European Food Safety Authority

ZOONOSES MONITORING

POLAND

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

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

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

IN 2011

INFORMATION ON THE REPORTING AND MONITORING SYSTEM

Country: Poland

Reporting Year: 2011

Laboratory name	Description	Contribution
General Veterinary Inspectorate		zoonoses / hygiene tabel
Natiomal Institute of Public Health- National Institute of Hygiene		FBO tabel, tabel concernig people

PREFACE

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

The report contains information on trends and sources of zoonoses and zoonotic agents in Poland during the year 2011 .

The information covers the occurrence of these diseases and agents in humans, animals, foodstuffs and in some cases also in feedingstuffs. In addition the report includes data on antimicrobial resistance in some zoonotic agents and commensal bacteria as well as information on epidemiological investigations of foodborne outbreaks. Complementary data on susceptible animal populations in the country is also given. The information given covers both zoonoses that are important for the public health in the whole European Community as well as zoonoses, which are relevant on the basis of the national epidemiological situation.

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

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

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

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

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1. ANIMAL POPULATIONS

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

A. Information on susceptible animal population

Sources of information

Most of data comes from local veterinary units. However, data concerning on the number of herds and livestock with reference to cattle, pigs, goats and sheep obtained the data from the Agency for Restructuring and Modernisation of Agriculture (ARMA). Data concerning to Gallus gallus and turkeys are suitable for these which were placed in reports to the European Commission.

Some data on the number of herds and holdings were obtained from the Agency for Restructuring and Modernisation of Agriculture (ARMA); whereas, data on the herds of other animal species (eg. reindeer,deer) were obtained in the District Veterinary Inspectorates. Data on the number of horses herds was obtained from the Polish Horse Breeders Association.

Data on the number of headage of susceptible animals was obtained from the Agency for Restructuring and Modernisation of Agriculture; while, data on other animal species was obtained in the District Veterinary Inspectorates.

Number of slaughtered animals is a number of animals examined by the official veterinarians in the slaughterhouses prezented in Report RRW-6 for 2008 prepared by General Veterinary Inspectorate and edited by Ministry of Agriculture and Rural Development,

Dates the figures relate to and the content of the figures

Data supplied by the Local Veterinary Units for the year 2010.

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

Definitions used for the purposes of monitoring and eradication of zoonoses are in compliance with the definitions determined by the Regulation 178/2002, Regulation 2160/2003 and Directives: 2003/99, 64/432, 90/539.

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

In 2009 number of herds sheep, goats, pigs and ducks were incresed in comparing to 2008. In case of herds of pigs was realted with stabilization of situation. Number of infected herds of pigs was decreased. Also we still observe increased the number of flocks of Gallus gallus.
In 2008 comparing to 2007, the number of cattle herds decresed but inreased number of live animals. It can be explaind by the fact that holdings which had one or two cows resign therefrom as well as young people moved to the cities. Whereas some farmers enlarged their holdings and number of cattle.
Tere was a slight increased number of pigs herds whereas decreased number of live animals. It was caused by a high price of meat from pigs, and arised holdings, which brought one or two pigs for private domestic use.
As well as decreased of number of livestock was caused by implementation of programme eradication of Aujeszky disease.
In 2008 comparing to 2007, number of sheeps and goats herds increased. It was related with additional payment from Ministry of Agriculture and Rural Development.
In 2008 there was significant decrease in number of flocks and number of live birds of Gallus gallus species. It was propably caused by implementation of National Salmonella control programme in breeding and laying flocks. Decrease in number of flocks can be explained by the fact that for 2008 many District Veterinary Inspectorates did not provide data on very small flocks and holdings (with less than 10 birds kept for private domestic use).
The number of flocks geese and duck decreased in 2008 to compared with 2007.

Also total number of flocks of turkeys decreased but was significant increased of livestock animals.
The number of horses as well as number of herds and holdings significantly decreased in 2008 comparing to 2007.
There was a significant increased the number of rabitts, wild boars or fallow deer herds. Whereas was slight significant decreased number of deer and ostriches herds.
For some animals the number of herds were greater than the number of slaughtered animals. This could be explain that in Poland is a lot of holdings, which keep one goat or horse for domestic use or for hobby. As well as we have a small number of slaughterhouses for goats and horses. We export horses to slaughrehouse in the other countries, where existing tradition in eating of horse meat.

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

In 2010, distribution of flocks of Gallus gallus is as follows:
the most flocks are in mazowieckie, wielkopolskie, kujawsko-pomorskie region.
For flocks of turkeys, herds are located in only five voivodeships: lubuskie, mazowieckie, opolskie, śląskie and warmińsko-mazurskie. The size of flocks hestitate between 3 to 6 thousand of animals.
For herds of cattle, regions with the largest livestock of cattle are in mazowieckie and podlaskie region.
In the region of wielkopolska is the largest pig population.
In 2009 the situation decribed below is similiar like in 2008.
Cattle
Most of livestock was located in 3 voivodeships: mazowieckie, podlaskie and wielkopolskie. At least cattle was in lubuskie voivodship.
Sheep and Goats
Most of sheep and goats are bred in the south regions of Poland, but also many sheep flocks are located in wielkopolskie voivodship which is located in the west part of Poland. Almost 23% of goats are bred in malopolskie voivodship.
Pigs
More than 30% of all pigs are bred in wielkopolskie voivodship, which is well known for location of big commercial holdings belonged to American company. Besides a lot of livestock are bred in lodzkie and mazowieckie voivodships.
Gallus gallus
High density of fowl of Gallus gallus was noted in wielkopolskie, mazowieckie and kujawsko - pomorskie voivideships.
Ducks and geese
Most of number of duck flock wete located in podkarpackie, podlaskie and swietokrzyskie voivodeships. Whereas geese were bred in wielkopolskie and podkarpackie voivodeships.
Turkeys
Over 40% of turkey production was located on warminsko - mazurskie voivodeship. The other localization is in region lubuskie.
Horses
Most number of horses herds were located in podkarpackie and podlaskie voivodeship.

Table Susceptible animal populations

* Only if different than current reporting year

		Number of herds or flocks		Number of slaughtered animals		Livestock numbers (live animals)		Number of holdings	
Animal species	Category of animals	Data	Year*	Data	Year*	Data	Year*	Data	Year*
Cattle (bovine animals)	- in total	646016		1591062		6068806			
Deer	farmed - in total	85				6217		87	
Ducks	meat production flocks	663				4056480		249	
	breeding flocks, unspecified - in total	38				66722		30	
	- in total	701		4794564		4123202		279	
Gallus gallus (fowl)	breeding flocks, unspecified - in total	1395				13215392			
	laying hens	2169				47155373			
	broilers	14843				323896107			
	- in total			709334951					
Geese	meat production flocks	1457				6431555		953	
	breeding flocks, unspecified - in total	296				391034		226	
	- in total	1753		5303229		6822589		1179	
Goats	- in total	9637		73		39537			

Table Susceptible animal populations

		Number of herds or flocks		Number of slaughtered animals		Livestock numbers (live animals)		Number of holdings	
Animal species	Category of animals	Data	Year*	Data	Year*	Data	Year*	Data	Year*
Pigs	- in total	289545		20394971		12617839			
Reindeers	farmed - in total	4				28		4	
Sheep	- in total	7943		23231		229596			
Solipeds, domestic	horses - in total	96609		43231		277313		96793	
Turkeys	meat production flocks	2777				18182823			
	breeding flocks, unspecified - in total	75				321027			
	- in total			25670577					
Wild boars	farmed - in total	26				246		27	
Chinchillas	farmed - at farm	74				31270		74	
Foxes	farmed - at farm - Unspecified	416				166687		414	
Hares	- at farm	2				320		2	
Minks	farmed - at farm - Unspecified	310				3048754		302	
Mouflons	- at farm	8				195		10	
Ostriches	farmed - at farm	83		2179		3457		27	

Table Susceptible animal populations

		Number of herds or flocks		Number of slaughtered animals		Livestock numbers (live animals)		Number of holdings	
Animal species	Category of animals	Data	Year*	Data	Year*	Data	Year*	Data	Year*
Partridges	- at farm	16				36136		14	
Pheasants	- at farm - Unspecified	52				518721		46	
Quails	- at farm	31				68500		31	
Rabbits	farmed - at farm	108				581851		131	
Raccoon dogs	- at farm	1				47		1	

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

The analysis of the official controls and examinations carried out by operetaros indicates that the frequency of the presence Salmonella spp. in foodstuffs of animal origin and feedstuffs is not much different from the situation detected in other EU countries. Poultry has always played a major role in spreading contamination among humans.

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

Poultry is the main reservoir of Salmonella in Poland, although epidemiological situation in other species, except slauhgter pigs, is not well recognized.
S. Enteritidis predominates in Gallus gallus, as well as in slaughter pigs. Species specific S. Choleraesuis occurs in pigs, mostly in clinical cases.
The most frequent serovars in poultry are: S. Enteritidis, S. Typhimurium, S. Infantis, S. Virchow, S. Mbandaka, S. Hadar, and in slaughter pigs (according to results of baseline survey) - S. Enteritidis, S.Typhimurium and S. Derby.
Higher Salmonella prevalence is observed in poultry commercial flocks than in breeders. There are differences in Salmonella infection rates in different poultry species. Infection rate did not differ significantly between ducks, geese and turkey flocks.

Poultry products are the most frequently contaminated by Salmonella. It should be pointed out that relatively low Salmonella prevalence was found in the case of pig and bovine carcasses and meat products of thereof.

This fact is connected with good hygienic practices observed in slaughterhouses in Poland and low prevalence of Salmonella in slaugter bovine animals and pigs.
Other animals were rarely tested and therefore epidemiological situation remained not well recognized.
Salmonella is not found in milk and is very rare in milk products. Mail serovars of Salmonella in food are S.Typhimurium, S.Enteritidis and S.Infantis. From 2007 when SCP in poultry flocks started existing, number of Salmonella decreased.

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

The data shows the typical Salmonella infection cycle covering feedingstuffs, animals, and foodstuffs influencing consumers health.
Hovewer, it is worth to notice decreasing trend in number of salmonellosis in human.

Recent actions taken to control the zoonoses

From 2007 was introduced National Salmonella control programme in breeding flocks of Gallus gallus and is continuing up to this day. Whereas in 2008 in Poland was implemented National Salmonella control programme in laying hens flocks. Programmes are obligatory. The national Salmonella control

programmes were based on Regulation No 2160/2003 of the European Parliament and of the Council of 17 November 2003 on the control of salmonella and other specified food-borne zoonotic agents as well as on Regulation 1003/2005, Regulation 1168/2006 and Regulation 1177/2006.
Sampling was conducted by owners as well as official authority. The tests were performed in regional veterinary laboratories, with status of official laboratories. When S. Enteritidis, S. Typhimurium or S. Infantis, S. Hadar or S. Virchow (breeding flocks) had been detected in samples taken by the operator, then official samples were taken by competent authority. The eggs were kept on holding and no birds could leave the flock until confirmation or exclusion of Salmonella. If the initial positive result was confirmed, official authorities supervised slaughtering of broilers. Eggs from S. Enteritidis and/or S. Typhimurium positive flocks were destroyed or sent to the egg-processing plants. In 2007 antibiotic treatment was allowed, therefore infected bird were often treated with antimicrobials.
After depopulation of the flock the farm was cleaned and disinfected, including safe disposal of manure or litter.

From 2009 was introduced SCP in broilers flocks and is continuing up to this day.

From 2010 were introduced National Salmonella control programme in breeding turkeys and fattening turkeys and is continuing up to this day

Additional information

Salmonella in feedingstuffs:

The feeding stuffs for poultry and other animals must be free from Salmonella. The samples of feeding stuffs are sent for testing also by the owners of poultry farms.

Veterinary Inspection conducts random, regular inspection in feeding stuffs production plants, in particular of microbiological standards, types of internal controls used by the owners of these plants to guarantee the appropriate quality of final product. In addition, it was foreseen that within the National Plan for the official control of animal feedstuffs in the scope of the supervision of Veterinary Inspection every year, samples are going to be randomly taken from the feedstuffs production plants, holdings and trading and tested for salmonella.

Operators duties in case of detection of inappropriate microbiological quality of product

1.notifying the District Veterinary Officer on the results of sample testing and the batch of products from which they were taken
2.secondary processing of contaminated batch, according to an indicated method, under supervision of Veterinary Inspection
3.increasing the frequency of sampling
4.verifying the origin and the indications of raw materials used in production
5.conducting appropriate cleaning and disinfecting of technical equipment

Methodology:
Regional veterinary laboratories follow ISO-EN 6579/2002 standard which was implemented in Poland as PN ISO EN 6579:2003. The strains isolated all over Poland were sent to National Reference Laboratory

for Salmonella for further epidemiological studies.
Baseline studies are performed according to appropriate EU technical specifications.
Antimicrobial resistance in Salmonella was performed with microbroth dilution method and E. coli was tested using disc diffusion method. The tests were performed and the results were interpreted according to CLSI (formerly NCCLS) recommendations.

2.1.2 Salmonellosis in humans

A. Salmonellosis in humans

Reporting system in place for the human cases

Information was direct to ECDC.

2.1.3 Salmonella in foodstuffs

A. Salmonella spp. in pig meat and products thereof

Monitoring system

Sampling strategy

At slaughterhouse and cutting plant

According to meat hygiene regulations.
All procedure concerning to sampling are written in HACCP. Official sampling cover only 10% of all samples taken by FBO.

At meat processing plant

According to meat hygiene regulations.
All procedure concerning to sampling are written in HACCP. Official sampling cover only 10% of all samples taken by FBO.

Sampling frequency of minced meat and raw products
meat for determining the presence of Salmonella for small businesses:
- Not more than 250 kg per week-1 once every 4 weeks
- Not more than 500 kg - 1 every 3 weeks
- Not more than 1000 kg - 1 once every 2 weeks
-over 1000 kg - 1 once a week

Frequency of the sampling

At slaughterhouse and cutting plant

Other: 10% official sampling in order to verification FBO sampling.

At meat processing plant

Other: 10% official sampling in order to verification FBO sampling.

Methods of sampling (description of sampling techniques)

At slaughterhouse and cutting plant

Bacterological sampling of carcassess is according to the Commission Decision of 8 June 2001 No. 2001/471/EC laying down rules for the regular checks on the general hygiene carried out by the operators in establishments according to Directive 64/433/EEC on health conditions for the production and marketing of fresh meat and Directive 71/118/EEC on health problems affecting the production and placing on the market of fresh poultry meat

At meat processing plant

In the case of raw meat products, the unit sample for examination is taken from the deep muscle layers, after singeing the skin or meat surface.
Five unit samples are taken for tests out of products manufactured on a given production day; these samples are considered to representative for the whole daily production.

Diagnostic/analytical methods used

At slaughterhouse and cutting plant

Other: PN-EN ISO-6579:2003

At meat processing plant

Other: PN-EN ISO-6579:2003

Control program/mechanisms

The control program/strategies in place

There was no national control programme existing. Operators must obey EU hygiene legislation and prepare internal control programmes and sampling strategies.

County veterinarian for the proper implementation of the surveillance the entities producing foodstuffs of animal origin must make an analysis prepared within the framework of internal control plans sampling of foods for specified in Chapter 1 of Annex I Commission Regulation (EC) No 2073/2005 on the criteria for foodstuffs. Given the unify the process of conducting the analysis of planned research in the area district may propose LVU supervised entities
systematize the planning process for these studies. To this end:
1) LVU supervised entities can submit a form to complete containing the item in Part 1 of Regulation 2073/2005, establishing the requirements and scope for the introduction of the planned number of research products for which a specific requirement applies;
2) a supervised entity, using the possibility of transmitted form or another form containing this information, draw sampling plans / for tests performed in the laboratory amount (if any) and for tests performed in the laboratory outside (it is necessary to identify the name of the lab) /
each in two copies and submit to the district veterinarian for acceptance, these plans are drawn up under the control of conducted by internal actors;
3) LVU having a risk analysis before accepting
Plans shall verify:
a) whether all groups of products manufactured at the plant, for Microbiological criteria are set by the operator were included in the study plan;
b) whether the products covered by the study plan include a possible increase
Listeria monocytogenes;
c) whether the proposed number of tests will provide an appropriate assessment of
at the end of the production process, as well as the shelf- consumption, taking into account the definitions of the party, the shelf-life consumption, and a representative sample of the sample contained in Regulation 2073/2005;
4) after thorough analysis plan, the county veterinarian spotted
amendments or accepts it, without application of amendments;
5) district veterinarian who has accepted a plan submitted transmit a copy of the company, and the other remains in the files inspectorate of the establishment;
6) the test plan provides a reference in the course of inspection entity and is compared with the actually performed the tests control product safety;

Samples to conduct research to assess the presence of Salmonella security products such as minced meat and meat preparations, should be collected once a week, 5 samples, a frequency change to a smaller may occur:
1) for the first time, if in three consecutive 10 week cycles were obtained satisfactory test results / or after 30 weeks / or where is a national or regional salmonella control program;
2) a second time if the national or regional control program Salmonella is shown that the prevalence of Salmonella in animals purchased by the slaughterhouse is low;

If the number of unsatisfactory results obtained exceeds the value or has been notified of the alarm system RASFF plant returns to the previously implemented frequency.

Measures in case of the positive findings or single cases

Products are destroyed and in case of positive carcass for Salmonella, meat is heat treated in order to destroy Salmonella.

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

In 2009, 47 441 units of pig meat were tested. 95 positive results for Salmonella were found.

In 2008, Salmonella was found in fresh meat (0.25%) as well as in products derived from pigs. The highest prevalence was observed in meat preparation intended to eaten raw (0,83%) and meat products-raw but intended to be eaten cooked (0,64%).
In 9 sampling unit was found S. Typhimurium.

B. Salmonella spp. in bovine meat and products thereof

Monitoring system

Sampling strategy

At slaughterhouse and cutting plant

According to regulation 2073/2005.
All procedure concerning to sampling are written in HACCP. Official sampling cover only 10% of all samples taken by FBO.

At meat processing plant

According to regulation 2073/2005.
All procedure concerning to sampling are written in HACCP. Official sampling cover only 10% of all samples taken by FBO.

Sampling frequency of minced meat and raw products meat for determining the presence of Salmonella for small businesses:
- not more than 250 kg per week-1 once every 4 weeks
- not more than 500 kg - 1 every 3 weeks
- not more than 1000 kg - 1 once every 2 weeks
-over 1000 kg - 1 once a week

Frequency of the sampling

At slaughterhouse and cutting plant

Other: 10% official sampling in order to verification FBO sampling.

At meat processing plant

Other: 10% official sampling in order to verification FBO sampling.

Type of specimen taken

At slaughterhouse and cutting plant

Other: -surface of carcasses,
- environmental samples

Methods of sampling (description of sampling techniques)

At meat processing plant

In the case of raw meat products, the unit sample for examination is taken from the deep muscle layers, after singeing the skin or meat surface.
Five unit samples are taken for tests out of products manufactured on a given production day; these samples are considered to representative for the whole daily production.

Diagnostic/analytical methods used

At slaughterhouse and cutting plant

Other: PN-EN ISO-6579:2003

At meat processing plant

Other: PN-EN ISO-6579:2003

Control program/mechanisms

The control program/strategies in place

Samples are taken by operators or within official control.

FBO introduce DVI with their HACCP and sampling scheme. DVI accept or not this and afterwords takes 10% samples in order to verification results.

