample of one hundred grams minimum each is taken in a sterile way, into clean and dry plastic bag, which is closed, sealed and stamped with a stamp of the Czech Agriculture and Food Inspection Authority (CAFIA). The sample is placed into refrigerated container and immediately sent to the laboratory for analysis.

Definition of positive finding

At retail

present in 25 g of tested sample

Diagnostic/analytical methods used

At retail

Bacteriological method: ISO 11290- EN/ISO 11290-1,2: 1998 standard:1996, 1998

Preventive measures in place

HACCP and GHP systems created.

Control program/mechanisms

The control program/strategies in place

The control programmes/ strategies in place: check of records and documents within the HACCP system

Recent actions taken to control the zoonoses

Monitoring of zoonoses according to the Decree of the Ministry of Health No. 132/2004 Coll. and Commission Recommendation concerning a coordinated programme for the official control of foodstuffs for 2004 (monitoring of cheeses made from raw or thermised milk, smoked fish, fresh vegetables, pastry products with egg's filling, ice cream, delicacy, fresh poultry and pork meat).

Suggestions to the Community for the actions to be taken

information about positive findings were communicated to the State Veterinary Office of the Czech Republic

Measures in case of the positive findings

On the basis of positive finding, the whole lot is recalled from circulation. A fine is imposed on the food business operator and he is ordered to remove the causes and to take such measures that would prevent recurrence of pathogens.

Notification system in place

According to Article 3 of Act No. 146/2002 Coll., on the Czech Agriculture and Food Inspection Authority and on amendments to some related Acts, the CAFIA a) imposes, by means of a measure, the obligation to remove identified deficiencies and determines a deadline for such removal, b) checks the observance of measures imposed to remove identified deficiencies.

Results of the investigation

Two positive sample out of the total number of 217 samples tested by the Czech Agriculture and Food Inspection Authority (link to table 7.1.).

Table 7.1 Listeria monocytogenes in food

	Source of information	Remarks	Epidemiological unit	Sample weight	Definition used	Units tested	<100 cfu/g	>100 cfu/g	L. monocytogenes	L. monocytogenes serovar 1/2a
Bovine meat										
meat products										
ready-to-eat										
- at processing plant	SVA		lot	25 g		35			0	
Pig meat										
meat products										
ready-to-eat										
- at retail	NIPH			25	salami, sausages	204	7	1	8	
- at retail - official food or feed controls - random sampling	CAFIA		lot*	25	fresh refrigerated pork meat	59				1
Poultry meat										
meat products										
ready to eat										
- at retail	NIPH			25	salami, saussages	36	1	1	2	
- at retail - official food or feed controls - random sampling	CAFIA		lot*	25	fresh refrigerated pork meat	7			0	
Cheeses										
- at retail	NIPH			25		60	1		1	
soft and semi soft										
made from raw or thermised milk										
- at retail	CAFIA		lot*	25	ripened soft cheese (ready-to-eat)	98				1
Dairy products										
other products										
ready-to-eat										
- at retail	NIPH			25		60				
ice-cream										
made from pasteurized milk										
- at retail - official food or feed controls - random sampling	CAFIA		lot*	25		28			0	
cow milk										
raw										

for direct human consumption	SVA			250 ml		120			2	
Fishery products										
fish										
smoked										
- at retail	NIPH			25		12				
- at retail - official food or feed controls - random sampling	CAFIA		lot*	25		10			0	
other										
- at retail	NIPH			25	non-RTE	12				
Processed fruits and vegetables										
- at retail - official food or feed controls - random sampling	CAFIA		lot*	25		6			0	
Bakery products										
pastry										
with egg filling										
- at retail - official food or feed controls - random sampling	CAFIA.		lot*	25		4			0	
Other processed food products										
ready-to-eat										
delicatessen										
- at retail - official food or feed controls - random sampling	CAFIA		lot*	25		5			0	
Delicatessen	NIPH			25	salads with dressing	24	4	0	4	
Confectionery products and pastes	NIPH			25	desserts	36				
Vegetables										
other	NIPH			25	frozen vegetable	48	6	0	6	
Prepared food, non-ready to eat	NIPH			25	pizza frozen	12	1	0	1	

Footnote

CAFIA - performed testing in accordance with Decree No. 132/2004 Coll.;
2004/24/EC - Commission Recommendation of 19 December 2003 concerning a coordinated programme for the oficial control of foodstuffs for 2004;
Decree No. 132/2004 Coll. - Decree of the Ministry of Health No. 132/2004 Coll., on microbiological requirements for foodstuffs, on means of their inspection and evaluation;
* Lot means an amount of units, identical in kind, that are produced under identical conditions.

2.4. VEROCYTOTOXIC ESCHERICHIA COLI

2.4.1. General evaluation of the national situation

2.4.2. Verocytotoxic Escherichia coli in humans

Table 11.3.A Verocytotoxic Escherichia coli infections in man - species/serotype distribution

Pathogenic Escherichia coli	Cases	Cases Inc	Autochtone cases	Autochtone Inc	Imported cases	Imported Inc
HUS	0					
- clinical cases	0					
- lab. confirmed cases	0					
- caused by O157 (VT+)	0					
- caused by other VTEC	0					
E.coli infect. (except HUS)						
- laboratory confirmed	1743	17,0866	1737	17,0278	6	
- caused by 0157 (VT+)	55	0,53917	55	0,53917	0	
- caused by other VTEC	0	0	0	0	0	

Table 11.3.B Verocytotoxic Escherichia coli infections in man - age distribution

Age Distribution	Verotoxigenic E. coli (VTEC)			VTEC O 157:H7			VTEC non-O 157		
	All	M	F	All	M	F	All	M	F
<1 year				18	13	5	818	450	368
1 to 4 years				24	10	14	735	402	333
5 to 14 years				1	1	0	25	11	14
15 to 24 years				2	0	2	14	2	12
25 to 44 years				3	1	2	50	13	37
45 to 64 years				2	2	0	36	17	19
65 years and older				5	3	2	10	4	6
Age unknown				0	0	0	0	0	0
Total :	0	0	0	55	30	25	1688	899	789

2.4.3. Pathogenic Escherichia coli in foodstuffs

A. Verotoxigenic E. coli (VTEC) in food - Bovine meat - minced meat - at retail - official food or feed controls - random sampling

Monitoring system

Sampling strategy

Czech Agriculture and Food Inspection Authority inspectors take samples of the individual product lots during the inspection randomly at retail according to Decree of the Ministry of Health No. 132/2004 Coll., on microbiological requirements for foodstuffs, on means of their inspection and evaluation; RASFF notifications; Commission Recommendation concerning a coordinated programme for the official control of foodstuffs; Inspection of food business operators and monitoring of consumer complaints.

Frequency of the sampling

Based on requirements determined in guides to GMP, GHP published by the Ministry of Agriculture and on the history of previous controls (at least once a year). Inspections are performed more frequently in production plants and shops that do not comply with the requirements.

Type of specimen taken

Meat

Methods of sampling (description of sampling techniques)

Sample of one hundred grams minimum each is taken in a sterile way, into clean and dry plastic bag, which is closed, sealed and stamped with a stamp of the Czech Agriculture and Food Inspection Authority (CAFIA). The sample is placed into refrigerated container and immediately sent to the laboratory for analysis.

Definition of positive finding

present in 25 g of tested sample

Diagnostic/analytical methods used

EN/ISO 16654: 2001 standard

Preventive measures in place

HACCP and GHP systems created.

Control program/mechanisms

The control program/strategies in place

Check of records and documents within the HACCP system

Recent actions taken to control the zoonoses

Monitoring of zoonoses according to the Decree of the Ministry of Health No. 132/2004 Coll. and Commission Recommendation concerning a coordinated programme for the official control of foodstuffs for 2004 (monitoring raw beef meat, beef meat products).

Suggestions to the Community for the actions to be taken

Information about positive findings were communicated to the State Veterinary Office of the Czech Republic

Measures in case of the positive findings or single cases

On the basis of positive finding, the whole lot is recalled from circulation. A fine is imposed on the food business operator and he is ordered to remove the causes and to take such measures that would prevent recurrence of pathogens.