Recent actions taken to control the zoonoses

The DVO, or OV authorised by the DVO, issues administrative decisions and carries out the activities in accordance with the provisions of Regulation (EC) No 852/2004, Regulation (EC) No 853/2004, Regulation (EC) No 178/2002 and Regulation (EC) No 1774/2002.

Measures in case of the positive findings or single cases

According to meat hygiene regulations.

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

In 2010, examinated 7300 units from bovine meat and products thereof and the results are satisfactory.

In 2009, 15 648 units of bovine were tested, and 34 positive results were found.
Salmonella spp. was found in 16 cases. The most positive results were in meat preparation from bovine meat intended to eaten cooked (7,2%).

Additional information

In order to unify the procedures carried out by the authorities of the Veterinary Inspection within the scope of determination of frequency of sampling to assess the process hygiene, products safety and execution of the requirements in the scope of official supervision conducted by the Veterinary Inspection, the Chief Veterinary Officer issued in 2009 the Instruction of the Chief Veterinary Officer No. GIWbż-500-7a/09 of 1 October 2009 on the code of conduct by carrying out supervision over studies conducted by operators producing foodstuffs of animal origin in the scope of their safety and control of production process hygiene.

C. Salmonella spp. in broiler meat and products thereof

Monitoring system

Sampling strategy

At slaughterhouse and cutting plant

According to meat hygiene regulations.
All procedure concerning to sampling are written in HACCP. Official sampling cover only 10% of all samples taken by FBO.
According to Instruction of the Chief Veterinary Officer No. GIWbż-500-7a/09 of 1 October 2009 on the code of conduct by carrying out supervision over studies conducted by operators producing foodstuffs of animal origin in the scope of their safety and control of production process hygiene, in order to determine the presence of Salmonella was created table determining the fundamental frequency of hygiene assessment of the production process in a small poultry slaughterhouses, depending on the number of slaughtered animals for the last year. Exceeding one of the values contained in the table results in necessity of a sampling frequency of twice.

At meat processing plant

According to meat hygiene regulations.
All procedure concerning to sampling are written in HACCP. Official sampling cover only 10% of all samples taken by FBO.

Frequency of the sampling

At slaughterhouse and cutting plant

Other: 10% official sampling in order to verification FBO sampling.

At meat processing plant

Other: 10% official sampling in order to verification FBO sampling.

Type of specimen taken

At slaughterhouse and cutting plant

Other: meat juice or tissue

Methods of sampling (description of sampling techniques)

At slaughterhouse and cutting plant

The Commission Decision of 8 June 2001 No. 2001/471/EC laying down rules for the regular checks on the general hygiene carried out by the operators in establishments according to Directive 64/433/EEC on health conditions for the production and marketing of fresh meat and Directive 71/118/EEC on health problems affecting the production and placing on the market of fresh poultry meat remains in force in Poland.

It determines the number of samples and the frequency of sampling as follows:
Between 5 and 10 carcasses should be sampled on a single day during each week. The day of sampling should be changed each week to ensure that every day of the week is covered. The frequency for testing the carcass in low throughput premises and for establishments not working on a full-time basis should be determined by the official veterinarian based on his judgment on hygiene standards with respect to the slaughter at each plant.
A sample from four sites from each carcass should be taken half way through the slaughter day and before chilling commences. Carcass identification, date and time of sampling should be recorded for each sample. Samples should be pooled from the different sampling sites (i.e. rump, flank, brisket and neck) of the tested carcass before examination. Where unacceptable results are obtained and corrective actions

do not lead to better hygiene, further samples should not be pooled until dressing problems have been resolved.

At meat processing plant

In the case of raw meat products, the unit sample for examination is taken from the deep muscle layers, after singeing the skin or meat surface.
Five unit samples are taken for tests out of products manufactured on a given production day; these samples are considered to representative for the whole daily production.

Diagnostic/analytical methods used

At slaughterhouse and cutting plant

Other: PN-EN ISO-6579:2003

At meat processing plant

Other: PN-EN ISO-6579:2003

Control program/mechanisms

The control program/strategies in place

There is no official control programme in place.

Measures in case of the positive findings or single cases

According to meat hygiene regulations.

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

In 2010 the largest number of unit tested was fresh meat.

In 2009,has been tested 13 603 003 samples from meat from broilers. The most positive cases were found in fresh meat from broilers.
In 2008 most contaminated from broiler meat and products thereof were: fresh broiler meat (6,85%), meat product raw intended to be eaten cooked (5,28%), fresh meat and mechanically seperated meat (5,54%). Compared with the 2007 contamination decreased.
In 2008 were conducted survey on prevalence of Salmonella spp. in broiler carcasses carried out according to Commision Desicion 2007/516/EC. Salmonella was found in 107 of 420 tested carcass samples (25,5%).

D. Salmonella spp. in eggs and egg products

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

Salmonella is very rare found in eggs and products thereof. None of eggs products tested were positive for Salmonella spp. in 2007.
But in 2008 Salmonella was found in 0,33% eggs and egg product tested.
In 2009, has been tested 2992 samples derived from eggs and egg products and Salmonella was found in 4 cases. Percentage of Salmonella took away 0,1%.

In 2010 the results of testing eggs and products thereof are satisfactory. Only 1 unit tested was positive.

E. Salmonella spp. in turkey meat and products thereof

Monitoring system

Sampling strategy

At slaughterhouse and cutting plant

According to meat hygiene regulations.
All procedure concerning to sampling are written in HACCP. Official sampling cover only 10% of all samples taken by FBO.

At meat processing plant

According to meat hygiene regulations.
All procedure concerning to sampling are written in HACCP. Official sampling cover only 10% of all samples taken by FBO.

Frequency of the sampling

At slaughterhouse and cutting plant

Other: 10% official sampling in order to verification FBO sampling.

At meat processing plant

Other: 10% official sampling in order to verification FBO sampling.

Type of specimen taken

At slaughterhouse and cutting plant

Other: meat juice or tissue

Results of the investigation

Salmonella serotypes covered by the program were found in 21 flocks of turkeys from 4 648 examined flocks.

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

The prevalence in flocks of fattening turkeys in 2011 was 0.45%. The most frequently isolated serotype of Salmonella in flocks of turkeys were S. Typhimurium, which was found in 13 flocks, while S. Enteritidis was found in 8 flocks. Other serotypes - not covered in the fight - were isolated in 126 flocks.
In 2010 examineted 2114 units from turkey meat and products thereof. In the tested units not found S. Enteritidis or S. Typhimurium; all serotypes belongs to Salmonella unspecified.
In 2009, has been tested 4 421 samples from meat from turkey. 135 samples were positive. Only in 5 cases was found S. Typhimurium.
In 2007, the highest contamination of turkey products was found in minced meat intended to be eaten cooked (14.34%), neck skin (11.3%) and in meat preparations intended to be eaten cooked (7.25%).
Generally in 2008 in meat from turkey and product thereof Salmonella was found in 4,96%. The most contaminated was fresh turkey meat, in this case Salmonella was found in 180 samples.

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	private lab	Census	HACCP and owns check	food sample > neck skin		Single	25g	509	19	0	0
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample > meat		Single	25g	205	56	0	0
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample > meat		Single	25g	70	2	2	
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample > meat		Single	25g	53	0		
Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	167	0		
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample		Single	25g	15	0		
Meat from turkey - carcase - at slaughterhouse - Surveillance	private lab	Unspecified	Not applicable	food sample > neck skin		Single	25g	255	5	0	0
Meat from turkey - fresh - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	65	0		
Meat from turkey - meat products - cooked, ready-to -eat - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	5	0		
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	50	0		

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from duck - carcase - at slaughterhouse - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > neck skin		Single	25g	10	0		
Meat from geese - carcase - at slaughterhouse - Surveillance	RVL	Objective sampling	Industry sampling	food sample > neck skin		Single	25g	63	4	0	0
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance [1)]	RVL	Census	Official sampling	food sample > neck skin		Single	25g	45	20	0	0
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	RVL	Unspecified	Official sampling	food sample > neck skin		Single	25g	230	3	0	0
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	RVL	Census	Official sampling	food sample > neck skin		Single	25g	130	63	8	0
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance [2)]	RVL	Objective sampling	Industry sampling	food sample > neck skin		Single	25g	5	0		
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance [3)]	RVL	Objective sampling	Official sampling	food sample > neck skin		Single	25g	120	2	0	0
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	RVL	Objective sampling	Official sampling	food sample > neck skin		Single	25g	410	60	0	0
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance [4)]	RVL	Suspect sampling	Official sampling	food sample > neck skin		Single	25g	15	5	0	0
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	RVL	Unspecified	Official and industry sampling	food sample > neck skin		Single	25g	305	44	21	0
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	RVL	Objective sampling	Official sampling	food sample > neck skin		Single	25g	10	4	0	0
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > neck skin		Single	25g	410	31	3	0

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	RVL	Objective sampling	Industry sampling	food sample > neck skin		Single	25g	1275	32	0	0
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	RVL	Census	Industry sampling	food sample > neck skin		Single	25g	835	169	0	0
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	RVL	Suspect sampling	Official sampling	food sample > neck skin		Single	25g	60	38	0	0
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	private lab	Unspecified	Industry sampling	food sample > neck skin		Single	25g	1260	48	0	0
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance [5)]	RVL	Census	Industry sampling	food sample > neck skin		Single	25g	105	4	0	0
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	private lab	Census	Industry sampling	food sample > neck skin		Single	200g	290	0		
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	RVL	Unspecified	Industry sampling	food sample > neck skin		Single	25g	1110	9	3	1
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	private lab	Census	Industry sampling	food sample > neck skin		Single	25g	280	9	0	0
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > meat		Single	25g	300	38	3	0
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	private lab	Census	HACCP and owns check	food sample > meat		Single	25g	244	9	0	0
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	RVL	Census	Official sampling	food sample > meat		Single	125g	4	2	0	0
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample > meat		Single	25g	191	0		

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	private lab	Census	Industry sampling	food sample > meat		Single	25g	110	1	0	0
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance [6)]	RVL	Objective sampling	Official sampling	food sample > meat		Single	25g	15	0		
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample > meat		Single	25g	170	0		
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample > neck skin		Single	25g	15	0		
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample > meat		Single	25g	876	96	0	0
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample > meat		Single	25g	60	0		
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample > meat		Single	25g	390	0		
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	private lab	Objective sampling	Industry sampling	food sample > meat		Single	25g	180	11	0	0
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample > meat		Single	25g	35	0		
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample > meat		Single	25g	211	28	0	0
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample > meat		Single	25g	190	8	0	0
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > meat		Single	25g	12	0		

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance [7)]	RVL	Objective sampling	Official sampling	food sample > meat		Single	25g	35	3	0	0
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	private lab	Census	Industry sampling	food sample > meat		Single	25g	297	3	0	0
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample > meat		Single	25g	15	0		
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance [8)]	RVL	Unspecified	Industry sampling	food sample > meat		Single	25g	200	3	2	0
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample > meat		Single	25g	28	5	0	0
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	RVL	Census	Official sampling	food sample > meat		Single	25g	35	4	0	0
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample > meat		Single	25g	194	15	0	0
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample > meat		Single	25g	66	3	0	0
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample > meat		Single	25g	360	72	0	0

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample > meat		Single	25g	105	0		
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	80	0		
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	private lab	Objective sampling	Industry sampling	food sample		Single	25g	53	0		
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	25g	88	0		
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > meat		Single	25g	431	0		
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	120	0		
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample		Single	25g	10	0		
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	116	0		
Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	5	0		

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	1236	120	0	0
Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample		Single	25g	5	1	0	0
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance [9)]	RVL	Census	Official sampling	food sample		Single	125g	5	1	0	0
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	5	0		
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	10g	10	0		
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance [10)]	RVL	Objective sampling	Official sampling	food sample		Single	25g	50	7	0	0
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance (intended to be eaten cooked)	RVL	Census	Industry sampling	food sample		Single	125g	16	3	0	0
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance (intended to be eaten cooked)	RVL	Census	Official sampling	food sample		Single	10g	10	7	0	0
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance (intended to be eaten cooked)	RVL	Objective sampling	Industry sampling	food sample		Single	25g	40	0		

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance (intended to be eaten cooked)	RVL	Objective sampling	Official sampling	food sample		Single	25g	130	9	0	0
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance (intended to be eaten cooked)	RVL	Census	Official sampling	food sample		Single	125g	4	2	0	0
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	30	0		
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	199	2	0	0
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	75	0		
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance	private lab	Census	HACCP and owns check	food sample		Single	250g	2	1	0	0
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	60	0		
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	125g	1	0		
Meat from duck - carcase - at slaughterhouse - Surveillance	RVL	Objective sampling	Industry sampling	food sample > neck skin		Single	25g	95	4	0	0
Meat from duck - carcase - at slaughterhouse - Surveillance	RVL	Census	Industry sampling	food sample > neck skin		Single	25g	10	6	0	0

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from duck - carcase - at slaughterhouse - Surveillance	private lab	Census	Industry sampling	food sample > neck skin		Single	25g	90	0		
Meat from duck - carcase - at slaughterhouse - Surveillance	RVL	Census	Official and industry sampling	food sample > neck skin		Single	25g	6	0		
Meat from duck - carcase - at slaughterhouse - Surveillance	RVL	Objective sampling	Official sampling	food sample > neck skin		Single	25g	10	0		
Meat from duck - carcase - at slaughterhouse - Surveillance	RVL	Unspecified	Official and industry sampling	food sample > neck skin		Single	25g	5	0		
Meat from geese - carcase - at slaughterhouse - Surveillance	private lab	Census	Industry sampling	food sample > neck skin		Single	25g	50	0		
Meat from geese - carcase - at slaughterhouse - Surveillance	RVL	Convenience sampling	Official sampling	food sample > neck skin		Single	25g	5	0		
Meat from geese - carcase - at slaughterhouse - Surveillance	RVL	Census	Industry sampling	food sample > neck skin		Single	25g	147	6	0	0
Meat from geese - carcase - at slaughterhouse - Surveillance	private lab	Census	HACCP and owns check	food sample > meat		Single	25g	48	0		
Meat from turkey - carcase - at slaughterhouse - Surveillance	RVL	Unspecified	Official and industry sampling	food sample > neck skin		Single	25g	60	1	0	0
Meat from turkey - carcase - at slaughterhouse - Surveillance	private lab	Census	Industry sampling	food sample > neck skin		Single	25g	260	3	0	0
Meat from turkey - carcase - at slaughterhouse - Surveillance	RVL	Census	Industry sampling	food sample > neck skin		Single	25g	605	55	0	0
Meat from turkey - carcase - at slaughterhouse - Surveillance [11)]	RVL	Objective sampling	Official sampling	food sample > neck skin		Single	25g	25	2	0	0

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from turkey - carcase - at slaughterhouse - Surveillance	RVL	Census	Official sampling	food sample > neck skin		Single	25g	90	17	0	0
Meat from turkey - carcase - at slaughterhouse - Surveillance	RVL	Objective sampling	Official sampling	food sample > neck skin		Single	25g	20	0		
Meat from turkey - carcase - at slaughterhouse - Surveillance	private lab	Census	HACCP and owns check	food sample > neck skin		Single	25g	35	10	0	0
Meat from turkey - fresh - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample > meat		Single	25g	15	1	0	0
Meat from turkey - fresh - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample > meat		Single	25g	128	12	0	0
Meat from turkey - fresh - at processing plant - Surveillance [12)]	RVL	Objective sampling	Official sampling	food sample > meat		Single	25g	5	0		
Meat from turkey - fresh - at processing plant - Surveillance	private lab	Unspecified	Not applicable	food sample > meat		Single	25g	260	2	0	0
Meat from turkey - fresh - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample > meat		Single	25g	3	0		
Meat from turkey - fresh - at processing plant - Surveillance	private lab	Census	HACCP and owns check	food sample > meat		Single	25g	6	1	0	0
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	20	3	0	0
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance [13)]	RVL	Objective sampling	Official sampling	food sample		Single	25g	5	0		

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	25g	338	14	0	0
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	55	2	0	0
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	private lab	Census	HACCP and owns check	food sample		Single	25g	15	0		
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	private lab	Objective sampling	Industry sampling	food sample		Single	25g	178	2	0	0
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	25g	11	0		
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	10g	5	0		
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	125g	1	0		
Meat from turkey - mechanically separated meat (MSM) - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	10g	10	0		
Meat from turkey - mechanically separated meat (MSM) - at processing plant - Surveillance [14)]	RVL	Objective sampling	Official sampling	food sample		Single	25g	20	2	0	0
Meat from turkey - mechanically separated meat (MSM) - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	10g	10	0		

Table Salmonella in poultry meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from turkey - mechanically separated meat (MSM) - at processing plant - Surveillance	RVL		Industry sampling	food sample		Single	10g	25	0		
Meat from turkey - mechanically separated meat (MSM) - at processing plant - Surveillance [15)]	RVL	Objective sampling	Official sampling	food sample		Single	10g	5	0		
Meat from turkey - mechanically separated meat (MSM) - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	5	3	0	0
Meat from turkey - minced meat - intended to be eaten cooked - at processing plant - Surveillance	RVL		Official sampling	food sample		Single	25g	10	0		

	Salmonella spp., unspecified
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	19
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	56
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	

Table Salmonella in poultry meat and products thereof

	Salmonella spp., unspecified
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance	
Meat from turkey - carcase - at slaughterhouse - Surveillance	5
Meat from turkey - fresh - at processing plant - Surveillance	
Meat from turkey - meat products - cooked, ready-to -eat - at processing plant - Surveillance	
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	
Meat from duck - carcase - at slaughterhouse - Surveillance	
Meat from geese - carcase - at slaughterhouse - Surveillance	4
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance [1)]	20
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	3
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	55
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance [2)]	
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance [3)]	2

Table Salmonella in poultry meat and products thereof

	Salmonella spp., unspecified
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	60
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance [4)]	5
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	23
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	4
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	28
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	32
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	169
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	38
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	48
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance [5)]	4
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	5

Table Salmonella in poultry meat and products thereof

	Salmonella spp., unspecified
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse - Surveillance	9
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	35
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	9
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	2
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	1
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance [6)]	
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	96
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	

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	Salmonella spp., unspecified
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	11
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	28
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	8
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance [7)]	3
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	3
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance [8)]	1
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	5

Table Salmonella in poultry meat and products thereof

	Salmonella spp., unspecified
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	4
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	15
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	3
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	72
Meat from broilers (Gallus gallus) - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	

Table Salmonella in poultry meat and products thereof

	Salmonella spp., unspecified
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	120
Meat from broilers (Gallus gallus) - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	1
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance [9)]	1
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance	

Table Salmonella in poultry meat and products thereof

	Salmonella spp., unspecified
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance [10)]	7
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance (intended to be eaten cooked)	3
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance (intended to be eaten cooked)	7
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance (intended to be eaten cooked)	
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance (intended to be eaten cooked)	9
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance (intended to be eaten cooked)	2
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance	2
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance	

Table Salmonella in poultry meat and products thereof

	Salmonella spp., unspecified
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance	1
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - minced meat - intended to be eaten cooked - at processing plant - Surveillance	
Meat from duck - carcase - at slaughterhouse - Surveillance	4
Meat from duck - carcase - at slaughterhouse - Surveillance	6
Meat from duck - carcase - at slaughterhouse - Surveillance	
Meat from duck - carcase - at slaughterhouse - Surveillance	
Meat from duck - carcase - at slaughterhouse - Surveillance	
Meat from duck - carcase - at slaughterhouse - Surveillance	
Meat from geese - carcase - at slaughterhouse - Surveillance	
Meat from geese - carcase - at slaughterhouse - Surveillance	

Table Salmonella in poultry meat and products thereof

	Salmonella spp., unspecified
Meat from geese - carcase - at slaughterhouse - Surveillance	6
Meat from geese - carcase - at slaughterhouse - Surveillance	
Meat from turkey - carcase - at slaughterhouse - Surveillance	1
Meat from turkey - carcase - at slaughterhouse - Surveillance	3
Meat from turkey - carcase - at slaughterhouse - Surveillance	55
Meat from turkey - carcase - at slaughterhouse - Surveillance [11)]	2
Meat from turkey - carcase - at slaughterhouse - Surveillance	17
Meat from turkey - carcase - at slaughterhouse - Surveillance	
Meat from turkey - carcase - at slaughterhouse - Surveillance	10
Meat from turkey - fresh - at processing plant - Surveillance	1
Meat from turkey - fresh - at processing plant - Surveillance	12
Meat from turkey - fresh - at processing plant - Surveillance [12)]	

Table Salmonella in poultry meat and products thereof

	Salmonella spp., unspecified
Meat from turkey - fresh - at processing plant - Surveillance	2
Meat from turkey - fresh - at processing plant - Surveillance	
Meat from turkey - fresh - at processing plant - Surveillance	1
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	3
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance [13)]	
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	14
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	2
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	2
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	

Table Salmonella in poultry meat and products thereof

	Salmonella spp., unspecified
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	
Meat from turkey - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	
Meat from turkey - mechanically separated meat (MSM) - at processing plant - Surveillance	
Meat from turkey - mechanically separated meat (MSM) - at processing plant - Surveillance [14)]	2
Meat from turkey - mechanically separated meat (MSM) - at processing plant - Surveillance	
Meat from turkey - mechanically separated meat (MSM) - at processing plant - Surveillance	
Meat from turkey - mechanically separated meat (MSM) - at processing plant - Surveillance [15)]	
Meat from turkey - mechanically separated meat (MSM) - at processing plant - Surveillance	3
Meat from turkey - minced meat - intended to be eaten cooked - at processing plant - Surveillance	

Comments:

[1)] RT-PCR

[2)] PCR

[3)] PCR

Table Salmonella in poultry meat and products thereof

Comments:

[4)] RT-PCR

[5)] RT-PCR

[6)] PCR

[7)] PCR

[8)] RT-PCR

[9)] PCR

[10)] PCR

[11)] PCR

[12)] the same samples tested by PCR- all negative

[13)] PCR

[14)] PCR

[15)] PCR

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance	RVL	Unspecified	HACCP and owns check	food sample > milk		Single	25ml	5	0		
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample > milk		Single	25ml	37	0		
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	25g	366	0		
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample		Single	25g	5	0		
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample		Single	25g	5	0		
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample		Single	25g	10	0		
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample		Single	25g	83	0		
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample		Single	25g	40	0		
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	1646	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	93	0		
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - at processing plant - Surveillance	PRIVATE LAB	Census	Industry sampling	food sample		Single	25g	88	0		
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	25g	255	0		
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	25g	10	0		
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	5	0		
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	77	0		
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	225	0		
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	private lab	Unspecified	Official and industry sampling	food sample		Single	25g	117	0		
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	25g	60	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	25g	63	0		
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	5	0		
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	267	0		
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	25g	5	0		
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	40	0		
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	135	0		
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance [1)]	RVL	Census	Industry sampling	food sample		Single	25g	70	0		
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	972	0		
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample		Single	25g	70	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	private lab	Census	Not applicable	food sample		Single	25g	48	0		
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	471	0		
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	25g	241	0		
Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk	RVL	Census	Official and industry sampling	food sample		Single	25g	6	0		
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	25g	1	0		
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Suspect sampling	Official sampling	food sample		Batch	125g	2	0		
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Batch	125g	10	0		
Cheeses, made from unspecified milk or other animal milk - curd	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	81	0		
Cheeses, made from unspecified milk or other animal milk - curd	RVL	Unspecified	HACCP and owns check	food sample		Single	25g	11	0		
Cheeses, made from unspecified milk or other animal milk - spreadable - at processing plant - Surveillance (made from pasteurized milk)	private lab	Unspecified	Official and industry sampling	food sample		Single	25g	34	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample > milk		Single	25ml	15	0		
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance	private lab	Unspecified	Official and industry sampling	food sample		Single	25g	59	0		
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	25g	56	0		
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	56	0		
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance [2)]	RVL	Objective sampling	Industry sampling	food sample		Single	25g	5	0		
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	private lab	Objective sampling	Not applicable	food sample		Single	25g	37	0		
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	25g	99	0		
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance [3)]	RVL	Objective sampling	Official sampling	food sample		Single	25g	5	0		
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	165	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	20	0		
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	5	0		
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	private lab	Unspecified	Official and industry sampling	food sample		Single	25ml	32	0		
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25ml	35	0		
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	44	0		
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	25g	1	0		
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	20	0		
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	private lab	Objective sampling	Not applicable	food sample		Single	200g	91	0		
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	50	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	25g	102	0		
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	65	0		
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	private lab	Census	Not applicable	food sample		Single	25g	5	0		
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	83	0		
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	85	0		
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample		Single	25g	10	0		
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	114	0		
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	5	0		
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - at processing plant - Surveillance	private lab	Unspecified	Official and industry sampling	food sample		Single	25g	2	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	25g	136	0		
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	25g	15	0		
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	5	0		
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	private lab	Census	Not applicable	food sample		Single	25g	6	0		
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	private lab	Unspecified	Not applicable	food sample		Single	25g	8	0		
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	170	0		
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	65	0		
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	16	0		
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Batch	125g	3	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	20	0		
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	25g	10	0		
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	private lab	Census	HACCP and owns check	food sample		Single	75g	884	0		
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	25g	201	1	0	0
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	50g	65	0		
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample		Single	25g	5	0		
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	25g	135	0		
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	private lab	Census	Industry sampling	food sample		Single	25g	30	0		
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	40	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	213	0		
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	115	0		
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	149	0		
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	private lab	Unspecified	Not applicable	food sample		Single	50g	3	0		
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance [4)]	RVL	Objective sampling	Industry sampling	food sample		Single	25g	31	0		
Milk, cows' - pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > milk		Single	25ml	213	0		
Milk, cows' - pasteurised milk - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample > milk		Single	25ml	30	0		
Milk, cows' - pasteurised milk - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample > milk		Single	25ml	30	0		
Milk, cows' - pasteurised milk - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample > milk		Single	25ml	2	0		
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance	RVL	Census	Industry sampling	food sample > milk		Single	25ml	2	0		
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance [5)]	RVL	Census	Industry sampling	food sample > milk		Single	25ml	6	0		

Table Salmonella in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance	private lab	Census	Not applicable	food sample > milk		Single	25ml	10	0		
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance	private lab	Unspecified	Industry sampling	food sample > milk		Single	25ml	42	0		
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample > milk		Single	25ml	22	0		
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample > milk		Single	25ml	33	0		
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	RVL	Census	Official sampling	food sample > milk		Single	25ml	20	0		
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample > milk		Single	25ml	12	0		

	Salmonella spp., unspecified
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance	
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	

Table Salmonella in milk and dairy products

	Salmonella spp., unspecified
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - at processing plant - Surveillance	

Table Salmonella in milk and dairy products

	Salmonella spp., unspecified
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from cows' milk - fresh - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	

Table Salmonella in milk and dairy products

	Salmonella spp., unspecified
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance [1)]	
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	

Table Salmonella in milk and dairy products

	Salmonella spp., unspecified
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk	
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	
Cheeses, made from unspecified milk or other animal milk - curd	
Cheeses, made from unspecified milk or other animal milk - curd	
Cheeses, made from unspecified milk or other animal milk - spreadable - at processing plant - Surveillance (made from pasteurized milk)	
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance	

Table Salmonella in milk and dairy products

	Salmonella spp., unspecified
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance [2)]	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance [3)]	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	

Table Salmonella in milk and dairy products

	Salmonella spp., unspecified
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	

Table Salmonella in milk and dairy products

	Salmonella spp., unspecified
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	
Dairy products (excluding cheeses) - ice-cream - made from pasteurised milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	

Table Salmonella in milk and dairy products

	Salmonella spp., unspecified
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	

Table Salmonella in milk and dairy products

	Salmonella spp., unspecified
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	1
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	

Table Salmonella in milk and dairy products

	Salmonella spp., unspecified
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance [4)]	
Milk, cows' - pasteurised milk - at processing plant - Surveillance	
Milk, cows' - pasteurised milk - at processing plant - Surveillance	
Milk, cows' - pasteurised milk - at processing plant - Surveillance	
Milk, cows' - pasteurised milk - at processing plant - Surveillance	
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance	
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance [5)]	
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance	
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance	

Table Salmonella in milk and dairy products

	Salmonella spp., unspecified
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	

Comments:

[1)] PCR

[2)] PCR

[3)] PCR

[4)] PCR

[5)] PCR

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Eggs - table eggs - at packing centre - Surveillance	RVL	Objective sampling	HACCP and owns check	food sample		Single	25g	29	0		
Egg products - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample > meat		Single	25g	635	1	0	0
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25ml	10	0		
Fishery products, unspecified - cooked - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample		Single	25g	57	0		
Fish - smoked - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	20	0		
Crustaceans - unspecified - cooked - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	336	0		
Crustaceans - unspecified - cooked - at retail - Surveillance	private lab	Unspecified	Not applicable	food sample		Single	150g	1	0		
Molluscan shellfish - raw - at processing plant - Surveillance [1)]	RVL	Objective sampling	Industry sampling	food sample		Single	25g	5	0		
Molluscan shellfish - cooked - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	25g	8	0		
Crustaceans - unspecified - cooked - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Batch	25g	11	0		
Crustaceans - unspecified - cooked - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample		Single	25g	20	0		
Crustaceans - unspecified - cooked - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	6	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Crustaceans - unspecified - cooked - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	65	1	0	0
Crustaceans - unspecified - cooked - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Batch	25g	7	0		
Egg products - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	192	0		
Egg products - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample		Batch	25g	15	0		
Egg products - at processing plant - Surveillance	private lab	Census		food sample		Single	25g	7	0		
Egg products - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	20	0		
Egg products - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	1	0		
Egg products - at processing plant - Surveillance	private lab	Census	Not applicable	food sample		Single	25g	2	0		
Egg products - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Batch	125g	2	0		
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	15	0		
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	private lab	Census	HACCP and owns check	food sample		Single	25ml	5	0		
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample		Single	25g	5	0		
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	private lab	Census	HACCP and owns check	food sample		Single	25ml	2	2	0	0
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	1	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	25ml	30	0		
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	996	0		
Eggs - table eggs - at farm - Surveillance	RVL	Census	Industry sampling	food sample		Single	25g	5	0		
Eggs - table eggs - at packing centre - Surveillance	RVL	Objective sampling	Official sampling	food sample		Batch	25g	29	0		
Eggs - table eggs - at packing centre - Surveillance [2)]	RVL	Census	Industry sampling	food sample		Single	25g	9	0		
Eggs - table eggs - at packing centre - Surveillance	RVL	Suspect sampling	Industry sampling	food sample		Single	25g	21	0		
Eggs - table eggs - at packing centre - Surveillance	RVL	Suspect sampling	Official sampling	food sample		Single	25g	18	1	0	0
Eggs - table eggs - at packing centre - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	93	0		
Eggs - table eggs - at packing centre - Surveillance	RVL	Unspecified	Official sampling	food sample		Single	25g	7	0		
Eggs - table eggs - at packing centre - Surveillance [3)]	RVL	Objective sampling	Industry sampling	food sample		Single	25ml	18	0		
Eggs - table eggs - at packing centre - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Batch	25g	117	0		
Eggs - table eggs - at packing centre - Surveillance	RVL	Census	Industry sampling	food sample		Single	25g	116	0		
Eggs - table eggs - at packing centre - Surveillance	RVL	Census	Official sampling	food sample		Single	25ml	24	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Eggs - table eggs - at packing centre - Surveillance	private lab	Unspecified	Not applicable	food sample		Single	50g	50	0		
Eggs - table eggs - at packing centre - Surveillance [4)]	RVL	Unspecified	Official sampling	food sample		Single	25g	6	0		
Eggs - table eggs - at packing centre - Surveillance [5)]	RVL	Suspect sampling	Official sampling	food sample		Single	25g	2	0		
Fish - raw	private lab	Unspecified	Official and industry sampling	food sample		Single	25g	20	0		
Fish - smoked - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	1994	0		
Fish - smoked - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	60	0		
Fish - smoked - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	10	0		
Fish - smoked - at processing plant - Surveillance	private lab	Census	Industry sampling	food sample		Single	25g	321	0		
Fish - smoked - at processing plant - Surveillance	private lab	Census	HACCP and owns check	food sample		Single	25g	30	0		
Fishery products, unspecified - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	37	0		
Fishery products, unspecified - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	47	0		
Fishery products, unspecified - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	50	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Fishery products, unspecified - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	15	0		
Fishery products, unspecified - cooked - at processing plant - Surveillance	private lab	Unspecified	Not applicable	food sample		Single	200g	29	0		
Fishery products, unspecified - cooked - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	216	0		
Fishery products, unspecified - cooked - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Batch	25g	5	0		
Fishery products, unspecified - cooked - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	25g	8	0		
Meat from broilers (Gallus gallus) - carcase	RVL	Objective sampling	Official sampling	food sample > carcass swabs		Single	100cm2	10	0		
Meat from sheep - carcase	RVL	Objective sampling	Industry sampling	food sample > carcass swabs		Single	400cm2	15	0		
Meat from turkey - carcase [6)]	RVL	Objective sampling	Official sampling	food sample > carcass swabs		Single	100cm2	5	0		
Molluscan shellfish - cooked - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	25g	5	0		
Molluscan shellfish - cooked - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	5	0		
Molluscan shellfish - cooked - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	15	0		
Molluscan shellfish - raw - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	12	0		

Table Salmonella in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Molluscan shellfish - raw - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	8	0		
Other food (gourmet food)	RVL	Census	Official sampling	food sample		Batch	125g	3	3	3	
Other food (gourmet food)	RVL	Unspecified	HACCP and owns check	food sample		Batch	25g	5	0		
Other food (gourmet food)	RVL	Unspecified	Industry sampling	food sample		Single	25g	5	0		
Other food (gourmet food)	RVL	Census	Industry sampling	food sample		Batch	125g	1	1	1	
Other food (gourmet food)	private lab	Unspecified	Official and industry sampling	food sample		Single	25g	5	0		
Other food (gourmet food)	private lab	Unspecified	Industry sampling	food sample		Single	25g	528	0		
Other food (gourmet food)	RVL	Unspecified	Official sampling	food sample		Batch	25g	10	0		
Other food (natural intestinal casings from pigs)	RVL	Unspecified	Industry sampling	food sample > meat		Single	25g	3	0		
Other food (pork fat)	RVL	Unspecified	Industry sampling	food sample		Single	25g	5	0		

	Salmonella spp., unspecified
Eggs - table eggs - at packing centre - Surveillance	
Egg products - at processing plant - Surveillance	1
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	

Table Salmonella in other food

	Salmonella spp., unspecified
Fishery products, unspecified - cooked - at processing plant - Surveillance	
Fish - smoked - at processing plant - Surveillance	
Crustaceans - unspecified - cooked - at processing plant - Surveillance	
Crustaceans - unspecified - cooked - at retail - Surveillance	
Molluscan shellfish - raw - at processing plant - Surveillance [1)]	
Molluscan shellfish - cooked - at processing plant - Surveillance	
Crustaceans - unspecified - cooked - at processing plant - Surveillance	
Crustaceans - unspecified - cooked - at processing plant - Surveillance	
Crustaceans - unspecified - cooked - at processing plant - Surveillance	
Crustaceans - unspecified - cooked - at processing plant - Surveillance	1
Crustaceans - unspecified - cooked - at processing plant - Surveillance	
Egg products - at processing plant - Surveillance	
Egg products - at processing plant - Surveillance	

Table Salmonella in other food

	Salmonella spp., unspecified
Egg products - at processing plant - Surveillance	
Egg products - at processing plant - Surveillance	
Egg products - at processing plant - Surveillance	
Egg products - at processing plant - Surveillance	
Egg products - at processing plant - Surveillance	
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	2
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	
Eggs - raw material (liquid egg) for egg products - at processing plant - Surveillance	
Eggs - table eggs - at farm - Surveillance	
Eggs - table eggs - at packing centre - Surveillance	

Table Salmonella in other food

	Salmonella spp., unspecified
Eggs - table eggs - at packing centre - Surveillance [2)]	
Eggs - table eggs - at packing centre - Surveillance	
Eggs - table eggs - at packing centre - Surveillance	1
Eggs - table eggs - at packing centre - Surveillance	
Eggs - table eggs - at packing centre - Surveillance	
Eggs - table eggs - at packing centre - Surveillance [3)]	
Eggs - table eggs - at packing centre - Surveillance	
Eggs - table eggs - at packing centre - Surveillance	
Eggs - table eggs - at packing centre - Surveillance	
Eggs - table eggs - at packing centre - Surveillance	
Eggs - table eggs - at packing centre - Surveillance [4)]	
Eggs - table eggs - at packing centre - Surveillance [5)]	
Fish - raw	

Table Salmonella in other food

	Salmonella spp., unspecified
Fish - smoked - at processing plant - Surveillance	
Fish - smoked - at processing plant - Surveillance	
Fish - smoked - at processing plant - Surveillance	
Fish - smoked - at processing plant - Surveillance	
Fish - smoked - at processing plant - Surveillance	
Fishery products, unspecified - at processing plant - Surveillance	
Fishery products, unspecified - at processing plant - Surveillance	
Fishery products, unspecified - at processing plant - Surveillance	
Fishery products, unspecified - at processing plant - Surveillance	
Fishery products, unspecified - cooked - at processing plant - Surveillance	
Fishery products, unspecified - cooked - at processing plant - Surveillance	
Fishery products, unspecified - cooked - at processing plant - Surveillance	

Table Salmonella in other food

	Salmonella spp., unspecified
Fishery products, unspecified - cooked - at processing plant - Surveillance	
Meat from broilers (Gallus gallus) - carcase	
Meat from sheep - carcase	
Meat from turkey - carcase [6)]	
Molluscan shellfish - cooked - at processing plant - Surveillance	
Molluscan shellfish - cooked - at processing plant - Surveillance	
Molluscan shellfish - cooked - at processing plant - Surveillance	
Molluscan shellfish - raw - at processing plant - Surveillance	
Molluscan shellfish - raw - at processing plant - Surveillance	
Other food (gourmet food)	
Other food (gourmet food)	
Other food (gourmet food)	
Other food (gourmet food)	
Other food (gourmet food)	
Other food (gourmet food)	
Other food (gourmet food)	

Table Salmonella in other food

	Salmonella spp., unspecified
Other food (natural intestinal casings from pigs)	
Other food (pork fat)	

Comments:

[1)] PCR

[2)] RT-PCR

[3)] PCR

[4)] RT-PCR

[5)] RT-PCR

[6)] PCR

Table Salmonella in red meat and products thereof

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Meat from bovine animals - carcase	RVL	Objective sampling	Official sampling	food sample > carcass swabs		Single	400cm2	82	0		
Meat from bovine animals - carcase [1)]	RVL	Objective sampling	Industry sampling	food sample > carcass swabs		Single	400cm2	15	0		
Meat from bovine animals - carcase	RVL	Objective sampling	Industry sampling	food sample > carcass swabs		Single	400cm2	245	0		
Meat from bovine animals - carcase [2)]	RVL	Objective sampling	Official sampling	food sample > carcass swabs		Single	400cm2	15	0		
Meat from pig	RVL	Objective sampling	Official sampling	food sample > carcass swabs		Single	400cm2	604	0		
Meat from pig - carcase [3)]	RVL	Objective sampling	Industry sampling	food sample > carcass swabs		Single	400cm2	235	0		
Meat from pig - carcase	RVL	Objective sampling	Industry sampling	food sample > carcass swabs		Single	400cm2	1584	1	0	0
Meat from pig - carcase [4)]	RVL	Objective sampling	Official sampling	food sample > carcass swabs		Single	400cm2	95	0		
Meat from pig - carcase	RVL	Objective sampling	Official sampling	food sample > carcass swabs		Single	300cm2	46	0		

Table Salmonella in red meat and products thereof

	Salmonella spp., unspecified
Meat from bovine animals - carcase	
Meat from bovine animals - carcase [1)]	
Meat from bovine animals - carcase	
Meat from bovine animals - carcase [2)]	
Meat from pig	
Meat from pig - carcase [3)]	
Meat from pig - carcase	1
Meat from pig - carcase [4)]	
Meat from pig - carcase	

Comments:

[1)] PCR

[2)] PCR

[3)] PCR

[4)] PCR

2.1.4 Salmonella in animals

A. Salmonella spp. in Gallus Gallus - breeding flocks

Monitoring system

Sampling strategy

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

From 2007 in Poland was introduced National Salmonella control programme in breeding flocks of Gallus gallus.
The sampling frame cover all adult breeding flocks comprising at least 250 birds.
Bases of sampling:
- sampling at the initiative of the operator
- official sampling.