Notification system in place

According to Article 3 of Act No. 146/2002 Coll., on the Czech Agriculture and Food Inspection Authority and on amendments to some related Acts, the CAFIA a) imposes, by means of a measure, the obligation to remove identified deficiencies and determines a deadline for such removal, b) checks the observance of measures imposed to remove identified deficiencies.

Results of the investigation

All samples were negative out of the total number of 28 samples tested by the Czech Agriculture and Food Inspection Authority (link to table 11.2.).

Table 11.2 Verocytotoxic Escherchia coli in food

	Source of information	Remarks	Epidemiological unit	Sample weight	Units tested	Units positive	VTEC O 157	VTEC O 157:H7
Bovine meat								
fresh								
- at retail - official food or feed controls - random sampling	CAFIA		lot*	25	10	0		
meat products								
- at retail - official food or feed controls - random sampling	CAFIA		lot*	25	18	0		
Pig meat								
fresh								
- at slaughter								
Poultry meat								
fresh								
- at slaughter								
Meat from sheep								
fresh								
- at slaughter			animal		0	0		
Goat meat								
fresh								
- at slaughter			animal		0	0		
cow milk								
raw								
Dairy products								
Fishery products								

Footnote

CAFIA - performed the testing in accordance with Decree No. 132/2004 Coll.
Decree No. 132/2004 Coll. - Decree of the Ministry of Health No. 132/2004 Coll., on microbiological requirements for foodstuffs, on means of their inspection and evaluation;
*Lot means an amount of units, identical in kind, that are produced under identical conditions.

2.4.4. Pathogenic Escherichia coli in animals

A. Verotoxigenic Escherichia coli in cattle (bovine animals)

Monitoring system

Sampling strategy

There was no official National program in the Czech Republic for monitoring VT E. coli in the year 2004.

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

We are not able to evaluate the recent situation because the data abou prevalences is missing.

2.5. TUBERCULOSIS

2.5.1. General evaluation of the national situation

A. Tuberculosis General evaluation

History of the disease and/or infection in the country

Elimination of bovine tuberculosis caused by M. bovis was successfully completed in the CR by eradicatoin and control programme in 1968.

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

The whole territory of the Czech Republic is declared officially free of tuberculosis as regards bovine herds in accordance with Commission decision 2004/320/EC of 31 March 2004. There is no relevance between TBC in human and TBC in animals.

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

There is no relevance between findings in animals, feedingstuffs and foodstuffs to human causes because since 1968 the Czech Republic is free from Bovine tuberculosis (M. bovis).

Recent actions taken to control the zoonoses

All animals over 24 months (except breeding bulls) were tested by tuberculin test in 50% of holdings once a year. The holdings were set down by appropriate Regional veterinary administration. All breeding bulls were tested once a year.
Control of movement and assembling of animals.
All slaughtered animals and foodstafs of animal origin were under veterinary control.

2.5.2. Tuberculosis in humans

A. Tuberculosis due to Mycobacterium bovis in humans

Reporting system in place for the human cases

Register of tuberculosis notifies clinical reports and laboratory reports of tuberculosis and mycobacterioses.

Diagnostic/analytical methods used

Laboratory microscopy and cultivation methods of identification are used. Only cultivation proof is considered as valid microbiological proof.

Notification system in place

Tuberculosis is obligatory notified disease since the begining of the 20th century. The most recent system contains two branches´ Register of tuberculosis - physician´s reports based register and laboratory reports of positive findings based system. Both are merged into one system with unique identification number.

History of the disease and/or infection in the country

Tuberculosis caused by M. tuberculosis is declining for several years after ten-years stagnation. CR is considered as low endemicity country.
After successful elimination of tuberculosis due to M. bovis in animals, we notify only very sporadic cases of identification of M. bovis in humans. Bacteriological finding of M. bovis in humans must be considered very cautiously.

Table 1.2.A Tuberculosis in man - species/serotype distribution

Mycobacterium	Cases	Cases Inc	Autochtone cases	Autochtone Inc	Imported cases	Imported Inc
	1057	10	908	0	149	0
M. bovis						
M. tuberculosis	1057	10,3	908		149	
reactivation of previous cases						

Footnote

There is no evidence of foreign population count, so we are not able to calculate incidence rates for foreigners separately.

Table 1.2.B Tuberculosis in man - age distribution

Age Distribution	M. bovis			M. tuberculosis		
	All	M	F	All	M	F
<1 year						
1 to 4 years						
5 to 14 years						
15 to 24 years						
25 to 44 years						
45 to 64 years						
65 years and older						
Age unknown						
Total :	0	0	0	0	0	0

Footnote

Detailed information is not available up this date due to validation procedures specific to tuberculosis statistics in run.

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

Commission Decision 2004/320/EC

Free regions

The whole territory of the Czech Republic is declared officially free of tuberculosis as regards bovine herds.

Monitoring system

Sampling strategy

The sampling strategy is in accordance with Directive 64/432/EECas amended. All animals over 24 months (except breeding bulls) are testing by tuberculin test in 50% of holdings once a year. The holdings are set down by RVA. All breeding bulls are testing once a year. The sampling is a part of permanent monitoring.

Frequency of the sampling

Once a year

Type of specimen taken

Other: intradermal tuberculization

Methods of sampling (description of sampling techniques)

The place of application is situated at the border of the anterior and middle thirds of the neck. The skin must be without pathological changes, equally thick with the possibility of an easy cutaneous drape formation. The place of tuberculin administration is perfectly cut and cleaned. The cutaneous drape is formed with the thumb and the point finger and its thickness is after cutimetre measuring recorded. The dosage of 0.1 ml of tuberculin is applicated by means of a short sterile needle, bevel edge outwards, with graduated syringe charged with tuberculin, inserted obliquely into the deepest layers of the skin. The right reaction after intradermal administration - the papula formation in the place of allergen inoculation - must be detected by palpation. If the tuberculin was not administered intradermally, it is possible to repeat the administration in the same place in the prescribed dosage. If the skin is injured during cutting or if skin changes are determined before tuberculin administration, it is necessary to inoculate tuberculin on another place of the same neck side. The origin place is cancelled with the hair cut.

Case definition

Negative reaction: If there is apparent only bordered swelling with the cutaneous drape

strengthening of max. 2 mm without clinical symptoms as diffusion or large swelling, exudation, necrosis, painfulness or inflammation reaction of the corresponding lymphatic vessels or lymphatic nodes.
Dubious reaction: If there is apparent no clinical symptom stated in item a) but the cutaneous drape strengthening is higher than 2 mm but lower than 4 mm.
Positive reaction: If there are apparent clinical symptoms stated in item a) or the cutaneous drape in the place of application is thicker by 4 mm or more.

Diagnostic/analytical methods used

Simple intradermal tuberculization is performing with tuberculin BOVITUBAL 28000 IU/ml (Bioveta, CZ) that contains tuberculin protein from Mycobacterium bovis (strain AN 5). The dose for one animal is 0,1ml. The diagnostic method is in accordance with recommendation OIE.

Vaccination policy

Vaccination is strictly prohibited.

Other preventive measures than vaccination in place

The control of movement animals between regions and control of import animals.

Control program/mechanisms

The control program/strategies in place

The control of bovine tuberculosis is performing in accordance with 64/432/EC as amended.

Measures in case of the positive findings or single cases

In the case of positive results of examination the appropriate RVA issue emergency veterinary measures in accordance with Veterinary Act.

Notification system in place

Notification system is lay down by the Act No. 166/1999 on veterinary care and amending certain related laws (Veterinary Act), as amended.

Results of the investigation

If the result of investigation is positive, the person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the animals shall notify the results to the competent authority.

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

In the Czech Republic bovine tuberculosis was suppressed in frame of the nationwide sanitation program (1959 - 1968) on 10 October 1968. The post-eradication period (1969 - 1999) was characterized by the extinction of reservoir sources. Currently only the sporadic cases of the bovine tuberculosis incidence have been recorded. In 1981, 1987 to 1990, 1993 and 1996 any

bovine tuberculosis incidence was not found. Thereat in other years, from 1980 to 1995, at the most three outbreaks of tuberculosis ever appeared in cattle. The participation of the infected animals in individual stocks was very low and never exceeded 5 to 10% of animals. In 1970 ? 1995 the Mycobacterium bovis infection was also diagnosed in other 119 animals (zoological gardens, nature, small breedins) and in ten milk specimens. By course of the O.I.E. (International Animal Health Code ? chapter 3.2.3.) definition the territory of the Czech Republic is free from bovine tuberculosis (the prevalence up to 0,2% of infected cattle stocks).