Operator checks:
-day -old chicks,
-four-week-old birds,
-birds two weeks before moving to laying phase or laying unit and
-every second week during the laying period.
Official sampling include:
-within four weeks following moving to layinh phase or laying unit,
-toward the end of the laying phase, not earlier than eight weeks before the end of production cycle and
-during the production, at any time sufficiently distant from sample reffered above.

Type of specimen taken:
1. day-old chicks
- sample bedding materials and meconium from 10 transporting boxes from every supply or
-superficial swabs from 10 bottom of transporting boxes or
-dead chick (no more than 20).
2. rearing and production period
- faeces made up of separate samples of fresh faeces each weighing not less than 1 g taken at random from the number of sites in the buldings were the birds are kept,
-five pars of boot swabs,
- in cage breeding flocks-naturally mixed faeces from dropping belts, scrapers or deep pits.

The samples must be deliver to regional veterinary laboratory. In case if Salmonella was detected, the RVL informed District Veterinary Officer, whose take up measures in case of positive finding in single cases.

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

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

Industry sampling - every 2 weeks.
Official sampling:
(a) within four weeks following moving to laying phase or laying unit;

(b) towards the end of the laying phase, not earlier than eight weeks before the end of the production cycle;

(c) during the production, at any time sufficiently distant from the samples referred to in points (a) and (b).

Type of specimen taken

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

Other: sample bedding materials and meconium from 10 transporting boxes from every supply or
-superficial swabs from 10 bottom of transporting boxes or
-dead chick (no more than 20).

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

Other:
- socks/ boot swabs
- dust
- feaces

Methods of sampling (description of sampling techniques)

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

Sampling included:
- sample bedding materials and meconium from 10 transporting boxes from every supply or
-superficial swabs from 10 bottom of transporting boxes or
-dead chick (no more than 20).

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

Sampling included:
- faeces made up of separate samples of fresh faeces each weighing not less than 1 g taken at random from the number of sites in the buldings were the birds are kept,
-five pars of boot swabs,
- in cage breeding flocks-naturally mixed faeces from dropping belts, scrapers or deep pits.

Breeding flocks: Production period

Sampling included:
- faeces made up of separate samples of fresh faeces each weighing not less than 1 g taken at random from the number of sites in the buldings were the birds are kept,
-five pars of boot swabs,
- in cage breeding flocks-naturally mixed faeces from dropping belts, scrapers or deep pits.

Case definition

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

A positive case is where positive result in laboratory test for detection of S.Enteritidis, S. Typhimurium, S. Infantis, S.Hadar or S. Virchow was confirmed in samples taken officialy and also when detected

antimicrobials or bacterial growth inhibitory effect are it shall be accounted for as an infected breeding flock.

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

A positive case is where positive result in laboratory test for detection of S.Enteritidis, S. Typhimurium, S. Infantis, S.Hadar or S. Virchow was confirmed in samples taken officialy and also when detected antimicrobials or bacterial growth inhibitory effect are it shall be accounted for as an infected breeding flock.

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

A positive case in adult flock is where positive result in laboratory test for detection of S.Enteritidis, S. Typhimurium, S. Infantis, S.Hadar or S. Virchow was confirmed in samples taken officialy and also when detected antimicrobials or bacterial growth inhibitory effect are it shall be accounted for as an infected adult breeding flock.

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

Measures in case of the positive findings or single cases

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

Procedures in case of a suspected infection after owner's sampling
1. District Veterinary Officer take sample for laboratory test- and in additional sample of feed and water
2. DVO orders
-isolating the poultry on the farm
-disinfection of hatching eggs
-using disinfection agent before the entrances and exits of poultry houses and before the entrance and the exit of the farm grounds
-hatching incubated eggs in separeted hatchers in fumes of disinfection agent
3. DVO forbids
-carrying away eggs from the farm grounds (a possibility of bringing them directly to a factory producing or processing egg products);
-using products hindering isolation of bacilli in the flock before taking official samples;
-limit moving poultry from and into farm;
-remove from farm feaces poultry and used bedding materials.

Procedures after obtained positive results of official sampling:
1.DVO orders
-urgent slaughtering or killing all poultry;
-destroying all carcasses;
-destroying hatchering eggs and chicks origanated from them ;
-destroying or management feeds after heat treated guarantee killed salmonella;
-destroying or management bedding materials, faeces and others equipment, which could be contaminated;
-cleaning and disinfection of places where animals are kept, theirs surronding, transportion means, objects.

Results of the investigation

In 2010, in adult flocks 35 positive were found for S. Enteritidis, S. Typhimurium, S. Infantis, S. Hadar and S. Virchow.
In 2011 infection with at least one of five serotypes of Salmonella were included in the program in 27 flocks of 1 970 all breeding flocks examined, including 26 adult breeding flocks from among 1 498 adults surveyed herds.
In 2009, in adult flocks 29 positive results were found for 5 serotypes of salmonella ond 8 other serotype which are not under the programme. Most often S. Enteritidis was confirmed.

In 2008, Salmonella spp. was found in 72 unit sampling in 1159 breeding flocks. All positive results were confirmed by official sampling. In 63 cases was found S. enteritidis, S. typhimurium, S. infantis, S. hadar and S. virchow. the other 9 was unspecified Salmonella.

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

Percentages of serotype of Salmonella infection of adult breeding flocks of Gallus gallus, comprising at least 250 birds in 2010., amounted to 2.57%, which is to reduce the prevalence of Salmonella compared to previous years.

In 2009, in adult flock percentage of positive flock was 2,6%. So the community target was no set but number of positive flocks decreased.
The percentage value in adult breeding flocks at production period with positive results in 2008 was 5,75%. There was increase comparing to 2007, when the percentage value took away 3,1%.

B. Salmonella spp. in Gallus Gallus - broiler flocks

Monitoring system

Sampling strategy

Broiler flocks

From 2009 SCP in broilers was introduced. Samples was taken by operators three weeks before sending off birds to slaughterhouse. Operator's must examine every broiler flock because of on this bases official veterinarian filled up the health certificate. Without certificate every broilers delivery to slaughterhouse would not be accept. In additional operator's examined one-day chicks.

Frequency of the sampling

Broiler flocks: Before slaughter at farm

3 weeks prior to slaughter

Type of specimen taken

Broiler flocks: Before slaughter at farm

Other: feaces or boot swabs

Methods of sampling (description of sampling techniques)

Broiler flocks: Before slaughter at farm

according to regulation No 648/2007

Case definition

Broiler flocks: Before slaughter at farm

A positive case is where positive result in laboratory test for detection of S.Enteritidis, S. Typhimurium was confirmed in samples taken officialy and also when detected antimicrobials or bacterial growth inhibitory effect.

Diagnostic/analytical methods used

Broiler flocks: Before slaughter at farm

Bacteriological method: ISO 6579:2002

Control program/mechanisms

The control program/strategies in place

Broiler flocks

In the case of positive results of laboratory tests in the direction of Salmonella serotype of the program or to detect the inhibitory effect of the growth of bacteria in samples taken at the initiative of farmers in the species flock of broilers chicken (Gallus gallus) during the three weeks before the broilers to the slaughterhouse, the breeder is obliged to:
1) immediately, and notification to the district veterinarian;
2) leaving the broiler in place of permanent residence there, and not to introduce other poultry;
3) prevent unauthorized access to the house or places which are suspected of being infected broiler Salmonella covered by the scheme or their carcasses;
4) refrain from the dumping, elevating and dispose of meat, carcasses of broilers, feed, manure and litter originating from poultry and other objects which are in place to maintain broilers;
5) make available to the Veterinary Inspection of broilers to research and medical treatments and assistance in carrying out these tests and treatments;
6) the district veterinarian provide explanations and information that maybe important the detection of Salmonella and the sources of infection or to prevent its spread ;

7) provide the district veterinarian documentation of the herd, especially documentary evidence of purchase of chicks, litter, feed, animals and the sale of eggs and documentation related to the treatment records, etc.;
8) increase hygenic standards.

Measures in case of the positive findings or single cases

Broiler flocks: Before slaughter at farm

1. District Veterinary Officer take sample for laboratory test- and in additional sample of feed and water.
2. District Veterinary Officer
forbids:
-limit moving poultry from and into farm;
-remove from farm feaces poultry and used bedding materials;
orders:
-destroying or management feeds after heat treated guarantee killed salmonella
-destroying or management bedding materials, faeces and others equipment, which could be contaminated
-cleaning and disinfection of places where animals are kept, theirs surronding, transportion means, objects.

Broiler flocks: At slaughter (flock based approach)

According to meat hygiene regulations.

Results of the investigation

Salmonella serotypes covered by the program were found in 180 broiler flocks of 26 801 tested out of flocks.
In 2009, 128 positive results for S. Enteritidis and S. Typhimurium were found. This results were confirmed in official sampling.

Salmonella serotypes covered by the program were found in 146 out of 29 344 broiler flocks tested.

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

The prevalence in broiler flocks in 2011 amounted to 0.50%. The most frequently isolated Salmonella serotype in broiler flocks was S. enteritidis, which was established in 135 herds, while S. Typhimurium was found in nine flocks.

In 2009 and 2010 the percentage of species flocks of broilers chicken (Gallus gallus), the program tested positive was less than 1%.

C. Salmonella spp. in Gallus Gallus - flocks of laying hens

Monitoring system

Sampling strategy

Laying hens flocks

National provisions:
Examination of samples (operators and official)and they are tested in Regional Veteryinary Laboratory.
Flock positive in own check is suspected flock. Afterwords is administrative proceeding in result we have or negative result or positive result of official confimatory sampling, what means it's infected flock.
Infected birds are slaughter or killing.
Eggs from infected flock are channeled for processing or destroying.
Sampling by an competent authority will take place at least:
- in one flock per year per holding comprising at least 1000 birds
-at the age of 24+/- 2 weeks in laying flocks housed in buildings where Salmonella was detected in the preceding flock
- in any case of suspicion of Salmonella Enteritidis and S. Typhimurium infection, as a result of the epidemiological investigation of foodborne outbreaks
- in all other laying flocks on the holding in case S. enteritidis or S. typhimurium are detected in one laying flock on the holding
- in cases where the competent authority considers it appropriate.

Frequency of the sampling

Laying hens: Day-old chicks

Every flock is sampled

Laying hens: Rearing period

At the age of 4 weeks by food bussines operator

Laying hens: Production period

Every _15___ weeks by FBO

Type of specimen taken

Laying hens: Day-old chicks

Meconium

Laying hens: Rearing period

Faeces

Laying hens: Production period

Faeces

Methods of sampling (description of sampling techniques)

Laying hens: Day-old chicks

Day-old chicks

- sample bedding materials and meconium from 10 transporting boxes from every supply (on 25 g from site) or in cases without litter

-superficial swabs from 10 bottom of transporting boxes (pooled in laboratory into 1 sample) or

-dead chicks (also during the transport), no more than 20 chicks– pooled in laboratory into 1 sample

Laying hens: Rearing period

pooled feaces

Laying hens: Production period

A. In cage flocks, 2 × 150 grams of naturally pooled faeces shall be taken from all belts or scrapers in the house after running the manure removal system; however, in the case of step cage houses without scrapers or belts 2 × 150 grams of mixed fresh faeces must be collected from 60 different places beneath the cages in the dropping pits.
B. In barn or free-range houses, two pairs of boot swabs or socks be taken, without changing overboots between boot swabs
C. Additional samples in case of the official sampling
-250 ml containing at least 100 gram of dust shall be collected from prolific sources of dust throughout the house or
-an additional sample of 150 grams naturally pooled faeces or
-an additional pair of boot swabs or socks shall be taken.

Case definition

Laying hens: Production period

A positive case is a adult flock where positive result in laboratory test for detection of Salmonella Enteritidis and Salmonella Typhimurium was confirmed in samples taken officialy and also when detected antimicrobials or bacterial growth inhibitory effect.

Diagnostic/analytical methods used

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

Vaccination policy

Laying hens flocks

Live Salmonella vaccines may be be used in the framework of national Salmonella control programme:
-where the manufacturer provide an appropriate method to distinguish bacteriologically wild-type strains of Salmonella from vaccine strains,
-in laying hens during production if the safety of the use has been demonstrated and they are authorised for such purpose.
The competent authority may provide derogation from obligation to vaccinate laying hens to a holding if:
-he is satisfied with the preventive measures taken on the holding of rearing and on the holding of egg production,
and
-the absence of Salmonella Enteritidis was demonstrated on the holding of rearing and production during the 12 months preceding the arrival of the animals.

Control program/mechanisms

The control program/strategies in place

Laying hens flocks

In the case of positive results of laboratory tests on samples takenby the food bussines operator in the laying flock, in the direction of Salmonella serotype of the program or be detected in samples taken at the initiative of food bussines operator bacterial growth inhibitory effect, the breeder is obliged to:
1) immediate notification to the district veterinarian;
2) leave the hens in their place of permanent residence there, and not to introduce other poultry;
3) prevent unauthorized access to the house or places where poultry are suspected of being infected with Salmonella or the programmable delay;
4) refrain from the dumping, and dispose of elevating meat and products derived from birds, their carcases, feed, manure and litter from poultry and other objects at the place of keeping laying hens;
5) make available to the Veterinary Inspection of poultry research and medical treatments and assistance in carrying out these tests and treatments;
6) the district veterinarian provide explanations and information that may be relevant to the detection of the disease and the sources of infection or to prevent the spread of disease or infection;
7) provide the district veterinarian documentation of the herd, in particular, documentary evidence of purchase of chicks, litter, feed, animals and the sale of eggs and documentation related to the treatment records, etc.;
8) increase hygenic standards.

Measures in case of the positive findings or single cases

Laying hens flocks

If Salmonella was found in the operator's sample the epidemiological inteligence collecting official samples:
- from suspected flock,
-from other flock,
-feed,
-water.
And if Salmonella in official sample it's infected flock.
Administration processing: District Veterinary officer:
1. Orders:
-immediate slaughter or killing all birds
-utilization of killed and dead animals
-isolated of the infected flock
-use of the proper disinfetants at the entrance and exits of the hen houses
-isolation of the eggs (separate storage or designation for thermal processing)
2. Forbids:
-export eggs from the holding (exeption designation for thermal processing)
-use of antimicrobials
-export of faeces and bedding from the holding
-export of the birds, except for slaugtery transport.

Results of the investigation

Salmonella serotypes covered by the program were found in 87 flocks of 2615 flocks tested, including 83 adult flocks of 2235 flocks tested.

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

The prevalence in all flocks of laying hens in 2011 was 3.33%, while in adult laying hens - 3.71%. Salmonella serotypes not included in the eradication program - were isolated in 44 flocks, including adults in 41 flocks.

D. Salmonella spp. in bovine animals

Monitoring system

Sampling strategy

There was no control programme for salmonella in bovine animals.

Type of specimen taken

Animals at slaughter (herd based approach)

Surface of carcasses

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

Monitoring system

Sampling strategy

Breeding flocks

Voluntary, based on EU legislation for breeding flocks of Gallus gallus.

Meat production flocks

The sampling 1-2 weeks prior to slaughter

Type of specimen taken

Breeding flocks: Day-old chicks

Other:meconium or dead chicks

Breeding flocks: Rearing period

Other: feaces

Breeding flocks: Production period

Other: feaces or dead ducks or swab from ceaca

Meat production flocks: Before slaughter at farm

Other: feaces

Methods of sampling (description of sampling techniques)

Breeding flocks: Day-old chicks

Based on EU legislation for breeding flocks of Gallus gallus.

Breeding flocks: Rearing period

Based on EU legislation for breeding flocks of Gallus gallus.

Breeding flocks: Production period

Based on EU legislation for breeding flocks of Gallus gallus.

Meat production flocks: Before slaughter at farm

dir.92/117/EEC

Case definition

Breeding flocks: Day-old chicks

A flock is an epidemiological unit.
Definition of a case:
A positive case is a flock, where positive result in laboratory tests for detection of Salmonella was confirmed in samples taken officially.

Breeding flocks: Rearing period

A flock is an epidemiological unit.

Definition of a case:
A positive case is a flock, where positive result in laboratory tests for detection of Salmonella was confirmed in samples taken officially.

Breeding flocks: Production period

A flock is an epidemiological unit.
Definition of a case:
A positive case is a flock, where positive result in laboratory tests for detection of Salmonella was confirmed in samples taken officially.

Meat production flocks: Before slaughter at farm

A flock is an epidemiological unit.
Definition of a case:
A positive case is a flock, where positive result in laboratory tests for detection of Salmonella was confirmed.

Control program/mechanisms

The control program/strategies in place

Breeding flocks

There is no official control programme for ducks in Poland.
Voluntary porgrammes are based on Regulation 2160/2003 and 200/2010.

Meat production flocks

On the basis of the instruction of Chief Veterinary Officer
-IW.z. II D/Sal-2/99- on eradication of salmonellosis in poultry herds intended for slaughter and on the EU legislation.

Measures in case of the positive findings or single cases

According to meat hygiene law.

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

In 2005, Salmonella was found in 7,2% and 16 % of, respectively, breeding and meat production duck flocks. S.Enteritidis and S.Typhimurium were found in several percent of flocks(range 3,4%-20,0%) and the remaining isolates mainly belonged to group C1-C2.
In 2006 Salmonella Enteritidis and Salmonella Typhimurium were the most frequent isolated serovars from breeding and meat production flocks.
In 2007 Salmonella was found in 5.3% of breeding flocks tested and 14% of meat production flocks tested.
In 2008 Salmonella was found in 15,1% of breeding flocks tested and 11,4% of meat production flock tested. As can you see, there was significant increased of prevalence of Salmonella in breeding flocks but slight decreased in meat production flocks. Salmonella Enteritidis was detected in 29 flocks from all, Salmonella typhimurium in 18 flocks and Salmonella spp. was found in 39 samples.
In 2009 percentage of prevalence Salmonella in meat production flocks was 13% and in breeding flocks 12,7%. In compare 2008 with 2009, we could observed slight increased of Salmonella.

Additional information

The results of examinations of all poultry species intended for slaughter and the date of examination had to be indicated in health certificates accompanying the dispatches of birds to a slaughterhouse.
In 2009 was not found positive results for Salmonella in meat from ducks.

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

Monitoring system

Sampling strategy

Breeding flocks

Voluntary, based on EU legislation for breeding flocks of Gallus gallus (Regulations: 2160/2003 and 1003/2005)

Frequency of the sampling

Meat production flocks: Before slaughter at farm

Other: every flock is sampled 3-2 weeks before slaughter

Type of specimen taken

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

Other: feaces, swabs from ceaca or dead geese

Meat production flocks: Before slaughter at farm

Other: feaces or swabs from ceaca or dead geese

Methods of sampling (description of sampling techniques)

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

Based on EU legislation for breeding flocks of Gallus gallus

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

Based on EU legislation for breeding flocks of Gallus gallus

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

Based on EU legislation for breeding flocks of Gallus gallus

Case definition

Breeding flocks: Day-old chicks

A positive case is the flock, where positive results in laboratory tests for detection of Salmonella was confirmed by official sampling

Breeding flocks: Rearing period

A positive case is the flock, where positive results in laboratory tests for detection of Salmonella was confirmed by official sampling

Breeding flocks: Production period

A positive case is the flock, where positive results in laboratory tests for detection of Salmonella was confirmed by official sampling

Meat production flocks: Before slaughter at farm

A positive case is the flock, where positive results in laboratory tests for detection of Salmonella was confirmed by official sampling

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

In 2005, Salmonella was found in 3,4% and 10,1% of, respectively, breeding and meat production geese flocks. Serogroups 0:4, C1-C2 predominated in geese isolates. They were observed, respectively in 38,5% and 35,9% of geese breeding flocks as well 27,5% and 47,5% of meat production flocks.
In 2006, only 10% of samples from breeding and meat production flocks were positive for Salmonella.
In 2007, 2.4% of breeding flocks sampled and 10.4% of sampled meat production flocks were positive.
In 2008 10,03% of breeding flocks sampled and 9,15% of sampled meat production flocks were positive. S. enteritidis was found in 25,5% and S. Typhimurium in 23,6%.
In 2009 percentage of prevalence of Salmonella is quite low and take away 9,5 %. Most positive cases were found in meat production flocks.

Additional information

In 2009 there was no positive results for Salmonella in meat from geese.

G. Salmonella spp. in pigs

Monitoring system

Sampling strategy

Breeding herds

In 2008 was conducted survey carried out according to Commision Decision of 20 December 2007 concerning a financial contribution from the community towards a survey on the prevalence of salmonella and MRSA in herds breeding pigs to be carried out in the Member states (2006/662/EC).
The survey was implemented according to the General Veterinary Officer Guidelines of 6 December 2007.
Sampling in breeding holdings was specified by weeks of the study period in the Timetables, proportionally to the number of holdings of breeding pigs in given voivodships.
Samples were collected by official veterinarians and reffered to designated laboratories.
The survey comprised 327 sample batches collected from 322 holdings.

Frequency of the sampling

Breeding herds

Sampling takes place during the 12 months

Type of specimen taken

Breeding herds

Faeces

Methods of sampling (description of sampling techniques)

Breeding herds

For bacteriological analysis 10 samples of freshly voiced faeces representing the holding were collected. Each sample of at least 25 g was collected as a gaze swab moved along ca. 2 meters of pen floor covered with faecal mass or as a pool of at least 10 individual faeces. Bacteriological detection was done using Community Reference Laboratory – Salmonella recommended method as described in EN ISO 6579:2002/A1:2007. Most of the analyses were performed within 24 hours after sampling. Salmonella spp. isolates from each positive sample were send to NRL-Salmonella for serotyping according White-Kauffmann-Le Minor scheme.

Diagnostic/analytical methods used

Breeding herds

Bacteriological method: ISO 6579:2002

Measures in case of the positive findings or single cases

According to meat hygiene regulation.

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

Salmonella spp. was found in 28 of 327 tested holdings (8.6%) located in 11 voivodships. The highest percentage of infected breeding flocks were in podkarpackie, śląskie, and lubuskie.
No seasonality was noted on Salmonella spp. occurrence in pigs. Salmonella spp. was more frequently found in holdings of higher size. The influence of boars and gilts replacement policy on Salmonella spp. occurrence, although not significant, might indicate the increased risk of infection for holdings purchasing animals.
Of analysed pen characteristics the statisti-cally significant influence on Salmonella spp. occurrence were found in number of pigs in pen, sex, floor type, all in/all out procedure, pig diet and origin of feed. Furthermore feed additives reduced Salmonella spp. infection whereas antibiotic treatment favoured Salmonella spp. infections.

H. 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)

Flocks of turkeys are sampled on the initiative of the food business operator and the competent authority

Meat production flocks

Sampling is performed within 3 weeks prior to slaughter

Frequency of the sampling

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

Every flock is sampled

Meat production flocks: Before slaughter at farm

Other: every flock is tested 3 weeks before slaughter.

Type of specimen taken

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

Other: feaces, dust

Meat production flocks: Before slaughter at farm

Other: feaces, dust

Methods of sampling (description of sampling techniques)

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

Description of sampling techniques are described in regulation 200/2010

Meat production flocks: Before slaughter at farm

and 584/2008

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: Before slaughter at farm

Bacteriological method: ISO 6579:2002

Control program/mechanisms

The control program/strategies in place

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

In the case of positive results of laboratory tests in the direction of the program serotype of Salmonella samples in a flocks of breeding turkeys at the initiative of food bus, or detection of bacterial growth inhibitory effect, the farmer is obliged to:

1) immediate notification to the district veterinarian;
2) leaving the turkeys in their place of permanent residence, and where other non-poultry;
3) prevent unauthorized access to buildings or places where there are turkeys suspected of being infected by Salmonella under the program or delay those turkeys;
4) refrain from the dumping, elevating and dispose of the meat, hatching eggs, turkey carcasses, feed, manure and litter from the turkey and other objects at the place of keeping turkeys;
5) make available to the Veterinary Inspection turkeys for research and medical treatments and assistance in carrying out these tests
and treatment;
6) the district veterinarian provide explanations and information that may be relevant to the detection of Salmonella and Salmonella infections chopsticks covered by the program, the source or sources of Salmonella infection or to prevent the spread of the disease or infection.
7) provide the district veterinarian documentation of the herd, especially invoices proving purchase of chicks, litter, feed, turkey and egg sales, and medical and veterinary records, etc.;
8) increase hygenic standards.

In case of positive results of the tests referred to above, the district veterinary officer:
1) an epizootic investigation;
2) take samples for laboratory testing in all flocks on the farm;
3) to establish the source of Salmonella infection of the herd, conduct research:
a) feed
b) water from their own farm;
4) requires an administrative decision:
a) maintaining separate turkeys on the holding in individual buildings or other places where they are kept,
b) the use of biocides for disinfection of hatching eggs immediately after harvest,
c) the use of biocidal products on the entrances to buildings and exits of these facilities, as well as entrances into the and departures from the holding
d) hatching eggs have been incubated in the hatching plant breeding in separate cameras, with the use of biocidal products authorized for the current disinfection during breeding, active against Salmonella;
5) prohibits an administrative decision:
a) the dumping of eggs hatching until the results of laboratory testing of all flocks on the farm,
b) the use of biocides, veterinary medicinal products
and measures to impede the isolation of Salmonella in the herd before the sampling official
c) movement of turkeys from the farm and to farm and flock
and the flock on the farm, unless the poultry breeder so requests, will be moved to the slaughterhouse, to the movement of turkey in order to be slaughtered in a slaughterhouse, a health certificate is placed about the origin of the flock, which obtained a positive result in the direction of Salmonella Enteritidis or Salmonella Typhimurium laboratory testing of samples taken at the initiative of farmers - a positive result was obtained in the direction of Salmonella Enteritidis or Salmonella Typhimurium, or where the inhibitory effect of bacterial growth,
d) movement from the holding of meat, turkey carcasses, feed, manure and litter originating from poultry and other objects which are in place to maintain turkey, without his consent.

In the case of positive results of laboratory tests on samples taken by district veterinary officer of the flock of turkey breeding in the direction of serotypes of Salmonella Enteritidis or Salmonella Typhimurium (other than the vaccine strains) or in cases where the officially drawn samples of the inhibitory effect of bacterial growth, the district veterinarian requires an administrative decision:
1) immediate slaughter or killing any farmed turkeys in the flock, except that the turkeys showing clinical signs of disease are always subject to the killing;

2) destruction all dead corpses and dead turkeys;
3) the destruction of hatching eggs and chicks have hatched;
4) the destruction of feed or their management, with measures to ensure full control of the inactivation of Salmonella in the case of positive results of laboratory analysis of feed samples for the presence of Salmonella;
5) the destruction or the management of litter, droppings and other objects at the place of keeping turkeys, which may have become contaminated in a manner which prevents contamination of Salmonella
6) under his supervision to carry out thorough cleansing and disinfection:
a) buildings in which he was detained poultry from infected flocks,
b) building environment referred to in point. and, vehicles used to transport and other items that may have become infected, under his supervision,
7) take other actions to improve hygenic conditions at the farm

Meat production flocks

In the case of positive results of laboratory tests in the direction of the program serotype of Salmonella samples in a herd of breeding turkeys at the initiative of farmers, or detection of bacterial growth inhibitory effect, the farmer is obliged to:
1) immediate notification to the district veterinarian;
2) leaving the turkeys in their place of permanent residence, and where other non-poultry;
3) prevent unauthorized access to buildings or places where there are turkeys suspected of being infected by Salmonella under the program or delay those turkeys;
4) refrain from the dumping, elevating and dispose of the meat, hatching eggs, turkey carcasses, feed, manure and litter from the turkey and other objects at the place of keeping turkeys;
5) make available to the Veterinary Inspection turkeys for research and medical treatments and assistance in carrying out these tests
and treatment;
6) the district veterinarian provide explanations and information that may be relevant to the detection of Salmonella and Salmonella infections chopsticks covered by the program, the source or sources of Salmonella infection or to prevent the spread of the disease or infection.
7) provide the district veterinarian documentation of the flock, especially invoices proving purchase of chicks, litter, feed, turkey and egg sales, and medical and veterinary records, etc.;
8) increase hygenic standards.

In case of positive results of the tests referred to above, the county veterinarian:
A) carry out an epizootic
2) take samples for diagnostic tests in all flocks on the farm
3) to establish the source of Salmonella infection, the herd sticks, carry out research:
a) feed
b) water from their own farm;
4) requires an administrative decision:
a) maintaining separate turkeys on the holding
in different livestock buildings or other places where it is maintained,
b) the use of biocidal products on the entrances and exits of buildings housing livestock, as well as the entrances and departures from the holding
5) prohibits an administrative decision:
a) the use of biocides, veterinary medicinal products
and measures to impede the isolation of Salmonella in the herd prior to sampling by the county veterinarian,
b) movement of turkeys from the farm and the farm and the herd and the herd on the farm unless poultry before the end of fattening
at the request of the breeder, will be moved to a slaughterhouse;

c) movement from the holding of meat, turkey carcasses, feed, manure and litter originating from poultry and other objects which are in place to maintain turkey, without his consent.

In the case of positive results of laboratory tests of samples taken by the district veterinarian of the flock of turkeys for slaughter in the direction of serotypes of Salmonella Enteritidis or Salmonella Typhimurium (other than the vaccine strains), or in case of detection in samples collected by the county veterinarian, the inhibitory effect of bacterial growth, county veterinarian in an administrative decision:
1) requires:
a) destruction of all carcasses of dead turkeys;
b) the destruction of feed or their management, with measures to ensure full control of the inactivation of Salmonella in the case of positive results of laboratory analysis of samples of feed in the direction of Salmonella;
c) conversion or destruction of the meat at a farm
and harvested from these turkeys
d) the destruction or the management of litter, droppings and other items that may have become contaminated
e) accurate cleansing and disinfection under his supervision, construction works,
where they were kept turkeys from an infected herd, the environment of these objects, vehicles used to transport turkeys and other items that may have become contaminated
f) take any other actions aimed at improving the conditions zoohigienicznych
on the farm;
2) prohibits the movement of turkeys from an infected herd of the farm and the herd infected at the farm and herd to herd on the farm, unless before the end of fattening turkeys, at the request of the breeder, to be shipped directly to the slaughterhouse in order to undergo slaughtered.

Measures in case of the positive findings or single cases

According to meat hygiene law.

Results of the investigation

In 2011 in Poland in the framework of the SCP positive result in tests of food bussiness operators and the official in the direction of S. Enteritidis and S. Typhimurium was not found in flocks of breeding turkeys .

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

The year 2010 was the first year of the "National Programme for control of certain Salmonella serotypes in breeding turkeys. "
According to a report from the EFSA basic research carried out in flocks of turkeys, it was shown that in Poland, Salmonella Typhimurium was found in 16.3% of analyzed samples, and Salmonella enteritidis in 7% of samples tested.
These results were a reference to the Community objective of reducing the proportion of flocks infected in the first year of the program.
In the first year of operation there was no positive result in the direction of S. enteritidis and / or S. Typhimurium in breeding flocks of turkeys.

The year 2010 was the first year of the "National Programme for control of certain serotypes of Salmonella in fattening turkeys. "
In the first year of the program the percentage of flocks covered by the program turkeys tested positive was 0.7%.

Table Salmonella in breeding flocks of Gallus gallus

	No of flocks under control programme	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Target Verification	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis
Gallus gallus (fowl) - parent breeding flocks for egg production line - during rearing period - Control and eradication programmes	66	LVU	Objective sampling	Official and industry sampling				Flock	66	0	
Gallus gallus (fowl) - parent breeding flocks for egg production line - adult - Control and eradication programmes	202	LVU	Census	Official and industry sampling			yes	Flock	202	1	
Gallus gallus (fowl) - grandparent breeding flocks for egg production line - during rearing period - Control and eradication programmes	9	LVU	Objective sampling	Official and industry sampling				Flock	9	0	
Gallus gallus (fowl) - grandparent breeding flocks for egg production line - adult - Control and eradication programmes	14	LVU	Census	Official and industry sampling			yes	Flock	14	0	
Gallus gallus (fowl) - parent breeding flocks for broiler production line - during rearing period - Control and eradication programmes	355	LVU	Objective sampling	Official and industry sampling				Flock	351	1	
Gallus gallus (fowl) - parent breeding flocks for broiler production line - adult - Control and eradication programmes	1197	LVU	Census	Official and industry sampling			yes	Flock	1194	29	25
Gallus gallus (fowl) - grandparent breeding flocks for broiler production line - during rearing period - Control and eradication programmes	34	LVU	Objective sampling	Official and industry sampling				Flock	34	0	
Gallus gallus (fowl) - grandparent breeding flocks for broiler production line - adult - Control and eradication programmes	47	LVU	Census	Official and industry sampling			yes	Flock	47	0	
Gallus gallus (fowl) - parent breeding flocks, unspecified - adult - Control and eradication programmes [1)]	41	LVU	Objective sampling	Official and industry sampling			yes	Flock	41	0	

Table Salmonella in breeding flocks of Gallus gallus

	S. Hadar	S. Infantis	S. Typhimurium	S. Virchow	S. 1,4,[5],12:i:-	Salmonella spp., unspecified
Gallus gallus (fowl) - parent breeding flocks for egg production line - during rearing period - Control and eradication programmes						
Gallus gallus (fowl) - parent breeding flocks for egg production line - adult - Control and eradication programmes						1
Gallus gallus (fowl) - grandparent breeding flocks for egg production line - during rearing period - Control and eradication programmes						
Gallus gallus (fowl) - grandparent breeding flocks for egg production line - adult - Control and eradication programmes						
Gallus gallus (fowl) - parent breeding flocks for broiler production line - during rearing period - Control and eradication programmes		1				
Gallus gallus (fowl) - parent breeding flocks for broiler production line - adult - Control and eradication programmes				1		3
Gallus gallus (fowl) - grandparent breeding flocks for broiler production line - during rearing period - Control and eradication programmes						
Gallus gallus (fowl) - grandparent breeding flocks for broiler production line - adult - Control and eradication programmes						
Gallus gallus (fowl) - parent breeding flocks, unspecified [1)] - adult - Control and eradication programmes						

Table Salmonella in breeding flocks of Gallus gallus

Comments:

[1)] plus 13 flocks unspecified in rearing period

Table Salmonella in other birds

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified
Ostriches	private lab	Objective sampling	Industry sampling	environmental sample		Flock	4	0			
Ostriches	private lab	Unspecified	Not applicable	environmental sample		Flock	1	0			
Ostriches	RVL	Census	Industry sampling	environmental sample		Flock	14	0			
Ostriches	RVL	Objective sampling	Industry sampling	environmental sample		Flock	15	0			
Ostriches	RVL	Unspecified	Official and industry sampling	environmental sample		Flock	15	0			
Other animals	RVL			animal sample		Animal	5	0			
Other animals [1)]	RVL			environmental sample		Flock	21	0			
Other animals [2)]	RVL	Suspect sampling	Industry sampling	animal sample > eggs		Flock	1	0			
Other animals [3)]	RVL			environmental sample		Animal	12	0			
Pheasants	RVL	Convenience sampling	Industry sampling	environmental sample		Animal	2	0			
Pheasants	RVL	Census	Industry sampling	environmental sample		Flock	8	0			
Pheasants	RVL	Unspecified	Industry sampling	animal sample > organ/tissue		Flock	3	0			
Pheasants [4)]	RVL	Unspecified	Industry sampling	environmental sample		Flock	5	0			
Pigeons	RVL	Suspect sampling	Industry sampling	environmental sample		Flock	34	6		6	
Pigeons	RVL	Unspecified	Industry sampling	animal sample > organ/tissue		Flock	1	1		1	

Table Salmonella in other birds

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	Salmonella spp., unspecified
Pigeons	RVL	Unspecified	Industry sampling	animal sample > organ/tissue		Flock	10	1			1
Pigeons	RVI	Unspecified	Industry sampling	environmental sample		Flock	6	0			
Pigeons	RVL	Suspect sampling	Industry sampling	animal sample > organ/tissue		Animal	9	2		2	
Pigeons	RVL	Suspect sampling	Industry sampling	animal sample > faeces		Flock	57	1		1	
Pigeons	RVL	Unspecified	Industry sampling	environmental sample		Flock	14	1			1
Pigeons	RVI	Convenience sampling	Industry sampling	environmental sample		Animal	23	1		1	
Pigeons	RVL	Census	Industry sampling	environmental sample		Flock	297	15		14	1
Quails	RVL	Objective sampling	Official and industry sampling	environmental sample > boot swabs		Flock	12	0			
Quails - Surveillance	RVL	Unspecified	Industry sampling	environmental sample		Flock	7	0			