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

There is no relevance because we have no case of TBC (M. bovis).

Additional information

In 2002 were tested 391 274 animals by single tuberculin test examination (11 positive) and 1 350 animals by simultaneous tuberculin test examination (10 positive). All positive reactions were investigated for M. bovis with negative result.
In 2003 were tested 374 625 animals by single tuberculin test examination (1 positive) and 1 730 animals by simultaneous tuberculin test examination. All positive reactions were investigated for M. bovis with negative result.
In 2004 were tested 322 494 animals by single tuberculin test examination (29 positive) and 12 124 animals by simultaneous tuberculin test examination. All positive reactions were investigated for M. bovis with negative result.
In frame of the health control paid by the state, bovine tuberculosis is currently monitored in the CR as follow: single tuberculin test examination, simultaneous tuberculin test examination, laboratory examination (section, histological investigation and bacteriological investigation), serological investigation.

B. Mycobacterium bovis in farmed deer

Monitoring system

Sampling strategy

There were no official National monitoring program in the Czech Republic in the year 2004. All slaughtered animals and products for the animals were under official veterinary control.

Table 1.1.3 Tuberculosis in animals

	Source of information	Remarks	Epidemiological unit	Units tested	Units positive	M. bovis	M. tuberculosis	M. avium spp.
Goats (1)	MAH		animal	1030	0	0	0	
Pigs (2)	IAS		animal	4228961	56	0	0	56
Zoo animals (3)	IAD		animal	693	0	0	0	
Sheep (4)	IAS		animal	15624	0	0	0	

(1) : Methodology of Animal Health
(2) : Investigation of slaugtered animals
(3) : Investigation of dead animals
(4) : Investigation of slaugtered animals

Footnote

MAH - Methodology of Animal health Control
IAS - investigation of slaughtered animals
IAD - investigation of death animals

1.1.1 Bovine tuberculosis

MANDATORY (12)	CATTLE		
Number of herds under official control:(11)	27806	Number of animals under official control:	1428329
	OTF bovine herds	**OTF bovine herds with status suspended**	**Bovine herds infected with tuberculosis**
Status of herds at year end (a):(1)	27806	0	0
New cases notified during the year (b):(2)		55	0
	Units tested	**Units suspected**	**Units positive**
Routine tuberculin test (c) - data concerning herds:(3)	12829	20	0
Routine tuberculin test (c) - data concerning animals:(4)	322494	65	0
	Animals slaughtered	**Animals suspected**	**Animals positive**
Routine post-mortem examination (d):(5)	335812	33	0
		Herds suspected	**Herds confirmed**
Follow up of suspected cases in post-mortem examination (e):(6)		24	0
Follow-up investigation of suspected cases: trace, contacts (f):(7)		12124	0
	Animals tested	**Animals suspected**	**Animals positive**
Other routine investigations: exports (g):(8)	0	0	0
Other routine investigations: tests at AI stations (h):(9)	3515	0	0
	All animals	**Positives**	**Contacts**
Animals destroyed (i):(10)	0	0	0
Animals slaughtered (j):	23	0	0

VOLUNTARY	CATTLE		
	Animals tested	**Animals suspected**	**Animals positive**
Other investigations: imports (k):			
	Herds tested	**Herds suspected**	**Herds positive**
Other investigations: farms at risk (l):			
	Samples tested	***M. bovis*isolated**	
Bacteriological examination (m):			

(1) : to 31. December 2004
(2) : sources of this datas are reports from SVI,s and RVA,s by means of the Information System of the SVA CR
(3) : Numbers of investigation according to Methodology of the Health Control of Animals
to 31. December 2004
(4) : Numbers of investigation according to Methodology of the Health Control of Animals
to 31. December 2004
(5) : Sources of this datas are reports from slaughterhauses
to 31. December 2004
(6) : sources of this datas are reports from SVI,s and RVA,s
to 31. December 2004
(7) : sources of this datas are reports from SVI,s and RVA,s
to 31. December 2004
(8) : to 31. December 2004
(9) : to 31. December 2004
(10) : to 31. December 2004
(11) : to 31.December 2004
(12) : to 31. December 2004

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

In 1964 the program for eradication and control of bovine brucellosis in cattle caused by B. abortus was successfully completed.
Ovine and caprine brucellosis caused by B. melitensis has never been recorded and found in the Czech Republic.

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

The whole territory of the Czech Republic is declared officially free of brucelosis as regards bovine, sheep and goats herds in accordance with Commission decision 2004/320/EC of 31 March 2004.

2.6.2. Brucellosis in humans

A. Brucellosis in humans

Reporting system in place for the human cases

Epidat, all regions in the Czech Republic

Case definition

EU case definition in use

Notification system in place

Notifiable diseases

History of the disease and/or infection in the country

Year	Cases
1955	39
1956	75
1957	38
1958	45
1959	32
1960	67
1961	71
1962	74
1963	49
1964	37
1965	2
1966	10
1967	3
1968	2
1969	0
1970	0
1971	0
1972	0
1973	11
1974	4
1975	1
1976	0
1977	0
1978	0
1979	1
1980	0
1981	1
1982	0
1983	1
1984	4

1985	1
1986	1
1987	1
1988	2
1989	1
1990	0
1991	0
1992	0
1993	0
1994	0
1995	1
1996	1
1997	0
1998	0
1999	0
2000	0
2001	0
2002	0
2003	0
2004	0

Results of the investigation

0 cases confirmed in humans

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

Eradication of the disease in cattle in the year 1964

Table 2.3.A Brucellosis in man - species/serotype distribution

Brucella	Cases	Cases Inc	Autochtone cases	Autochtone Inc	Imported cases	Imported Inc
	0	0	0	0	0	0
B. abortus	0	0,00	0	0,00	0	0,00
B. melitensis	0	0,00	0	0,00	0	0,00
B. suis	0	0,00	0	0,00	0	0,00
occupational cases	0	0,00	0	0,00	0	0,00

Table 2.3.B Brucellosis in man - age distribution

Age Distribution	B. abortus			B. melitensis			Brucella spp.		
	All	M	F	All	M	F	All	M	F
<1 year	0	0	0	0	0	0	0	0	0
1 to 4 years	0	0	0	0	0	0	0	0	0
5 to 14 years	0	0	0	0	0	0	0	0	0
15 to 24 years	0	0	0	0	0	0	0	0	0
25 to 44 years	0	0	0	0	0	0	0	0	0
45 to 64 years	0	0	0	0	0	0	0	0	0
65 years and older	0	0	0	0	0	0	0	0	0
Age unknown									
Total :	0	0	0	0	0	0	0	0	0

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

The Czech Republic is free from 1964. The officially free status in accordance with Europe is laid down in Commission Decision 2004/320/EC.

Free regions

The whole territory of the Czech Republic is declared officially free of brucellosis as regards bovine herds.

Monitoring system

Sampling strategy

All holdings of cattle, which do not supply milk to dairy - all cows and heifers 24 months old, all breeding bulls, bulk milk samples from all holdings of cattle, which supply milk to diary, all abortion animals

Frequency of the sampling

All holdings of cattle, which do not supply milk to dairy - once a year
all breeding bulls - once a year
bulk milk samples from all holdings of cattle, which supply milk to diary - two times a year
all abortion animals - 2 x in interval 21 - 28 days

Type of specimen taken

Other: milk, blood,abortion foetus

Methods of sampling (description of sampling techniques)

The sampling strategy was done by State Veterinary Administration in Methodology of control of animals health which is was laid down in accordance with Veterinary Act No 166/1999 as amended.

Case definition

Positive laboratory investigation (serological or bacteriological).