Comments:

[1)] birds

[2)] birds

[3)] birds

[4)] breeding flock

Table Salmonella in other birds

Table Salmonella in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	S. 1,4,[5],12:i:-
Cats	RVL	Objective sampling	Not applicable	animal sample > rectum-anal swab		Animal	1	0			
Cats	RVL	Unspecified	Industry sampling	animal sample > rectum-anal swab		Animal	2	0			
Cats	RVL	Suspect sampling	Industry sampling	animal sample > rectum-anal swab		Animal	1	0			
Cattle (bovine animals)		Unspecified	Industry sampling	environmental sample		Animal	2	0			
Dogs	RVI	Suspect sampling	Industry sampling	animal sample > rectum-anal swab		Animal	1	0			
Dogs	RVL	Unspecified	Industry sampling	animal sample > rectum-anal swab		Animal	2	0			
Dogs		Unspecified	Industry sampling	environmental sample		Animal	1	0			
Pigs	RVL	Unspecified	Industry sampling	animal sample > organ/tissue		Animal	6	0			
Pigs	private lab	Unspecified	Industry sampling	animal sample > organ/tissue		Flock	7	1		1	
Pigs	RVL	Unspecified	Industry sampling	environmental sample		Animal	2	0			

Table Salmonella in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium	S. 1,4,[5],12:i:-
Solipeds, domestic - horses	RVL	Suspect sampling	Industry sampling	animal sample > rectum-anal swab		Animal	1	0			
Solipeds, domestic - horses	RVL	Unspecified	Industry sampling	environmental sample		Flock	1	0			

	Salmonella spp., unspecified
Cats	
Cats	
Cats	
Cattle (bovine animals)	
Dogs	
Dogs	
Dogs	
Pigs	
Pigs	
Pigs	
Solipeds, domestic - horses	
Solipeds, domestic - horses	

Table Salmonella in other animals

Table Salmonella in other poultry

	No of flocks under control programme	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Target Verification	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis
Gallus gallus (fowl) - laying hens - day-old chicks - Control and eradication programmes	1	LVU	Objective sampling	Official and industry sampling				Flock	1	1	1
Gallus gallus (fowl) - laying hens - during rearing period - Control and eradication programmes	404	LVU	Objective sampling	Official and industry sampling				Flock	379	6	3
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes	2258	LVU	Census	Official and industry sampling			yes	Flock	2235	124	80
Gallus gallus (fowl) - broilers - before slaughter - at farm - Control and eradication programmes	29401	LVU	Census	Official and industry sampling			yes	Flock	29343	201	134
Turkeys - breeding flocks, unspecified - during rearing period - at farm - Control and eradication programmes	37	LVU	Objective sampling	Official and industry sampling				Flock	37	4	
Turkeys - breeding flocks, unspecified - adult - at farm - Control and eradication programmes	80	LVU	Census	Official and industry sampling			yes	Flock	79	1	
Turkeys - fattening flocks - before slaughter - at farm - Control and eradication programmes	4682	LVU	Census	Official and industry sampling			yes	Flock	4648	147	8
Ducks - breeding flocks, unspecified		RVL	Objective sampling	Official and industry sampling	environmental sample > boot swabs			Flock	29	6	2
Ducks - meat production flocks		RVL	Objective sampling	Official and industry sampling	environmental sample			Flock	22	0	
Geese - breeding flocks, unspecified		RVL	Objective sampling	Official and industry sampling	environmental sample			Flock	124	5	
Geese - meat production flocks		RVL	Objective sampling	Official and industry sampling	environmental sample			Flock	185	9	1

Table Salmonella in other poultry

	No of flocks under control programme	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Target Verification	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis
Ducks - breeding flocks, unspecified - at farm - Surveillance		RVL	Unspecified	Official and industry sampling	environmental sample			Flock	45	6	
Ducks - breeding flocks, unspecified - at farm - Surveillance		private lab	Unspecified	Industry sampling	environmental sample			Flock	29	0	
Ducks - breeding flocks, unspecified - at farm - Surveillance		RVL	Census	Industry sampling	environmental sample			Flock	11	5	
Ducks - meat production flocks - at farm - Surveillance		RVL	Unspecified	Industry sampling	animal sample > organ/tissue			Flock	21	0	
Ducks - meat production flocks - at farm - Surveillance		RVL	Unspecified	Industry sampling	environmental sample			Flock	151	3	1
Ducks - meat production flocks - at farm - Surveillance		RVL	Census	Industry sampling	environmental sample			Flock	375	36	4
Ducks - meat production flocks - at farm - Surveillance		private lab	Unspecified	Industry sampling	environmental sample			Flock	168	1	
Ducks - meat production flocks - at farm - Surveillance		RVL	Census	Industry sampling	animal sample			Flock	1	0	
Ducks - unspecified - at farm - Surveillance		private lab	Census	Industry sampling	animal sample > faeces			Flock	23	1	
Ducks - unspecified - at farm - Surveillance		private lab	Census	Industry sampling	animal sample > organ/tissue			Flock	10	0	
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes	2258	LVU	Suspect sampling	Official sampling				Flock	157	56	44
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes [1)]	2258	LVU	Census	Industry sampling				Flock	2178	0	

Table Salmonella in other poultry

	No of flocks under control programme	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Target Verification	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes	2258	LVU	Objective sampling	Official sampling				Flock	854	68	36
Geese - breeding flocks, unspecified - at farm - Surveillance		RVL	Unspecified	Industry sampling	animal sample > organ/tissue			Flock	2	2	
Geese - breeding flocks, unspecified - at farm - Surveillance		RVL	Objective sampling	Official and industry sampling	animal sample > organ/tissue			Flock	2	0	
Geese - breeding flocks, unspecified - at farm - Surveillance		RVL	Suspect sampling	Official sampling	environmental sample			Flock	4	1	
Geese - breeding flocks, unspecified - at farm - Surveillance		RVL	Census	Official sampling	animal sample > organ/tissue			Flock	1	0	
Geese - breeding flocks, unspecified - at farm - Surveillance		private lab	Unspecified	Industry sampling	environmental sample			Flock	58	1	
Geese - breeding flocks, unspecified - at farm - Surveillance		RVL	Census	Official and industry sampling	environmental sample			Flock	62	3	3
Geese - breeding flocks, unspecified - at farm - Surveillance		RVL	Unspecified	Industry sampling	environmental sample			Flock	92	8	5
Geese - meat production flocks - at farm - Surveillance		RVL	Suspect sampling	Official sampling	animal sample > organ/tissue			Flock	1	0	
Geese - meat production flocks - at farm - Surveillance		private lab	Unspecified	Industry sampling	environmental sample			Flock	328	4	2
Geese - meat production flocks - at farm - Surveillance		RVL	Census	Industry sampling	animal sample > organ/tissue			Flock	8	0	
Geese - meat production flocks - at farm - Surveillance		RVL	Census	Industry sampling	environmental sample			Flock	389	24	2

Table Salmonella in other poultry

	No of flocks under control programme	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Target Verification	Sampling unit	Units tested	Total units positive for Salmonella	S. Enteritidis
Geese - meat production flocks - at farm - Surveillance		RVL	Unspecified	Industry sampling	animal sample > organ/tissue			Flock	72	9	2
Geese - meat production flocks - at farm - Surveillance		RVL	Unspecified	Industry sampling	environmental sample			Flock	230	47	7
Geese - meat production flocks - at farm - Surveillance		RVL	Suspect sampling	Official sampling	environmental sample			Flock	4	2	
Geese - unspecified - at farm - Surveillance		private lab	Census	Industry sampling	animal sample > faeces			Flock	20	0	
Geese - unspecified - at farm - Surveillance		private lab	Census	Industry sampling	animal sample > organ/tissue			Flock	11	0	

	S. Typhimurium	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Newport
Gallus gallus (fowl) - laying hens - day-old chicks - Control and eradication programmes				
Gallus gallus (fowl) - laying hens - during rearing period - Control and eradication programmes			3	
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes	3		41	
Gallus gallus (fowl) - broilers - before slaughter - at farm - Control and eradication programmes	9		58	
Turkeys - breeding flocks, unspecified - during rearing period - at farm - Control and eradication programmes			4	

Table Salmonella in other poultry

	S. Typhimurium	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Newport
Turkeys - breeding flocks, unspecified - adult - at farm - Control and eradication programmes			1	
Turkeys - fattening flocks - before slaughter - at farm - Control and eradication programmes	13		126	
Ducks - breeding flocks, unspecified			2	2
Ducks - meat production flocks				
Geese - breeding flocks, unspecified	4		1	
Geese - meat production flocks	4		4	
Ducks - breeding flocks, unspecified - at farm - Surveillance	2		3	1
Ducks - breeding flocks, unspecified - at farm - Surveillance				
Ducks - breeding flocks, unspecified - at farm - Surveillance	3		2	
Ducks - meat production flocks - at farm - Surveillance				
Ducks - meat production flocks - at farm - Surveillance			1	1
Ducks - meat production flocks - at farm - Surveillance	11		21	
Ducks - meat production flocks - at farm - Surveillance	1			
Ducks - meat production flocks - at farm - Surveillance				

Table Salmonella in other poultry

	S. Typhimurium	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Newport
Ducks - unspecified - at farm - Surveillance	1			
Ducks - unspecified - at farm - Surveillance				
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes	2		10	
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes [1)]				
Gallus gallus (fowl) - laying hens - adult - at farm - Control and eradication programmes	1		31	
Geese - breeding flocks, unspecified - at farm - Surveillance	2			
Geese - breeding flocks, unspecified - at farm - Surveillance				
Geese - breeding flocks, unspecified - at farm - Surveillance	1			
Geese - breeding flocks, unspecified - at farm - Surveillance				
Geese - breeding flocks, unspecified - at farm - Surveillance	1			
Geese - breeding flocks, unspecified - at farm - Surveillance				
Geese - breeding flocks, unspecified - at farm - Surveillance	1		2	
Geese - meat production flocks - at farm - Surveillance				

Table Salmonella in other poultry

	S. Typhimurium	S. 1,4,[5],12:i:-	Salmonella spp., unspecified	S. Newport
Geese - meat production flocks - at farm - Surveillance	1		1	
Geese - meat production flocks - at farm - Surveillance				
Geese - meat production flocks - at farm - Surveillance	13		9	
Geese - meat production flocks - at farm - Surveillance			7	
Geese - meat production flocks - at farm - Surveillance	29	3	8	
Geese - meat production flocks - at farm - Surveillance	2			
Geese - unspecified - at farm - Surveillance				
Geese - unspecified - at farm - Surveillance				

Comments:

[1)] in case of positive result in industry sampling official confirmatory samples are taken

2.1.5 Salmonella in feedingstuffs

Table Salmonella in compound feedingstuffs

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Compound feedingstuffs for cattle - process control - at feed mill - Surveillance	RVL	Census	Industry sampling	feed sample			25g	1	0		
Compound feedingstuffs for cattle - final product - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample		Single	25g	320	4		
Compound feedingstuffs for pigs - process control - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample			25g	3	0		
Compound feedingstuffs for pigs - final product - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample		Single	25g	1521	13		
Compound feedingstuffs for poultry (non specified) - process control - at feed mill - Surveillance	RVL	Census	Official sampling	feed sample		Batch	25g	5	0		
Compound feedingstuffs for poultry (non specified) - final product - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample		Single	25g	457	5		
Compound feedingstuffs for poultry - breeders - final product - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample		Single	25g	132	1		
Compound feedingstuffs for poultry - laying hens - process control - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample		Single	25g	51	0		
Compound feedingstuffs for poultry - laying hens - final product - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample		Single	25g	317	4		

Table Salmonella in compound feedingstuffs

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Compound feedingstuffs for poultry - broilers - process control - at feed mill - Surveillance	RVL		Official sampling	feed sample		Single	25g	64	0		
Compound feedingstuffs for poultry - broilers - final product - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample		Single	25g	672	1		
Pet food - final product	RVL		Official and industry sampling	feed sample		Single	25g	328	5		

	Salmonella spp., unspecified
Compound feedingstuffs for cattle - process control - at feed mill - Surveillance	
Compound feedingstuffs for cattle - final product - at feed mill - Surveillance	4
Compound feedingstuffs for pigs - process control - at feed mill - Surveillance	
Compound feedingstuffs for pigs - final product - at feed mill - Surveillance	13
Compound feedingstuffs for poultry (non specified) - process control - at feed mill - Surveillance	
Compound feedingstuffs for poultry (non specified) - final product - at feed mill - Surveillance	5

Table Salmonella in compound feedingstuffs

	Salmonella spp., unspecified
Compound feedingstuffs for poultry - breeders - final product - at feed mill - Surveillance	1
Compound feedingstuffs for poultry - laying hens - process control - at feed mill - Surveillance	
Compound feedingstuffs for poultry - laying hens - final product - at feed mill - Surveillance	4
Compound feedingstuffs for poultry - broilers - process control - at feed mill - Surveillance	
Compound feedingstuffs for poultry - broilers - final product - at feed mill - Surveillance	1
Pet food - final product	5

Table Salmonella in feed material of animal origin

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Feed material of land animal origin - dairy products - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample			25g	207	1		
Feed material of land animal origin - meat and bone meal - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample			25g	719	7		
Feed material of land animal origin - bone meal - at feed mill - Surveillance	RVL	Objective sampling	Industry sampling	feed sample			25g	3	0		
Feed material of land animal origin - feather meal - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample			25g	492	0		
Feed material of land animal origin - blood meal - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample			25g	48	1		
Feed material of land animal origin - animal fat - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample			25g	278	0		
Feed material of marine animal origin - fish meal - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample			25g	479	1		

	Salmonella spp., unspecified
Feed material of land animal origin - dairy products - at feed mill - Surveillance	1
Feed material of land animal origin - meat and bone meal - at feed mill - Surveillance	7

Table Salmonella in feed material of animal origin

	Salmonella spp., unspecified
Feed material of land animal origin - bone meal - at feed mill - Surveillance	
Feed material of land animal origin - feather meal - at feed mill - Surveillance	
Feed material of land animal origin - blood meal - at feed mill - Surveillance	1
Feed material of land animal origin - animal fat - at feed mill - Surveillance	
Feed material of marine animal origin - fish meal - at feed mill - Surveillance	1

Table Salmonella in other feed matter

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Salmonella	S. Enteritidis	S. Typhimurium
Feed material of cereal grain origin - barley derived - at feed mill - Surveillance	RVL		Official sampling	feed sample			25g	27	1		
Feed material of cereal grain origin - wheat derived - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample			25g	122	1		
Feed material of cereal grain origin - maize derived - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample			25g	53	0		
Feed material of oil seed or fruit origin - rape seed derived - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample			25g	314	5		
Feed material of oil seed or fruit origin - soya (bean) derived - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample			25g	527	31		
Feed material of oil seed or fruit origin - cotton seed derived - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample			25g	15	0		
Feed material of oil seed or fruit origin - sunflower seed derived - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample			25g	240	1		
Feed material of oil seed or fruit origin - other oil seeds derived - at feed mill - Surveillance	RVL		Official and industry sampling	feed sample			25g	28	0		
Other feed material - tubers, roots and similar products - at feed mill - Surveillance	RVL	Objective sampling	Industry sampling	feed sample			25g	5	0		

Table Salmonella in other feed matter

	Salmonella spp., unspecified
Feed material of cereal grain origin - barley derived - at feed mill - Surveillance	1
Feed material of cereal grain origin - wheat derived - at feed mill - Surveillance	1
Feed material of cereal grain origin - maize derived - at feed mill - Surveillance	
Feed material of oil seed or fruit origin - rape seed derived - at feed mill - Surveillance	5
Feed material of oil seed or fruit origin - soya (bean) derived - at feed mill - Surveillance	31
Feed material of oil seed or fruit origin - cotton seed derived - at feed mill - Surveillance	
Feed material of oil seed or fruit origin - sunflower seed derived - at feed mill - Surveillance	1
Feed material of oil seed or fruit origin - other oil seeds derived - at feed mill - Surveillance	
Other feed material - tubers, roots and similar products - at feed mill - Surveillance	

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 Salmonella serovars in animals

Serovar	Cattle (bovine animals)				Pigs				Gallus gallus (fowl)				Other poultry
Sources of isolates	Control program	Monitoring	Clinical	Surveillance	Control program	Monitoring	Clinical	Surveillance	Control program	Monitoring	Clinical	Surveillance	Control program
Number of isolates in the laboratory			5				30		667			168	89
Number of isolates serotyped	0	0	5	0	0	0	18	0	626	0	0	86	82
Number of isolates per serovar													
S. 1,4,[5],12:i:-			5				15						
S. Agona							1						7
S. Bredeney													4
S. Enteritidis							1		395			41	6
S. Gallinarum												4	
S. Hadar									9				1

Table Salmonella serovars in animals

Serovar	Cattle (bovine animals)				Pigs				Gallus gallus (fowl)				Other poultry
Sources of isolates	Control program	Monitoring	Clinical	Surveillance	Control program	Monitoring	Clinical	Surveillance	Control program	Monitoring	Clinical	Surveillance	Control program
Number of isolates in the laboratory			5				30		667			168	89
Number of isolates serotyped	0	0	5	0	0	0	18	0	626	0	0	86	82
Number of isolates per serovar													
S. Infantis									69			12	
S. Kentucky									3			0	16
S. Lexington									1			0	14
S. Livingstone									5			0	
S. Mbandaka									44			9	
S. Newport									6			3	18
S. Saintpaul									2			1	9
S. Senftenberg									5			4	
S. Tennessee									6			1	
S. Typhimurium							1		24			1	6
S. Virchow									41			9	1

Table Salmonella serovars in animals

Serovar / Sources of isolates	Cattle (bovine animals)				Pigs				Gallus gallus (fowl)				Other poultry
	Control program	Monitoring	Clinical	Surveillance	Control program	Monitoring	Clinical	Surveillance	Control program	Monitoring	Clinical	Surveillance	Control program
Number of isolates in the laboratory			5				30		667			168	89
Number of isolates serotyped	0	0	5	0	0	0	18	0	626	0	0	86	82
Number of isolates per serovar													
Salmonella spp.									16			1	

Serovar / Sources of isolates	Other poultry		
	Monitoring	Clinical	Surveillance
Number of isolates in the laboratory			9
Number of isolates serotyped	0	0	6
Number of isolates per serovar			
S. 1,4,[5],12:i:-			
S. Agona			
S. Bredeney			
S. Enteritidis			2
S. Gallinarum			

Table Salmonella serovars in animals

Serovar	Other poultry		
Sources of isolates	Monitoring	Clinical	Surveillance
Number of isolates in the laboratory			9
Number of isolates serotyped	0	0	6
Number of isolates per serovar			
S. Hadar			
S. Infantis			
S. Kentucky			3
S. Lexington			
S. Livingstone			
S. Mbandaka			
S. Newport			
S. Saintpaul			1
S. Senftenberg			
S. Tennessee			
S. Typhimurium			

Table Salmonella serovars in animals

Serovar / Sources of isolates	Other poultry		
	Monitoring	Clinical	Surveillance
Number of isolates in the laboratory			9
Number of isolates serotyped	0	0	6
Number of isolates per serovar			
S. Virchow			
Salmonella spp.			