Diagnostic/analytical methods used

The diagnostic methods are used in accordance with Directive 64/432/EEC, Regulation 2004/226/EEC. RBT, Complement fixation test, ELISA, slow agglutination.

Vaccination policy

Vaccination is strictly prohibited.

Other preventive measures than vaccination in place

Control of animals movement between regions and control of imported animals.

Control program/mechanisms

The control program/strategies in place

Ministry of Agriculture of the Czech Republic determines main strategies in a veterinary care and carries out their control as laid down in the Veterinary Act No. 166/1999 Article 44, Point 1a. The Ministry of Agriculture specifies obligatory preventive and diagnostics campaigns in accordance with the Veterinary Act, Article 44; Point 1d, based on the epidemiological situation. Related details are laid down in the "Methodology of Animal Health Controls and Prophylaxis" approved by the Ministry of Agriculture and issued in its Official Journal. According to the legislation (Veterinary Act 166/1999), the SVA CR (CCA) has the legal power to supervise any action ordered by the "Methodology". Regional veterinary administrations execute the legal powers as to supervise private veterinarians over their actions in the professional field as ordered by the "Methodology".

Measures in case of the positive findings or single cases

The measures are laid down in the Veterinary Act No 166/1999 and Decree 299/2003 in Accordance with 91/68/EEC.

Notification system in place

Notification system is lay down by the Act No. 166/1999 on veterinary care and amending certain related laws (Veterinary Act), as amended.

Results of the investigation

If the result of investigation is positive, the person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the animals shall notify the results to the competent authority.

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

In 1964 the program sanitating the cattle's stocks from bovine brucellosis cause by B. abortus was successfully completed in the Czech Republic. In 1959 the proper campaign was started searching the cattle population through agglutination test. At the beginning the eradication process was based on the elimination method, next phases the radical method was applied. Vaccination against brucellosis was stopped in time.
Following serological tests was used as main diagnostic methods - slow agglutination in indicated case supplemented with complement fixation and Coombs tests in modification by HajdÅ¯. The allergic test, ring milk test tec. were used as supplementary methods. Brucellosis infected cattle was promptly marked by permanent ear - hole and were not further examined. The bacterial culture examinations of aborted foetus, uterine discharge, milk tec. were used for

the diagnosis confirmation in new outbreaks and suspicion in particular.
The zero prevalence was accomplished towards the end of the year 1964 at the complete population. By course of O.I.E. principles defined in the Animal Health the Czech Republic has been free from bovine brucellosis since 30. 9. 1964.
1 048 682 samples for bovine brucellosis were tested in year 2002, no test was found positive. Milk samples were tested by ELISA, blood samples by RBT, Complement fixation test and slow agglutination.
1 050 654 samples for bovine brucellosis were tested in year 2003, 9 bulk milk samples were found positive. All animals from this bulk milk sample were tested individually with negative result. Milk samples were tested by ELISA, blood samples by RBT, Complement fixation test, and slow agglutination.
1 015 339 samples for bovine brucellosis were tested in year 2004, 52 bulk milk samples were found positive. All animals from this bulk milk sample were tested individually with negative result. Milk samples were tested by ELISA, blood samples by RBT, Complement fixation test, and slow agglutination.

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

There are not relevancies of the findings to human cases as a source of infection.

B. Brucella melitensis in Sheep

Status as officially free of ovine brucellosis during the reporting year

The entire country free

The Czech Republic is officialy free of ovine brucelosis in accordance with 320/20047/EC.

Free regions

All regions in The Czech republic are free of ovine brucelosis (B. melitensis) and the disease has never been found in the Czech Republic.

Monitoring system

Sampling strategy

The sampling strategy was done by State Veterinary Administration in Methodology of control of animal health which is laid down in accordance with Veterinary Act No. 166/1999 as amended.

Frequency of the sampling

All breeding rams were tested once a year. All abortioned sheep were tested serologicaly two times in interval 21 -28 days and in indication cases were tested bacteriologicaly aborted foetuses. In holdings which produced young breeding rams were tested all rams over 6 months old and 25 % adult sheep (min. 50 heads) once a year.

Type of specimen taken

Other: blood and foetuses

Methods of sampling (description of sampling techniques)

The methods of sampling is in according with Annex of the Council Decision 90/242/EEC

Case definition

Positive laboratory investigation (serological or bacteriological).

Diagnostic/analytical methods used

The diagnostic method that are used in accordance with Annex of the Council Decision 90/242/EEC.

Vaccination policy

Vaccination is strictly prohibited.

Other preventive measures than vaccination in place

Control of animals movement between regions and control of imported animals.

Control program/mechanisms

The control program/strategies in place

The control program is laid down by State Veterinary Administration in Methodology of control health in accordance with Veterinary Act no. 166/1999 as amended.

Measures in case of the positive findings or single cases

The measures are laid down in Veterinary Act No. 166/199 sb. and Decree 299/2003 Sb in accordance with 91/68/EEC.

Notification system in place

Notification system is lay down by the Act No. 166/1999 on veterinary care and amending certain related laws (Veterinary Act), as amended.

Results of the investigation

If the result of investigation is positive, the person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the animals shall notify the results to the competent authority.

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

In 2002 were tested for B. melitensis all breeding rams once a year, selection holdings of sheep and together housed production animals - basic herd once a year. Abortioned sheep were tested two times in 21 - 28 days interval and aborted foetuses were tested in indicated cases. 15 437 samples in sheep were tested for B. melitensis in year 2002 with negative results. Samples were

tested by complement fixation test, RBT and slow agglutination.
In 2003 were tested all breeding rams once a year, all abortioned sheep two times in interval 21 -28 days and aborted foetuses and all breeding rams and sheep in holdings which produced young breeding rams once a year. 16 827 samples in sheep were tested for B. melitensis in year 2003 with negative results. Samples were tested by complement fixation test, RBT and slow agglutination.
In 2004 were tested all breeding rams once a year, all abortioned sheep two times in interval 21 -28 days and aborted foetuses and in holdings which produced young breeding rams were tested all rams 6 months old and 25 % adult sheep (min. 50 heads) once a year.
15 471 samples in sheep were tested for B. melitensis in year 2004 with negative results. Samples were tested by complement fixation test, RBT and slow agglutination.

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

There are not relevancies of the findings to human cases as a source of infection.

C. Brucella melitensis in Goat

Status as officially free of caprine brucellosis during the reporting year

The entire country free

The Czech Republic officila free of Sheep and goat brucelosis in accordance with Commision Decision No. 320/2004/EC

Free regions

The all teritory of the Czech Republic is free of B. melitensis and B. melitensis has never been found in the Czech Republic.

Monitoring system

Sampling strategy

The sampling strategy was done by State Veterinary Administration in Methodology of control of animal healts which is lay down in accordance with Veterinary Act No. 166/1999 as amended.

Frequency of the sampling

Breeding male goats were tested once a year. All abortioned goats were tested serologicaly two times in interval 21 -28 days and aborted foetuses were tested by cultivation in indicated cases. In holdings which produced young breeding male goats were tested all male goats over 6 months old and 25 % adult goats (female sex) (min. 50 heads) once a year.

Type of specimen taken

Blood

Methods of sampling (description of sampling techniques)

The methods of sampling is in according with Annex of the Council Decision 90/242/EEC

Case definition

The sample is considered like positive in the case of positive laboratory examination.

Diagnostic/analytical methods used

The diagnostic methods were used in accordance with Directive 64/432/EEC and Regulation 2004/226/EEC. RBT, CFT, ELISA and slow agglutination.

Vaccination policy

Vacination is strictly prohibited.

Other preventive measures than vaccination in place

Control of animals movement between regions and control of imported animals.

Control program/mechanisms

The control program/strategies in place

Ministry of Agriculture of the Czech Republic determines main strategies in a veterinary care and carries out their control as laid down in the Veterinary Act No. 166/1999 Article 44, Point 1a. The Ministry of Agriculture specifies obligatory preventive and diagnostics campaigns in accordance with the Veterinary Act, Article 44; Point 1d, based on the epidemiological situation. Related details are laid down in the "Methodology of Animal Health Controls and Prophylaxis" approved by the Ministry of Agriculture and issued in its Official Journal. According to the legislation (Veterinary Act 166/1999), the SVA CR (CCA) has the legal power to supervise any action ordered by the "Methodology". Regional veterinary administrations execute the legal powers as to supervise private veterinarians over their actions in the professional field as ordered by the "Methodology".