Footnote:

other poultry= turkey;

Salmonella spp. (rough)

Table Salmonella serovars in food

Serovar	Meat from bovine animals		Meat from pig		Meat from broilers (Gallus gallus)		Meat from other poultry species		Other products of animal origin	
Sources of isolates	Monitoring	Surveillance	Monitoring	Surveillance	Monitoring	Surveillance	Monitoring	Surveillance	Monitoring	Surveillance
Number of isolates in the laboratory		5		36		124				
Number of isolates serotyped	0	5	0	19	0	105	0	0	0	0
Number of isolates per serovar										
S. Agona		0		0		1				
S. Albany		1		0		0				
S. Bredeney		0		1		1				
S. Derby		0		4		0				
S. Enteritidis		0		4		34				
S. Indiana		0		0		6				
S. Infantis		0		1		44				
S. Kentucky		0		0		0				
S. Kottbus		0		0		1				
S. Livingstone		0		1		0				
S. London		0		2		0				

Table Salmonella serovars in food

Serovar	Meat from bovine animals		Meat from pig		Meat from broilers (Gallus gallus)		Meat from other poultry species		Other products of animal origin	
Sources of isolates	Monitoring	Surveillance	Monitoring	Surveillance	Monitoring	Surveillance	Monitoring	Surveillance	Monitoring	Surveillance
Number of isolates in the laboratory		5		36		124				
Number of isolates serotyped	0	5	0	19	0	105	0	0	0	0
Number of isolates per serovar										
S. Mbandaka		0		0		3				
S. Newport		0		0		2				
S. Putten		0		0		2				
S. Saintpaul		0		0		1				
S. Typhimurium		4		2		1				
S. Typhimurium, monophasic		0		3		0				
S. Virchow		0		1		8				
Salmonella spp.		0		0		1				

2.1.7 Antimicrobial resistance in Salmonella isolates

A. Antimicrobial resistance in Salmonella in cattle

Sampling strategy used in monitoring

Frequency of the sampling

No active monitoring has been conducted.
The epidemiological situation in cattle is not well recognized.

Additional information

B. Antimicrobial resistance in Salmonella in foodstuff derived from cattle

Sampling strategy used in monitoring

Frequency of the sampling

Strains isolated from food derived from cattle were not tested for antimicrobial resistence separately.

Type of specimen taken

Not specified foodstuffs of animal origin

Laboratory methodology used for identification of the microbial isolates

Dillution method.

Additional information

C. Antimicrobial resistance in Salmonella in foodstuff derived from pigs

Sampling strategy used in monitoring

Frequency of the sampling

D. Antimicrobial resistance in Salmonella in foodstuff derived from poultry

Sampling strategy used in monitoring

Frequency of the sampling

Strains isolated from food derived from poultry were tested for antimicrobial resistance with quantitative and qualitative method.

Additional information

E. Antimicrobial resistance in Salmonella in pigs

Sampling strategy used in monitoring

Frequency of the sampling

F. Antimicrobial resistance in Salmonella in poultry

Sampling strategy used in monitoring

Frequency of the sampling

Isolates were collected from samples taken within control and eradication programme in flocks of Gallus gallus.

Type of specimen taken

Samples were taken in accordance with requirements set out in Community legistation: Regulation 1168/2006 for layers

Methods of sampling (description of sampling techniques)

Methods are described in Regulation 1168/2006 are in accordance with ISO/EN 17025 and 6579/2002. Qualitative data were obtained by using dillusion method.

Procedures for the selection of isolates for antimicrobial testing

Isolates are sent by regional veterinary laboratories to the National Reference Laboratory for Salmonella for further analisis.

Laboratory methodology used for identification of the microbial isolates

Dillution method

Laboratory used for detection for resistance

Antimicrobials included in monitoring

tetracycline, amphenicol, ampicillin, cephalosporin, ciprofloxacin, nalidixic acid, sulfonamide, trimethoprim, aminoglocosides

Cut-off values used in testing

Breakpoints recommended by EFSA.

Results of the investigation

Table Antimicrobial susceptibility testing of Salmonella in meat from bovine animals

Salmonella	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Dublin		S. Infantis		Salmonella spp.	
Isolates out of a monitoring program (yes/no)			yes									
Number of isolates available in the laboratory			4									
Antimicrobials:	N	n	N	n	N	n	N	n	N	n	N	n
Aminoglycosides - Gentamicin			4	0								
Aminoglycosides - Streptomycin			4	0								
Amphenicols - Chloramphenicol			4	4								
Fluoroquinolones - Ciprofloxacin			4	4								
Penicillins - Ampicillin			4	4								
Quinolones - Nalidixic acid			4	4								
Sulfonamides			4	4								
Tetracyclines - Tetracycline			4	4								
Trimethoprim			4	0								
Fully sensitive			4	0								
Resistant to 1 antimicrobial			4	0								
Resistant to 2 antimicrobials			4	0								
Resistant to 3 antimicrobials			4	0								
Resistant to 4 antimicrobials			4	0								
Resistant to >4 antimicrobials			4	4								
Cephalosporins - Cefotaxime			4	0								
Cephalosporins - Ceftazidim			4	0								

Table Antimicrobial susceptibility testing of Salmonella in meat from bovine animals

Table Antimicrobial susceptibility testing of Salmonella in Pigs

Salmonella	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Derby		Salmonella spp.		S. Typhimurium, monophasic	
Isolates out of a monitoring program (yes/no)											yes	
Number of isolates available in the laboratory											15	
Antimicrobials:	N	n	N	n	N	n	N	n	N	n	N	n
Aminoglycosides - Gentamicin											3	0
Aminoglycosides - Streptomycin											3	3
Amphenicols - Chloramphenicol											3	0
Fluoroquinolones - Ciprofloxacin											3	0
Penicillins - Ampicillin											3	3
Quinolones - Nalidixic acid											3	0
Sulfonamides											3	3
Tetracyclines - Tetracycline											3	3
Trimethoprim											3	0
Fully sensitive											3	0
Resistant to 1 antimicrobial											3	0
Resistant to 2 antimicrobials											3	0
Resistant to 3 antimicrobials											3	0
Resistant to 4 antimicrobials											3	3
Resistant to >4 antimicrobials											3	0
Cephalosporins - Cefotaxime											3	0
Cephalosporins - Ceftazidim											3	0

Table Antimicrobial susceptibility testing of Salmonella in Pigs

Table Antimicrobial susceptibility testing of Salmonella in meat from pig

Salmonella	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Derby		Salmonella spp.	
Isolates out of a monitoring program (yes/no)	yes		yes							
Number of isolates available in the laboratory	3		3							
Antimicrobials:	N	n	N	n	N	n	N	n	N	n
Aminoglycosides - Gentamicin	3	0	1	0						
Aminoglycosides - Streptomycin	3	0	1	0						
Amphenicols - Chloramphenicol	3	0	1	0						
Fluoroquinolones - Ciprofloxacin	3	0	1	0						
Penicillins - Ampicillin	3	0	1	0						
Quinolones - Nalidixic acid	3	0	1	0						
Sulfonamides	3	0	1	0						
Tetracyclines - Tetracycline	3	0	1	0						
Trimethoprim	3	0	1	0						
Fully sensitive	3	3	1	1						
Cephalosporins - Cefotaxime	3	0	1	0						

Table Antimicrobial susceptibility testing of Salmonella in meat from broilers (Gallus gallus)

Salmonella	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Paratyphi B var. Java		Salmonella spp.		S. Infantis	
Isolates out of a monitoring program (yes/no)	yes		yes								yes	
Number of isolates available in the laboratory	45		2								63	
Antimicrobials:	N	n	N	n	N	n	N	n	N	n	N	n
Aminoglycosides - Gentamicin	29	0	2	0							38	0
Aminoglycosides - Streptomycin	29	0	2	2							38	1
Amphenicols - Chloramphenicol	29	0	2	1							38	0
Fluoroquinolones - Ciprofloxacin	29	18	2	1							38	33
Penicillins - Ampicillin	29	0	2	2							38	1
Quinolones - Nalidixic acid	29	18	2	1							38	33
Sulfonamides	29	1	2	2							38	33
Tetracyclines - Tetracycline	29	0	2	2							38	33
Trimethoprim	29	1	2	0							38	33
Fully sensitive	29	11	2	0							38	3
Resistant to 1 antimicrobial	29	0	2	0							38	1
Resistant to 2 antimicrobials	29	17	2	0							38	0
Resistant to 3 antimicrobials	29	0	2	0							38	1
Resistant to 4 antimicrobials	29	0	2	1							38	0
Resistant to >4 antimicrobials	29	6	2	1							38	33
Cephalosporins - Cefotaxime	29	0	2	0							38	1
Cephalosporins - Ceftazidim	29	1	2	0							38	1

Table Antimicrobial susceptibility testing of Salmonella in meat from broilers (Gallus gallus)

Table Antimicrobial susceptibility testing of Salmonella in Turkeys

Salmonella	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Saintpaul		Salmonella spp.		S. Kentucky		S. Lexington		S. Newport	
Isolates out of a monitoring program (yes/no)	yes		yes								yes		yes		yes	
Number of isolates available in the laboratory	8		6								19		14		18	
Antimicrobials:	N	n	N	n	N	n	N	n	N	n	N	n	N	n	N	n
Aminoglycosides - Gentamicin	4	0	6	0							15	13	10	0	16	0
Aminoglycosides - Streptomycin	4	0	6	5							15	13	10	0	16	5
Amphenicols - Chloramphenicol	4	0	6	4							15	0	10	0	16	0
Fluoroquinolones - Ciprofloxacin	4	0	6	5							15	13	10	1	16	11
Penicillins - Ampicillin	4	1	6	5							15	13	10	1	16	11
Quinolones - Nalidixic acid	4	0	6	5							15	13	10	1	16	7
Sulfonamides	4	0	6	5							15	13	10	0	16	1
Tetracyclines - Tetracycline	4	1	6	5							15	13	10	1	16	0
Trimethoprim	4	0	6	0							15	13	10	0	16	0
Fully sensitive	4	2	6	1							15	2	10	9	16	2
Resistant to 1 antimicrobial	4	2	6	0							15	0	10	0	16	2
Resistant to 2 antimicrobials	4	0	6	0							15	0	10	0	16	0
Resistant to 3 antimicrobials	4	0	6	0							15	0	10	0	16	3
Resistant to 4 antimicrobials	4	0	6	0							15	0	10	1	16	9
Resistant to >4 antimicrobials	4	0	6	5							15	13	10	0	16	0
Cephalosporins - Cefotaxime	4	0	6	0							15	0	10	0	16	0
Cephalosporins - Ceftazidim	4	0	6	0							15	0	10	0	16	0

Table Antimicrobial susceptibility testing of Salmonella in Turkeys

Footnote:

sulfonamides = sulfonamide

Table Antimicrobial susceptibility testing of Salmonella in Gallus gallus (fowl) - laying hens

Salmonella	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		Salmonella spp.		S. Mbandaka		S. Virchow	
Isolates out of a monitoring program (yes/no)	yes		yes						yes		yes	
Number of isolates available in the laboratory	191		14						21		14	
Antimicrobials:	N	n	N	n	N	n	N	n	N	n	N	n
Aminoglycosides - Gentamicin	116	0	9	0					12	0	14	1
Aminoglycosides - Streptomycin	116	3	9	6					12	3	14	2
Amphenicols - Chloramphenicol	116	0	9	6					12	0	14	0
Fluoroquinolones - Ciprofloxacin	116	30	9	7					12	2	14	14
Penicillins - Ampicillin	116	12	9	6					12	2	14	0
Quinolones - Nalidixic acid	116	35	9	6					12	0	14	14
Sulfonamides	116	8	9	6					12	2	14	0
Tetracyclines - Tetracycline	116	1	9	6					12	0	14	1
Trimethoprim	116	1	9	0					12	1	14	0
Fully sensitive	116	70	9	2					12	7	14	0
Resistant to 1 antimicrobial	116	10	9	1					12	7	14	0
Resistant to 2 antimicrobials	116	34	9	0					12	3	14	12
Resistant to 3 antimicrobials	116	1	9	0					12	1	14	1
Resistant to 4 antimicrobials	116	0	9	0					12	0	14	0
Resistant to >4 antimicrobials	116	1	9	6					12	0	14	1
Cephalosporins - Cefotaxime	116	0	9	0					12	0	14	0
Cephalosporins - Ceftazidim	116	0	9	0					12	0	14	0

Table Antimicrobial susceptibility testing of Salmonella in Gallus gallus (fowl) - laying hens

Table Antimicrobial susceptibility testing of Salmonella in Gallus gallus (fowl) - broilers

Salmonella	S. Enteritidis		S. Typhimurium		S. 1,4,[5],12:i:-		S. Paratyphi B var. Java		Salmonella spp.		S. Mbandaka		S. Virchow	
Isolates out of a monitoring program (yes/no)	yes		yes								yes		yes	
Number of isolates available in the laboratory	244		11								31		28	
Antimicrobials:	N	n	N	n	N	n	N	n	N	n	N	n	N	n
Aminoglycosides - Gentamicin	158	0	6	0							13	0	12	0
Aminoglycosides - Streptomycin	158	3	6	6							13	1	12	3
Amphenicols - Chloramphenicol	158	1	6	6							13	0	12	0
Fluoroquinolones - Ciprofloxacin	158	89	6	6							13	5	12	12
Penicillins - Ampicillin	158	14	6	6							13	1	12	0
Quinolones - Nalidixic acid	158	94	6	6							13	5	12	12
Sulfonamides	158	9	6	6							13	0	12	1
Tetracyclines - Tetracycline	158	4	6	6							13	1	12	0
Trimethoprim	158	4	9	0							13	0		
Fully sensitive	158	54	6	1							13	5	12	0
Resistant to 1 antimicrobial	158	6	6	3							13	2	12	0
Resistant to 2 antimicrobials	158	86	6	0							13	4	12	8
Resistant to 3 antimicrobials	158	7	6	0							13	1	12	4
Resistant to 4 antimicrobials	158	1	6	1							13	0	12	0
Resistant to >4 antimicrobials	158	5	6	1							13	0	12	0
Cephalosporins - Cefotaxime	158	0	6	6							13	0	12	0
Cephalosporins - Ceftazidim	158	0	6	0							13	0	12	0

Table Antimicrobial susceptibility testing of Salmonella in Gallus gallus (fowl) - broilers

Table Antimicrobial susceptibility testing of S. Enteritidis in Gallus gallus (fowl) - unspecified - Official and industry sampling - unknown - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Enteritidis	Gallus gallus (fowl) - unspecified																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	436																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	274	0						27	206	37	4												0.3	32
Aminoglycosides - Streptomycin	32	274	5									17	217	32	2	1	2		3					2	128
Amphenicols - Chloramphenicol	16	274	1									87	177	9				1						2	64
Amphenicols - Florfenicol		274	274									166	100	7				1						2	64
Cephalosporins - Cefotaxime	0.5	274	0				140	125	8	1														0	4
Fluoroquinolones - Ciprofloxacin	0.06	274	130	1	48	90	5	11	94	19	5	1												0	8
Penicillins - Ampicillin	4	274	26							112	125	11					26							1	32
Quinolones - Nalidixic acid	16	273	128										144	1		1	127							4	64
Sulfonamides	256	274	17											3	6	65	164	19			2	15		8	1024
Tetracyclines - Tetracycline	8	274	1									166	100	7				1						1	64
Trimethoprim	2	274	5							264	4	1					5							1	32
Cephalosporins - Ceftazidim		274	274						252	22														0	16

Table Antimicrobial susceptibility testing of S. Typhimurium in Gallus gallus (fowl) - unspecified - Official and industry sampling - unknown - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Typhimurium	Gallus gallus (fowl) - unspecified																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	25																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	15	0							8	6	1												0.3	32
Aminoglycosides - Streptomycin	32	15	8											2	5		1	6	1					2	128
Amphenicols - Chloramphenicol	16	8	0									1	7											2	64
Amphenicols - Florfenicol		15	15									4	4		4	3								2	64
Cephalosporins - Cefotaxime	0.5	15	0				7	8																0	4
Fluoroquinolones - Ciprofloxacin	0.06	15	11		2	2		1	7	3														0.01	8
Penicillins - Ampicillin	4	15	8							3	4						8							1	32
Quinolones - Nalidixic acid	16	15	8										4		3			8						4	64
Sulfonamides	256	15	8													2	4	1			8			8	1024
Tetracyclines - Tetracycline	8	15	7									4	4		4	3								1	64
Trimethoprim	2	15	0							15														1	32
Cephalosporins - Ceftazidim		15	15						14	1														0	16

Table Antimicrobial susceptibility testing of S. Enteritidis in Meat from poultry, unspecified - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Enteritidis	Meat from poultry, unspecified																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	45																							
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	29	0						4	21	4													0.3	32
Aminoglycosides - Streptomycin	32	29	0									2	26		1									2	128
Amphenicols - Chloramphenicol	16	29	0									8	18	2	1									2	64
Cephalosporins - Cefotaxime	0.5	29	1				10	14	4			1												0.1	4
Fluoroquinolones - Ciprofloxacin	0.06	29	18		4	6	1	1	12	3	2													0.01	8
Penicillins - Ampicillin	4	29	0							8	19	2												0.5	32
Quinolones - Nalidixic acid	16	29	18										11			1	1	16						4	64
Sulfonamides	256	29	1													4	20	4				1		8	1024
Tetracyclines - Tetracycline	8	29	0								21	7		1										1	64
Trimethoprim	2	29	1							28				1										1	32
Cephalosporins - Ceftazidim		29	29						22	6				1										0.3	16

Table Antimicrobial susceptibility testing of S. Infantis in Meat from poultry, unspecified - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Infantis	Meat from poultry, unspecified																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	63																							
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	38	0						2	18	18													0.3	32
Aminoglycosides - Streptomycin	32	35	29												4	2	29							2	128
Amphenicols - Chloramphenicol	16	38	0										16	19	3									2	64
Cephalosporins - Cefotaxime	0.5	38	1				1	8	25	3				1										0.1	4
Fluoroquinolones - Ciprofloxacin	0.06	38	33		1	4			1	10	22													0.01	8
Penicillins - Ampicillin	4	38	1							3	14	20					1							1	32
Quinolones - Nalidixic acid	16	38	33										5					33						4	64
Sulfonamides	256	38	33													2	3				33			8	1024
Tetracyclines - Tetracycline	8	38	33								5					1	3	29						1	64
Trimethoprim	2	38	0							38														1	32
Cephalosporins - Ceftazidim		38	38						1	24	12					1								0.3	16

Table Antimicrobial susceptibility testing of S. Kentucky in Meat from turkey - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Kentucky	Meat from turkey																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	17																							
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	12	12												1	11								0.3	32
Aminoglycosides - Streptomycin	32	12	12														8	4						2	128
Amphenicols - Chloramphenicol	16	12	1										10	1				1						2	64
Cephalosporins - Cefotaxime	0.5	12	0					11	1															0.1	4
Fluoroquinolones - Ciprofloxacin	0.06	12	12											8	4									0.01	8
Penicillins - Ampicillin	4	12	12														12							1	32
Quinolones - Nalidixic acid	16	12	12															12						4	64
Sulfonamides	256	12	12																		12			8	1024
Tetracyclines - Tetracycline	8	12	12													2	7	3						1	64
Trimethoprim	2	12	1							11							1							1	32
Cephalosporins - Ceftazidim		12	12							8	4													0.3	16