Measures in case of the positive findings or single cases

The measures are laid down in Veterinary Act No 166/1999 and Decree 299/2003 in accordance with 91/68/EEC.

Notification system in place

Notification system is lay down by the Act No. 166/1999 on veterinary care and amending certain related laws (Veterinary Act), as amended.

Results of the investigation

If the result of investigation is positive, the person responsible for the laboratory carrying out the examination, the person carrying out the examination or the owner of the animals shall notify the results to the competent authority.

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

In 2002 were tested for B. melitensis all breeding male goats once a year, selection holdings of goats and together housed production animals - basic herd once a year, abortioned sheep two times in 21 - 28 days interval and aborted foetuses in indicated cases. 2810 samples in goats were tested for B. melitensis in year 2002 with negative results. Samples were tested by complement fixation test, RBT and slow agglutination.
In 2003 were tested all breeding male goats once a year, all abortioned goats two times in interval 21 -28 days and aborted foetuses in indicated cases. All breeding male goats and goats in holdings which produced young breeding male goats once a year. 3 060 samples in goats were tested for B. melitensis in year 2003 with negative results. Samples were tested by complement fixation test, RBT and slow agglutination.
In 2004 were tested all breeding male goats once a year, all abortioned goats two times in interval 21 -28 days and aborted foetuses in indicated cases. In holdings which produced young breeding male goats were tested all rams over 6 months old and 25 % adult sheep (min. 50 heads) once a year. 3 076 samples in goats were tested for B. melitensis in year 2004 with negative results. Samples were tested by complement fixation test, RBT and slow agglutination.

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

There are not relevancies of the findings to human cases as a source of infection.

Table 2.1.3 Brucellosis in animals

	Source of information	Remarks	Epidemiological unit	Units tested	Units positive	B. melitensis	B. abortus	B. suis
Pigs	MAH		animal	143946	1			1

Footnote

MAH - Methodology of Animal Health Control

2.1.1 Bovine brucellosis

MANDATORY	CATTLE		
Number of herds under official control:	27806	Number of animals under official control:	1428329
	OBF bovine herds	**OBF bovine herds with status suspended**	**Bovine herds infected with brucellosis**
Status of herds at year end (a):	27806	0	0
New cases notified during the year (b):	0	5	0
	Animals tested	**Animals suspected**	**Animals positive**
Notification of clinical cases, including abortions (c):	8953	0	0
	Units tested	**Units suspected**	**Units positive**
Routine testing (d1) - data concerning herds:	25636	5	0
Routine testing (d2) - number of animals tested:	1006386	63	0
Routine testing (d3) - number of animals tested individually:	149955	0	0
		Herds suspected	**Herds confirmed**
Follow-up investigation of suspected cases: trace, contacts (e):		0	0
	Animals tested	**Animals suspected**	**Animals positive**
Other routine investigations: exports (f):	2986	0	0
Other routine investigations: tests at AI stations (g):	2130	0	0
	All animals	**Positives**	**Contacts**
Animals destroyed (h):	0	0	0
Animals slaughtered (i):	0	0	0

VOLUNTARY	CATTLE		
	Animals tested	**Animals suspected**	**Animals positive**
Other investigations: imports (k):			
	Herds tested	**Herds suspected**	**Herds positive**
Other investigations: farms at risk (l):			
	Samples tested	**Brucella isolated**	
Bacteriological examination (m):			

2.1.2 Ovine and caprine brucellosis

MANDATORY	SHEEP AND GOATS		
Number of holdings under official control:	4559	Number of animals under official control:	134764
	OBF ovine and caprine holdings	**OBF ovine and caprine holdings with status suspended**	**OBF ovine and caprine holdings infected with brucellosis**
Status of herds at year end (a):	4559	0	0
New cases notified during the year (b):	0	0	0
	Animals tested	**Animals suspected**	**Animals positive**
Notification of clinical cases, including abortions (c):	48	0	0
	Units tested	**Units suspected**	**Units positive**
Routine testing (d) - data concerning holdings:	2243	0	0
Routine testing (d) - data concerning animals:	18495	0	0
		Holdings suspected	**Holdings confirmed**
Follow-up investigation of suspected cases: trace, contacts (e):		0	0
	Animals tested	**Animals suspected**	**Animals positive**
Other routine investigations: exports (f):	0	0	0
	All animals	**Positives**	**Contacts**
Animals destroyed (g):	0	0	0
Animals slaughtered (h):	0	0	0
VOLUNTARY	**SHEEP AND GOATS**		
	Animals tested	**Animals suspected**	**Animals positive**
Other investigations: imports (i):			
	Holdings tested	**Holdings suspected**	**Holdings positive**
Other investigations: farms at risk (j):			
	Samples tested	**Brucella isolated**	
Bacteriological examination (k):			

2.7. YERSINIOSIS

2.7.1. General evaluation of the national situation

2.7.2. Yersiniosis in humans

A. Yersinosis in humans

Reporting system in place for the human cases

Epidat

Case definition

EU

Notification system in place

Notifiable diseases

History of the disease and/or infection in the country

MKN DG 1999 2000 2001 2002 2003 2004
A04.6 Yers 211 231 301 403 372 498

Relevance as zoonotic disease

Morbidity of yersiniosis in CZ reveal increasing (498 cases in the last year). Age distribution is like salmonelloses. Cases are sporadic. Seasonality culminate in october and november. Source is most frequently pork meat.

Table 8.3.A Yersiniosis in man - species/serotype distribution

Yersinia	Cases	Cases Inc	Autochtone cases	Autochtone Inc	Imported cases	Imported Inc
	498	4	493	4	5	0
Y. enterocolitica	498	4,8819	493	4,8329	5	
Y. enterocolitica O:3						
Y. enterocolitica O:9						

Table 8.3.B Yersiniosis in man - age distribution

Age Distribution	Y. enterocolitica			Yersinia spp.		
	All	M	F	All	M	F
<1 year	31	16	15			
1 to 4 years	140	75	65			
5 to 14 years	160	102	58			
15 to 24 years	79	50	29			
25 to 44 years	51	22	29			
45 to 64 years	25	9	16			
65 years and older	12	3	9			
Age unknown	0	0	0			
Total :	498	277	221	0	0	0

Table 8.3.C Yersiniosis in man - seasonal distribution

Month	Y. enterocolitica	Yersinia spp.
	Cases	Cases
January	52	
February	36	
March	32	
April	30	
May	38	
June	33	
July	30	
August	40	
September	43	
October	52	
November	77	
December	35	
not known	0	0
Total :	498	0

Czech Republic 2004 Report on trends and sources of zoonoses

2.7.3. Yersinia in foodstuffs

A. Y. enterocolitica in food - Other products of animal origin - at retail - official food or feed controls - random sampling

Monitoring system

Sampling strategy

Czech Agriculture and Food Inspection Authority inspectors take samples of the individual product lots during the inspection randomly at retail according to Decree of the Ministry of Health No. 132/2004 Coll., on microbiological requirements for foodstuffs, on means of their inspection and evaluation; RASFF notifications; Commission Recommendation concerning a coordinated programme for the official control of foodstuffs; Inspection of food business operators and monitoring of consumer complaints.

Frequency of the sampling

Based on requirements determined in guides to GMP, GHP published by the Ministry of Agriculture and on the history of previous controls (at least once a year). Inspections are performed more frequently in production plants and shops that do not comply with the requirements.

Type of specimen taken

Meat

Methods of sampling (description of sampling techniques)

Sample of one hundred grams minimum each is taken in a sterile way, into clean and dry plastic bag, which is closed, sealed and stamped with a stamp of the Czech Agriculture and Food Inspection Authority (CAFIA). The sample is placed into refrigerated container and immediately sent to the laboratory for analysis.

Definition of positive finding

present in 25 g of tested sample

Diagnostic/analytical methods used

EN/ISO 10273: 2003 standard

Preventive measures in place

HACCP and GHP systems created

Control program/mechanisms

The control program/strategies in place

check of records and documents within the HACCP system

Recent actions taken to control the zoonoses

Monitoring of zoonoses according to the Decree of the Ministry of Health No. 132/2004 Coll. and Commission Recommendation concerning a coordinated programme for the official control of foodstuffs for 2004 (monitoring of raw beef and poultry meat, beef meat products, and pastry products with egg's filling, ice cream).

Suggestions to the Community for the actions to be taken

information about positive findings were communicated to the State Veterinary Office of the Czech Republic

Measures in case of the positive findings or single cases

On the basis of positive finding, the whole lot is recalled from circulation. A fine is imposed on the food business operator and he is ordered to remove the causes and to take such measures that would prevent recurrence of pathogens.

Notification system in place

According to Article 3 of Act No. 146/2002 Coll., on the Czech Agriculture and Food Inspection Authority and on amendments to some related Acts, the CAFIA a) imposes, by means of a measure, the obligation to remove identified deficiencies and determines a deadline for such removal, b) checks the observance of measures imposed to remove identified deficiencies.

Results of the investigation

All samples were negative out of the total number of 23 samples tested by the Czech Agriculture and Food Inspection Authority (link to table 8.2.).

Table 8.2 Yersinia enterocolitica in food

	Source of information	Remarks	Epidemiological unit	Sample weight	Units tested	Units positive	Y. enterocolitica	Y. enterocolitica O:3	Y. enterocolitica O:9
Bovine meat									
fresh									
- at retail - official food or feed controls - random sampling	CAFIA		lot*	25	12	0			
meat products									
non-ready-to-eat									
- at retail - official food or feed controls - random sampling	CAFIA		lot*	25	2	0			
Pig meat									
fresh									
- at slaughter	SVA		animal		3	0			
- at processing plant	SVA		25		90	0			
Poultry meat									
fresh									
- at retail - official food or feed controls - random sampling	CAFIA		lot*	25	7	0			
cow milk									
raw	SVA			250 ml	135	0			
Dairy products	SVA		lot		75	0			
Fishery products	SVA		lot		2	0			
Bakery products									
pastry									
with egg filling									
- at retail - official food or feed controls - random sampling	CAFIA		lot*	25	2	0			

Footnote

CAFIA - performed the testing in accordance with Decree No. 132/2004 Coll.;
Decree No. 132/2004 Coll. - Decree of the Ministry of Health No. 132/2004 Coll., on microbiological requirements for foodstuffs, on means of their inspection and evaluation;
* Lot means an amount of units, identical in kind, that are produced under identical conditions.

2.7.4. Yersinia in animals

A. Yersinia entercolitica in pigs

Monitoring system

Sampling strategy

Animals at farm

There was no monitoring program for Yersinia enterocolitica.

Animals at slaughter (herd based approach)

There was no monitoring program for Yersinia enterocolitica.

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

We are not able to evaluate the recent situation because data about prevalnce is missing.

2.8. TRICHINELLOSIS

2.8.1. General evaluation of the national situation

A. Trichinellosis General evaluation

History of the disease and/or infection in the country

On the last 100 years was written 19 epidemics of trichinellosis in our country. 1000 people turn sick and 50 people for them died. At last years, when every carcasses is investigation, we dont write down any occurrence of disease Trichinella spiralis by people.

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

The examination for trichinelosis is carry out at domestic pigs and wild boar, horses, coypus and bears in the place of their slaughtering. In case of emergency slaughtering out of slaughterhouse and/or at hunted wildlife is the examination carry out in the place of veterinary inspection of the meat. The examinations are perform by pressure method and/or by digestive method according to Methodical instruction of the SVA No. 14/2000 in accordance with Council directive on the examination for the trichinae (Trichinella spiralis) upon importation from third countries of fresh meat derived from domestic swine.

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

Human trichinellosis is caused by species of the nematode Trichinella, which is found in warm-blooded carnivores and omnivores including man. The pig is the main component of the epidemio - epizootologic chain of trichinellosis in man; it is also worth mentioning consumption of meat salami and sausages. Prevention of human trichinellosis established in the control of the nematode Trichinella in animals, feedingstuffs and foodstuffs.

Recent actions taken to control the zoonoses

Prevention of human trichinellosis resulting from the ingestion of pork is variously accomplished through meat inspection, through processing of pork products by heating, freezing, irradiating or curing, and through consumer education with respect to meat preparation. In modern pork production systems that employ principles of bio-security, there is essentially no risk to pigs of acquiring Trichinella infection, and the absence of the parasite from domestic pigs raised in these systems has been established through extensive testing. For pigs raised under bio-secure conditions, documentation of good production practices is a viable economic alternative to individual carcass testing to assure product safety.

Suggestions to the Community for the actions to be taken

Detection and identification assays are important tools in the control of Trichinella and the prevention of human trichinellosis. Test results are essential for clinical diagnosis. In modern pork production systems that employ principles of bio-security, there is essentially no risk to pigs of acquiring Trichinella infection, and the absence of the parasite from domestic pigs raised in these systems has been established through extensive testing.

2.8.2. Trichinellosis in humans

A. Trichinellosis in humans

Reporting system in place for the human cases

Epidat

Case definition

EU

Diagnostic/analytical methods used

Laboratory diagnostic

Notification system in place

Notifiable diseases

History of the disease and/or infection in the country

rare occurence - imported cases

Results of the investigation

0 cases reported in the year 2004

2.8.3. Trichinella in animals

A. Trichinella in pigs

Monitoring system

Sampling strategy

investigation every carcasses at slaughterhouse according to regulation 64/433/ECC and Regulation 77/96/ECC.

Frequency of the sampling

Every slaughtered animal is sampled

Type of specimen taken

Diaphragm muscle

Methods of sampling (description of sampling techniques)

Samples of tissue collected from sites where parasites concentrate, are subjected to digestion in acidified pepsin.

Case definition

the diaphragm, masseters or tongue,

Diagnostic/analytical methods used

Artificial digestion method of collective samples

Control program/mechanisms

The control program/strategies in place

The national control programm approved by national authorities and it conform according to Regulation 64/433/ECC and Regulation 77/96/ECC.

Recent actions taken to control the zoonoses

On the level of Regional Veterinary Administrations and appropriate veterinary inspectorates are developed sampling plans for investigation in fresh meat and involed node.

Measures in case of the positive findings or single cases

In case of positive findings in monitoring following measures are taken:
- notification to epizootologie officer
- Heat treatment of detained consignments of raw material

B. Trichinella in horses

Monitoring system

Sampling strategy

investigation every carcasses at slaughterhouse according to regulation 64/433/ECC and Regulation 77/96/ECC.

Frequency of the sampling

Every slaughtered animal is sampled

Type of specimen taken

Diaphragm muscle

Methods of sampling (description of sampling techniques)

Samples of tissue collected from sites where parasites concentrate, are subjected to digestion in acidified pepsin.

Case definition

the diaphragm, masseters or tongue

Diagnostic/analytical methods used

Artificial digestion method of collective samples

Control program/mechanisms

The control program/strategies in place

The national control programm approved by national authorities and it conform according to Regulation 64/433/ECC and Regulation 77/96/ECC.

Recent actions taken to control the zoonoses

On the level of Regional Veterinary Administrations and appropriate veterinary inspectorates are developed sampling plans for investigation in fresh meat and involed node.

Measures in case of the positive findings or single cases

In case of positive findings in monitoring following measures are taken:
- notification to epizootologie officer
- Heat treatment of detained consignments of raw material

Notification system in place

All the defaults founded are placed on record on control finding based on which an administrative procedure is initiated. The administrative procedure results in obligatory instructions where the terms are detailed for clearing up the defaults. Observance of the terms for clearing up the defaults is checked by the official veterinarian

Table 4.1 Trichinella in animals

	Source of information	Remarks	Epidemiological unit	Animals tested	Animals positive
Pigs	SVA			4298706	0
Solipeds	SVA			351	0
Wildlife					
wild boars	SVA			11966	0
foxes	SVA			0	0
other	SVA			28	0

2.9. ECHINOCOCCOSIS

2.9.1. General evaluation of the national situation

A. Echinococcus spp general evaluation

History of the disease and/or infection in the country

Until 1965 occurred echinococcosis only sporadically in 2% of keepings (low capacity stables) and was minimized and later totally eradicated by innovation and using high capacity stables (restricted access of rodents).

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

In last years there was no record of occurrence of echinococcosis.

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

Thanks the post mortem inspection of all carcasses is minimized the risk of releasing infected carcasses.

2.9.2. Echinococcosis in humans

A. Echinococcus spp in humans

Reporting system in place for the human cases

Epidat

Case definition

EU

Notification system in place

Notifiable diseases

History of the disease and/or infection in the country

rare occurrence - imported cases

Results of the investigation

No case in then year 2004

Table 9.2.A Echinococcosis in man - species/serotype distribution

	Cases	Cases Inc	Autochtone cases	Autochtone Inc	Imported cases	Imported Inc
Echinococcus	0	0	0	0	0	0
E. granulosus	0	0	0	0	0	0
E. multilocularis	0	0	0	0	0	0
Echinococcus spp.	0	0	0	0	0	0

2.9.3. Echinococcus in animals

2.10. TOXOPLASMOSIS

2.10.1. General evaluation of the national situation

2.10.2. Toxoplasmosis in humans

A. Toxoplasmosis in humans

Reporting system in place for the human cases

Epidat

Case definition

EU

Diagnostic/analytical methods used

Laboratory

History of the disease and/or infection in the country

Year	Cases
1970	91
1971	121
1972	157
1973	253
1974	1535
1975	460
1976	1071
1977	369
1978	1093
1979	773
1980	783
1981	704
1982	728
1983	959
1984	826
1985	875
1986	721
1987	569
1988	633
1989	595
1990	793
1991	706
1992	823
1993	860
1994	2056
1995	1514

1996	1217
1997	952
1998	777
1999	857
2000	670
2001	516
2002	646
2003	455
2004	219

Results of the investigation

Steady decrease of incidence

Table 10.2.A Toxoplasmosis in man - species/serotype distribution

Toxoplasma	Cases	Cases Inc
	319	3
Toxoplasma spp.	319	3,127157
congenital cases	2	0,019646

Table 10.2.B Toxoplasmosis in man - age distribution

Age Distribution	Toxoplasma spp.		
	All	M	F
<1 year	2	1	1
1 to 4 years	13	9	4
5 to 14 years	67	27	40
15 to 24 years	82	26	56
25 to 44 years	124	23	101
45 to 64 years	31	14	17
65 years and older	0	0	0
Age unknown	0	0	0
Total :	319	100	219

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

The Czech Republic belongs to those countries in which the incidence of rabies in wildlife was steadily increasing since the 1950s till 1980s. Sylvatic rabies established in our country and persists there enzootically up to the present as a continuing problem.
Continual research carried out during 1960 - 1980 proved that rabies had become endemic in the border areas of West and North Bohemia and North Moravia. The importance of foxes in rabies epidemiology increased and red fox became the principal vector of rabies in the Czech Republic. Neither subsidiaries payment for hunted foxes, which was introduced in 1969, nor gassing of fox dens, carried out during 1979-1984, did not improved the situation.
In the 1980s rabies reached its greatest geographical range. With the exception of several districts, the whole territory of the Czech Republic was affected. The oral vaccination of foxes was launched in a few districts adjacent to German borders in 1989 and implemented further thereafter. Since that time continual decline has been visible especially since 1992 when positive effect of oral vaccination has become evident.

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

The last outbreak of Rabies was reported in April 2002.
The rabies data reported during the last thirteen years indicate the development of the rabies situation in our country since the beginning of oral vaccination. In the period 1989 to 2003, 135 819 animals were examined for rabies. The major parts of them were foxes (more than 50%) followed by cats and dogs participating by 30 % together.
Rabies was diagnosed in 6 180 cases during this thirteen year period. The highest number of rabies cases was recorded in 1989 reaching 1 501 cases. The lowest occurrence (3 cases - April) was recorded in 2002.
The involvement of animal species shows that wild animals participated by 95,6% and domestic animals by 4,4 %. The highest occurrence was recorded in foxes accounting for 90,4% of the total cases. Other wild animals and domestic animals participated only by 5,2% and 4,4% respectively.
On the basis of the presented data the rabies situation in the Czech Republic can be characterized as a persistent sylvatic form with occasional transmission to domestic animals. Fox - mediated rabies significantly predominates and no directs transmission of rabies among domestic animals has been registered.
Rabies in 2002
7 477 animals belonging to 39 species were examined for rabies in the Czech Republic in 2002. Only three rabies cases were diagnosed in foxes from district Trutnov in East Bohemia.
Rabies in 2003
7 603 animals belonging to 45 species were examined for rabies in the Czech Republic in 2003. No positive case was recorded.

Relevance of the findings in animals, feedingstuffs and foodstuffs to human cases (as

a source of infection)

In total, 9.319 animals were examined for rabies in the Czech Republic during 2004. No positive case was recorded.
The adjacent areas of Germany and Austria are for long time rabies free. The situation in the northern part (border to Saxony) is found to be problematic.
On the contrary the rabies occurrence on both sides of the Polish border in 2002 and a few rare cases zone for rabies.
Human rabies occurs very rarely in our country. Only three cases were diagnosed during last 40 years.(1968-1 woman-Fox; 1973-1 man-Dog India; 1989-1 man-Unknown in Vietnam)

Recent actions taken to control the zoonoses

Domestic animals
Preventive vaccination of domestic carnivores and if necessary, domestic herbivores are the principal methods of domestic animals protection. The inactivated tissue-culture vaccines are used exclusively for this purpose.
Wild animals
The strategy of rabies control is based on reduction of wildlife reservoir of the virus by oral vaccination of foxes.
Oral vaccination of foxes
The field trial of oral immunization of foxes was started in the Czech Republic in spring 1989. The project planning and organization was prepared according to the rules of the WHO, in close co-operation with the Rabies Centre in Tübingen.
The first application of the oral rabies vaccine was carried out in the districts Klatovy, DomaÅ¾lice, Tachov adjacent to German border in the spring 1989. In the course of next campaigns the treated area was extended covering 44 districts in autumn 1992. In the autumn 1993 the whole territory of the Czech Republic, with exception of rabies free districts bordering Germany, was included.
Over the next years the strategy of oral vaccination was based on two basic principles:
a, Profound treatment in the districts affected by rabies.
b, Implementation of the oral immunization for at least two years after the last outbreak recorded.
The "Bavarian model" was applied during all vaccination campaigns. The hunters placed the vaccine baits manually in their hunting preserves. The strategy of vaccine baits distribution twice a year in spring and autumn was applied. Veterinary authorities were responsible for coordination and supervision of the campaigns at the district level. The original baits density 16 doses per 1 km2 was gradually increased, mainly in the areas with non-favourable epidemiological situation. Since 1996, the aerial distribution of the vaccine baits was used on restricted territory (4 - 6 districts). In 2002 the aerial vaccination was extended reaching 50% of treated territory (29 districts). The aerial vaccination was extended reaching 99% of treated territory in spring 2004. Nearly twenty three million of vaccine baits was used from 1989 till the spring 2004.
Since 1992, only Czech made live attenuated vaccine SAD - Bern has been used for vaccination campaigns.
Results of oral vaccination:
Control examinations following baits distribution were oriented to baits uptake, rabies diagnosis, tetracycline marking, characterization of virus strains and antibody formation.

The indirect measuring of baits uptake was obtained by the examination of fox bones for tetracycline incorporation.

As recommended by WHO, after each campaign, wildlife specimens were collected from vaccination area for examination. Altogether 53 538 animals were examined for rabies during last 12 campaigns. Rabies was proved in 994 cases (1,85%). All isolates were street virus strains as it was indicated by monoclonal antibodies.

Oral vaccination had undisputable positive influence on rabies incidence. A considerable reduction of positive findings was noticed, - from 1501 cases started in 1989 to 3 cases in 2002. An increase was registered in the year 1999 (214 cases).

The decline in the category of domestic carnivores - dogs and cats - is especially valuable. The dominant position is being held by foxes, which participate by 90 % in total number of rabies positive cases.

In the case of Rabies positive results the protective and control measures will be imposed according to the provisions of the Veterinary law 166/1999 (§67) as amended and 100% compensation for owners is established.

2.11.2. Lyssavirus (rabies) in animals

A. Rabies in dogs

Monitoring system

Sampling strategy

The sampling is performed only in suspected animals or in animals which savage people.

Frequency of the sampling

In indicated cases.

Type of specimen taken

Other: clinical investigation or brain

Methods of sampling (description of sampling techniques)

Samples of brain are taken in State Veterinary Institute.

Case definition

Positive IF test.

Diagnostic/analytical methods used

Fluorescent Antibody Test (FAT) on smears from hippocampus or medulla oblongata

Vaccination policy

Antirabies vaccination is obligatory acording to Vet. care Act No 166/1999. Every breeder has to ensure that dogs and some other animals kept in captivity, particulary foxes, badgers and martens, are vaccinated against rabies at their age of 3 months and then revaccinated in regular intervals. The vaccination is carry out by private veterinariens at the owners expense.

Other preventive measures than vaccination in place

All dogs which bite a man must be explore by the veterinarien.

Control program/mechanisms

The control program/strategies in place

The Czech Republic carry out program for oral vaccination of Foxes.

Measures in case of the positive findings or single cases

Positive animals are killed.

Notification system in place

Notification system is lay down by the Act No. 166/1999 of 13 July 1999 on veterinary care and

amending certain related laws (Veterinary Act)

Results of the investigation

The person responsible for the laborytory carrying out the examination have to notify the results to the competent authority.

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

The last Rabies (Fax) was in the 2002 year and the aim is keep the situation.

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

There is no relevance.

Table 5.1 Rabies in animals

	Source of information	Remarks	Animals tested	Animals positive
Cattle (bovine animals)	SVA		8	0
Sheep (1)	SVA		12	0
Goats	SVA		0	0
Pigs	SVA		0	0
Solipeds	SVA		0	0
Wildlife				
bats	SVA		21	0
foxes	SVA		8186	0
other	SVA		357	0
all	SVA		8564	0
Pet animals				
dogs	SVA		286	0
cats	SVA		421	0
other	SVA		28	0

(1) : The number involve sheep and goats

3. INFORMATION ON SPECIFIC INDICATORS OF ANTIMICROBIAL RESISTANCE

3.1. E. COLI INDICATORS

3.1.1. General evaluation of the national situation

A. E. coli general evaluation

History of the disease and/or infection in the country

There was no official and approval monitoring and control program for specific indicators of antimicrobials resistance in the year 2004.

3.1.2. Antimicrobial resistance in *Escherichia coli* isolates

Table 13.1 Antimicrobial susceptibility testing of E.coli in animals

	E.coli							
	Cattle (bovine animals)		**Pigs**		**Gallus gallus**		**Turkeys**	
Isolates out of a monitoring program	yes		yes					
Number of isolates available in the laboratory	51		175					
Antimicrobials:	**N**	**%R**	**N**	**%R**	**N**	**%R**	**N**	**%R**
Tetracycline	50	60%	175	63,4%				
Amphenicols								
Chloramphenicol	50	8%	175	14,3%				
Fluoroquinolones								
Enrofloxacin	51	15,7%	175	19,4%				
Aminoglycosides								
Streptomycin	50	60%	175	54,3%				
Gentamicin	50	6%	175	9,71%				
Neomycin	50	26%	175	10,9%				
Penicillins								
Amoxicillin/ clavulanic acid	51	13,7%	175	38,9%				
Ampicillin	51	13,7%	175	2,9%				

Table 13.7 Breakpoints used for antibiotic resistance testing of E.coli in Animals

Test Method Used

Disc diffusion
Agar dilution
Broth dilution
E-test

Standards used for testing

NCCLS
CASFM

Subject to quality control

Escherichia coli	Standard for breakpoint	Breakpoint concentration (microg/ml)			Range tested concentration (microg/ml)		disk content	breakpoint Zone diameter (mm)		
		Susceptible <=	Intermediate	Resistant >	lowest	highest	microg	Susceptible >=	Intermediate	Resistant <=
Tetracycline	NCCLS	4	8	16			30	19	15,18	14
Amphenicols										
Chloramphenicol	NCCLS	8	16	32			30	18	13,17	12
Florfenicol	NCCLS	8	16	32			30	18	13,17	12
Cephalosporin										
Cephalothin	NCCLS	8	16	32			30	18	15,17	14
Cefotaxim	NCCLS	8	16	32			30	23	15,22	14
3rd generation cephalosporins										
Fluoroquinolones										
Ciprofloxacin	NCCLS	1	2	4			5	21	16,20	15
Enrofloxacin	NCCLS	0,5	1	2			5	20	17,19	16
Quinolones										
Nalidixic acid	NCCLS	8	16	32			30	19	14,18	13
Trimethoprim	NCCLS	2	4	8			5	16	11,15	10
Sulfonamides										
Sulfonamide	NCCLS	256		512			30	17	13,16	12
Aminoglycosides										
Streptomycin	NCCLS						10	15	12,14	11
Gentamicin	NCCLS	4	8	16			10	15	13,14	12
Neomycin	NCCLS						30	17	13,16	12
Kanamycin	NCCLS	16	32	64			30	18	14,17	13
Trimethoprim + sulfonamides										
Trimethoprim + Sulfamethoxazol	NCCLS	2	4	8			5	16	11,15	10
Penicillins										
Amoxicillin/ clavulanic acid	NCCLS	8	16	32			20,10	18	14,17	13
Ampicillin	NCCLS	8	16	32			10	17	14,16	13

4. 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, epidemological investigations and reporting of foodborne outbreaks

Epidemiological investigation of outbreaks are performed by regional public health authorities. After completing epidemiological investigation they provide MOH and National Institute of Public Health with written report on outbreak. Reports are mandatory for larger outbreaks. Summaries are published in yearly table.

Description of the types of outbreaks covered by the reporting:

Mainly general outbreaks are reported. Decision on reporting other outbreaks (mainly family outbreaks) are made by regional authorities. Individual data on disease episodes from specific outbreaks are notified in EPIDAT, general infectious disease notification system. Reporting doesn´t depend on causative agent.

National evaluation of the reported outbreaks in the country:

Trends in numbers of outbreaks and numbers of human cases involved

We notified approximately hundred of rather small outbreaks yearly In last several years. Outbreak cases form in average 10% and family outbreaks about 15% of all notified cases. Sporadic cases aform approximately 3/4 of all cases.

Relevance of the different causative agents, food categories and the agent/food category combinations

Main causative agens in their significance are S.enteritidis, outbreaks caused by S.typhimurium and C.jejuni are relatively rare. We observe increase in outbreaks of foodborne diseases of viral origin. The most risky food components are eggs and poultry.

Evaluation of the severity and clinical picture of the human cases

Severe and fatal cases are very rare and are linked with bad health conditions.

Descriptions of single outbreaks of special interest

Outbreaks of particular interest are published in Centre of epidemiology and microbiology reports (NIPH).

Control measures or other actions taken to improve the situation

Control measures performed are done on legal basis.

Table 12. Foodborne outbreaks in humans

Causative agent	General outbreak	Family outbreak	Total Number in persons			Source			Type of evidence	Location of exposure	Contributing factors
			ill	died	in hospital		Suspected	Confirmed			
1	2	3	4	5	6	7			8	9	10
Salmonella	86	1664	6366	0	906	fodborne	6262	104	Epidemiologicaly and/or laboratory	CZ	
Campylobacter	5	542	1555	0	90	foodborne	1555	*	Epidemiologicaly and/or laboratory	CZ	
Escherichia coli(1)	3	23	108	0	18	fodborne, contact	108	*	Epidemiologicaly and/or laboratory	CZ	
Yersinia - Y. enterocolitica	0	8	22	0	1	foodborne	22	*	Epidemiologicaly and/or laboratory	CZ	
Toxoplasma - T. gondii	0	3	6	0	2	fodborne	6	0	Epidemiologicaly and/or laboratory		

(1) : non VTCE

Footnote

* data not available