Table Antimicrobial susceptibility testing of S. Newport in Meat from turkey - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Newport	Meat from turkey																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	20																							
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	15	0							4	8	3												0.3	32
Aminoglycosides - Streptomycin	32	15	8												2	5	8							2	128
Amphenicols - Chloramphenicol	16	15	5										9	1				5						2	64
Cephalosporins - Cefotaxime	0.5	15	0				1	10	2	2														0.1	4
Fluoroquinolones - Ciprofloxacin	0.06	15	15						4	3	3	3	2											0.01	8
Penicillins - Ampicillin	4	15	8							1	5	1					8							1	32
Quinolones - Nalidixic acid	16	15	15															15						4	64
Sulfonamides	256	15	13													1			1		13			8	1024
Tetracyclines - Tetracycline	8	15	15														8	7						1	64
Trimethoprim	2	15	0							14	1													1	32
Cephalosporins - Ceftazidim		15	15						7	8														0.3	16

Table Antimicrobial susceptibility testing of S. Mbandaka in Gallus gallus (fowl) - Unspecified - Unspecified - Official and industry sampling - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Mbandaka	Gallus gallus (fowl) - Unspecified																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	53																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	25	0						1	2	19	3												0.3	32
Aminoglycosides - Streptomycin	32	25	1												21	3	1							2	128
Amphenicols - Chloramphenicol	16	25	0										21	3	1									2	64
Amphenicols - Florfenicol		25	25									2	20	3										2	64
Cephalosporins - Cefotaxime	0.5	25	0				9	14	2															0.1	4
Fluoroquinolones - Ciprofloxacin	0.06	25	7		12	5	1		4	3														0.01	8
Penicillins - Ampicillin	4	25	3							19	2	1					3							1	32
Quinolones - Nalidixic acid	16	25	5										18	2				5						4	64
Sulfonamides	256	25	2													2	15	5	1		2			8	1024
Tetracyclines - Tetracycline	8	25	0									2	20	3										1	64
Trimethoprim	2	25	1							24				1										1	32
Cephalosporins - Ceftazidim		25	25						16	9														0.3	16

Table Antimicrobial susceptibility testing of S. Virchow in Gallus gallus (fowl) - Official and industry sampling - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Virchow	Gallus gallus (fowl)																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	43																							
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	26	1						1	10	10	4	1										0.3	32
Aminoglycosides - Streptomycin	32	26	1											1	20	4	1						2	128
Amphenicols - Chloramphenicol	16	26	0									6	20										2	64
Amphenicols - Florfenicol		26	26									13	13										2	64
Cephalosporins - Cefotaxime	0.5	26	0				23	3															0.1	4
Fluoroquinolones - Ciprofloxacin	0.06	26	26					6	19	1													0.01	8
Penicillins - Ampicillin	4	26	0							24	2												1	32
Quinolones - Nalidixic acid	16	26	26														8	18					4	64
Sulfonamides	256	26	1												1	16	8				1		8	1024
Tetracyclines - Tetracycline	8	26	0								13	13											1	64
Trimethoprim	2	26	0							25	1												1	32
Cephalosporins - Ceftazidim		26	26						26														0.3	16

Table Antimicrobial susceptibility testing of S. Newport in Turkeys - Unspecified - Unspecified - Official and industry sampling - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Newport	Turkeys - Unspecified																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	18																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	16	0							5	10	1												0.3	32
Aminoglycosides - Streptomycin	32	16	1											1	10	4	1							2	128
Amphenicols - Chloramphenicol	16	16	0									1	13	2										2	64
Amphenicols - Florfenicol		16	16									2	12	2										2	64
Cephalosporins - Cefotaxime	0.5	16	0				10	6																0.1	4
Fluoroquinolones - Ciprofloxacin	0.06	16	11		2	3			7	2	2													0.01	8
Penicillins - Ampicillin	4	16	11							4	1						11							1	32
Quinolones - Nalidixic acid	16	16	7										6	1	2			7						4	64
Sulfonamides	256	16	1													3	12				1			8	1024
Tetracyclines - Tetracycline	8	16	0									2	12	2										1	64
Trimethoprim	2	16	0							16														1	32
Cephalosporins - Ceftazidim		16	16						13	3														0.3	16

Table Antimicrobial susceptibility testing of S. Kentucky in Turkeys - Unspecified - Unspecified - Official and industry sampling - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Kentucky	Turkeys - Unspecified																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	19																							
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	15	13							2			1		2	10								0.3	32
Aminoglycosides - Streptomycin	32	15	13											1	1		10	2	1					2	128
Amphenicols - Chloramphenicol	16	15	0									1	14											2	64
Amphenicols - Florfenicol		15	15									7	8											2	64
Cephalosporins - Cefotaxime	0.5	15	0					12	3															0.1	4
Fluoroquinolones - Ciprofloxacin	0.06	15	13			2								9	4									0.01	8
Penicillins - Ampicillin	4	15	13							1	1						13							1	32
Quinolones - Nalidixic acid	16	15	13										2					13						4	64
Sulfonamides	256	15	13													1		1			13			8	1024
Tetracyclines - Tetracycline	8	15	0									7	8											1	64
Trimethoprim	2	15	0							14	1													1	32
Cephalosporins - Ceftazidim		15	15						2	12	1													0.3	16

Table Antimicrobial susceptibility testing of S. Lexington in Turkeys - Unspecified - Unspecified - Official and industry sampling - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

S. Lexington	Turkeys - Unspecified																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	14																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	10	0							1	9													0.3	32
Aminoglycosides - Streptomycin	32	10	0											1	9									2	128
Amphenicols - Chloramphenicol	16	10	0									2	7	1										2	64
Amphenicols - Florfenicol		10	10									3	6	1										2	64
Cephalosporins - Cefotaxime	0.5	10	0				7	2	1															0.1	4
Fluoroquinolones - Ciprofloxacin	0.06	10	1		8		1		1															0.01	8
Penicillins - Ampicillin	4	10	1							8	1						1							1	32
Quinolones - Nalidixic acid	16	10	1										9					1						4	64
Sulfonamides	256	10	0													1	8	1						8	1024
Tetracyclines - Tetracycline	8	10	0									3	6	1										1	64
Trimethoprim	2	10	0								10													1	32
Cephalosporins - Ceftazidim		10	10						9	1														0.3	16

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

Test Method Used	Standard methods used for testing

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

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

Test Method Used	Standard methods used for testing

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

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

Test Method Used	Standard methods used for testing

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

2.2 CAMPYLOBACTERIOSIS

2.2.1 General evaluation of the national situation

A. Thermophilic Campylobacter general evaluation

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

In 2008, there was baseline survey of prevalence of Campylobacter spp. in broiler flocks and Campylobacter spp. in broiler carcasses.

This baseline survey was conducted according to Commision Decision 2007/516/EC. The survey was shown that the prevalence of Campylobacter spp. is quite big. Generally, in Poland 79% of the positive samples were found. Most of the isolates were C. jejuni.

In addition the Campylobacter spp. was affirmed in fresh broiler meat (6 cases), meat preparation from broiler meat intended to be eaten cooked in 5 cases and also in fresh turkey meat in 16 cases.

Recent actions taken to control the zoonoses

The present system of communicable diseases epidemiological surveillance in Poland is in line with the Act on infectious diseases and infections (Journal of Laws of 2001 No.125, item 1384, as amended). This system complies with the Community Network on communicable diseases, based on the Decision 2119/98/EC of the European Parliament and of the Council. Cooperation between authorities employed to take action in cases of outbreaks among human population in Poland, was specified in the Ordinance of the Minister of Health on the cooperation between the State Sanitary Inspectorate, Veterinary Inspectorate and State Environmental Protection Inspectorate regarding control of infectious diseases of 7 April 2006 (Journal of Laws of 2006 No 73, item 516) and Ordinance of the Council of Ministers on the cooperation between the Veterinary Inspectorate, State Sanitary Inspectorate, State Pharmaceutical Inspectorate, Trade Inspectorate, Road Transport Inspectorate, Inspection of marketing Quality of Agricultural and Food Products and local administration units in control of infectious animal diseases, including zoonotic diseases of 23 April 2006 (Journal of Laws of 2006 No 83, item 575)

In accordance with above mentioned acts, District Sanitary Inspector informs District Veterinary Inspector of campylobacter foodborne outbreak associated with the consumption of poultry meat. Then District Veterinary Inspector carries out the epidemiological investigation.

2.2.2 Campylobacteriosis in humans

A. Thermophilic Campylobacter in humans

Reporting system in place for the human cases

Information was direct to ECDC.

2.2.3 Campylobacter in foodstuffs

A. Thermophilic Campylobacter in Broiler meat and products thereof

Monitoring system

Sampling strategy

At slaughterhouse and cutting plant

In 2008 was conducted baseline survey carried out according to Commission Decision No. 2007/516/EC. Sample collection in broiler slaughterhouses was specified by weeks of the study period in 2008 in the Timetables according to General Veterinary Officer Guidelines. Samples were collected by official veterinarians and reffered to designated laboratories.

F.b.o in HACCP definy how much samples takes for Campylobacter and Veterinary Inspection examined 10% of f.b.o samples to verification them.

Frequency of the sampling

At slaughterhouse and cutting plant

Other: it is definy in HACCP

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

In baseline survey of prevalence of Campylobacter spp. in broiler flocks as well as Campylobacter spp. in broiler carcasses obtained in carcasses 332 total units for thermophilic Campylobacter spp. Therein was 203 positive findings of C.jejuni and 129 positive results of C.coli.
In addition in fresh broiler meat received 6 positive results for C. jejuni and unspecified Campylobacter from 118 tested units.
Also 5 positive results of unspecified Campylobacter was found in meat preparation from broiler maet intended to be eaten cooked.

In 2009, the number of positive samples was smaller than during baseline study.

Additional information

2010
Campylobacter coli in broiler meat- quantitative data:
fully sensitive N= 8
resistant to 1 antimicrobials N=0
resistant to 2 antimicrobials N=14
resistant to 3 antimicrobials N=27
resistant to 4 antimicrobials N=32
resistant to > 4 antimicrobials N=0

Campylobacter jejuni in broiler meat- quantitative data:
fully sensitive N= 8
resistant to 1 antimicrobials N=1
resistant to 2 antimicrobials N=15
resistant to 3 antimicrobials N=16
resistant to 4 antimicrobials N=6
resistant to > 4 antimicrobials N=0

Table Campylobacter in other food

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni
Meat from pig - fresh - at slaughterhouse	NRL			food sample > carcass swabs		Slaughter batch		71	44	15	7
Meat from pig - fresh - at retail	NRL			food sample		---	10g	28	0		
Meat from bovine animals - fresh - at slaughterhouse	NRL			food sample > carcass swabs		Slaughter batch		40	8	3	1
Meat from bovine animals - fresh - at retail	NRL			food sample		---	10g	41	0		
Meat from poultry, unspecified (broiler & turkey raw)	RVL	Unspecified	Industry sampling	food sample > meat		Single	10g	1	0		
Meat from poultry, unspecified (broiler& turkey raw)	RVL	Unspecified	Industry sampling	food sample > meat		Single	25g	2	1	0	0
Meat from poultry, unspecified (broiler&turkey raw)	RVL	Unspecified	Official and industry sampling	food sample > meat		Single	25g	5	5	5	
Meat, mixed meat (broiler & turkey raw)	private lab	Census	HACCP and owns check	food sample > meat		Single	25g	44	0		
Meat, mixed meat (broiler & turkey raw)	private lab	Objective sampling	Industry sampling	food sample > meat		Single	25g	162	0		

	C. lari	C. upsaliensis	Thermophilic Campylobacter spp., unspecified
Meat from pig - fresh - at slaughterhouse			22
Meat from pig - fresh - at retail			

Table Campylobacter in other food

	C. lari	C. upsaliensis	Thermophilic Campylobacter spp., unspecified
Meat from bovine animals - fresh - at slaughterhouse			4
Meat from bovine animals - fresh - at retail			
Meat from poultry, unspecified (broiler & turkey raw)			
Meat from poultry, unspecified (broiler& turkey raw)	0	0	1
Meat from poultry, unspecified (broiler&turkey raw)			
Meat, mixed meat (broiler & turkey raw)			
Meat, mixed meat (broiler & turkey raw)			

Table Campylobacter in poultry meat

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse	NRL	Objective sampling	Official sampling	food sample > carcass swabs		Single	swab	405	226	114	112
Meat from broilers (Gallus gallus) - fresh - at retail	NRL	Unspecified	Not applicable	food sample > meat		Single	10g	110	91	56	35
Meat from turkey - carcase - at slaughterhouse	NRL	Objective sampling	Official sampling	food sample > carcass swabs		Single	swab	21	10	8	2
Meat from geese - carcase - at slaughterhouse	NRL	Objective sampling	Official sampling	food sample > carcass swabs		Single	swab	5	1		1

	C. lari	C. upsaliensis	Thermophilic Campylobacter spp., unspecified
Meat from broilers (Gallus gallus) - carcase - at slaughterhouse			
Meat from broilers (Gallus gallus) - fresh - at retail			
Meat from turkey - carcase - at slaughterhouse			
Meat from geese - carcase - at slaughterhouse			

2.2.4 Campylobacter in animals

A. Thermophilic Campylobacter in Gallus gallus

Monitoring system

Sampling strategy

In 2008 was introduced baseline survey carried out according to Commission Decision No. 2007/516/EC.

Sample collection in broiler slaughter houses was specified by weeks of the study period in 2008 in the Timetables according to General Veterinary Officer Guidelines. Samples were collected by official veterinarians and reffered to designated laboratories.
Direct culture on a selective medium suitable for Campylobacter spp. was used. The plates were incubated at 41.5 +/- 1C in a micro-aerobic atmosphere for at least 48 +/-2h. Isolation and confirmation of Campylobacter were carried out according to the standart ISO method. The Campylobacter spp. isolates were speciated using a molecular method based on the PCR technique.

In 2010 and 2009 there was no programme or survey at broilers farm. Information concernig to cattle origin from NRL, which carried out some reaserch.

Methods of sampling (description of sampling techniques)

Before slaughter at farm

2008 - The baseline survey for the presence of Campylobacter spp. in broiler flocks comprised of 420 samples taken from 420 flocks originating from 363 holdings.

At slaughter

2008- The survey for the presence of Campylobacter spp. in broiler carcasses covered 420 samples obtained from 157 slaughterhouses. The sampling based on a random selection, both regarding slaughter houses, sampling days each month and which batches were sampled on selected sampling day.
For bacteriological examination the intact caeca from 10 birds were taken at the time of evisceration, pooled and transported to the laboratory within 24 h.

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

Generally, in Poland 79% of the positive samples were found in broiler flocks. The highest number of positive holdings was detected in the following voivodeships: warminsko-mazurskie (100%), pomorskie (95%) and zachodniopomorskie (91%),whereas the lowest number of positive samples were detected in dolnoslaskie (50%), lubuskie (67%) and mazowieckie (71%)voivodeships.
In case slaughterhouses, the highest number of positive samples was found in pomorskie (96%), zachodniopomorskie (92%) and podkarpackie voivodeships, whereas the lowest number of positive samples was detected in dolnoslaskie (30%), podlaskie (67%) and opolskie (70%) voivodeships.
Seasonality of Campylobacter in broiler flocks was observed, although there was no statistically significant differences in the respective months sampled. Most of the izolates were C.jejuni.

Table Campylobacter in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Units tested	Total units positive for Campylobacter	C. coli	C. jejuni	C. lari
Cattle (bovine animals)	RVL	Selective sampling	Industry sampling	animal sample > nasal swab		Animal	19	0			
Cattle (bovine animals)	RVL	Census	Industry sampling	animal sample > organ/tissue		Animal	484	0			
Cattle (bovine animals)	RVL	Unspecified	Industry sampling	animal sample > organ/tissue		Animal	40	0			
Wild animals	RVL	Objective sampling	Industry sampling			Animal	1	0			
Wild animals	RVL	Unspecified	Industry sampling			Animal	1	0			

	C. upsaliensis	Thermophilic Campylobacter spp., unspecified
Cattle (bovine animals)		
Cattle (bovine animals)		
Cattle (bovine animals)		
Wild animals		
Wild animals		

2.2.5 Antimicrobial resistance in Campylobacter isolates

A. Antimicrobial resistance in Campylobacter jejuni and coli in cattle

Additional information

Campylobacter jejuni in bovine animals- quantitative data:
fully sensitive N= 3
resistant to 1 antimicrobials N=2
resistant to 2 antimicrobials N=1
resistant to 3 antimicrobials N=2
resistant to 4 antimicrobials and more N=0

Campylobacter coli in bovine animals- quantitative data:
resistant to 4 antimicrobials N=2

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

Additional information

There was no antimicrobial susceptibility testing of Campylobacter in meat from bovine.

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

Additional information

There was no antomicrobial susceptibility testing of Campylobacter in foodstuff derived from pigs.

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

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

In 2010 and 2009 AMR in meat from broilers was tested.

Additional information

In 2008 there was no antimicrobial resistence tested in foodstuff derived from poultry.

E. Antimicrobial resistance in Campylobacter jejuni and coli in pigs

Additional information

Campylobacter jejuni in pigs -quantitative data:
fully sensitive N=0
resistant to 1 antimicrobials N=1
resistant to 2 antimicrobials N=1
resistant to 3 antimicrobials N=1
resistant to 4 antimicrobials and more N=0

Campylobacter coli in pigs -quantitative data:
fully sensitive N=2
resistant to 1 antimicrobials N=1
resistant to 2 antimicrobials N=4
resistant to 3 antimicrobials N=5
resistant to 4 antimicrobials N= 8
resistant to > 4 antimicrobials N=2

F. Antimicrobial resistance in Campylobacter jejuni and coli in poultry

Sampling strategy used in monitoring

Type of specimen taken

2008- Samples were taken from broiler in accordance with Commission Decision 2007/516/EC.

Methods of sampling (description of sampling techniques)

Methods were described in Commisssion Decision 2007/516.

Laboratory methodology used for identification of the microbial isolates

2008- Bacteriological analyses of the broiler carcasses for the presence and number of Campylobacter spp. were carried out according to the standart ISO method. The Campylobacter spp. isolates were speciated using a molecular method based on the PCR technique.
Eight speciated Campylobacter isolates were also sent to the Community Reference Laboratory dor Campylobacter for confirmation of the results obtained in NRL and speciation.

Additional information

2010
Campylobacter jejuni in broilers- quantitative data:
fully sensitive N= 56
resistant to 1 antimicrobials N=22
resistant to 2 antimicrobials N=106
resistant to 3 antimicrobials N=55
resistant to 4 antimicrobials N=18
resistant to >4 antimicrobials N=0

Campylobacter coli in broilers- quantitative data:
fully sensitive N= 25
resistant to 1 antimicrobials N=11
resistant to 2 antimicrobials N=42
resistant to 3 antimicrobials N=90
resistant to 4 antimicrobials N=54
resistant to >4 antimicrobials N=9

Campylobacter jejuni in turkeys- quantitative data:
fully sensitive N= 3
resistant to 1 antimicrobials N=1
resistant to 2 antimicrobials N=4
resistant to 3 antimicrobials N=0
resistant to 4 antimicrobials N=0
resistant to >4 antimicrobials N=0

Campylobacter coli in turkeys- quantitative data:
fully sensitive N= 0
resistant to 1 antimicrobials N=0
resistant to 2 antimicrobials N=2
resistant to 3 antimicrobials N=6
resistant to 4 antimicrobials N=6
resistant to >4 antimicrobials N=1

Table Antimicrobial susceptibility testing of Campylobacter in Meat from broilers (Gallus gallus)

Campylobacter	C. coli		C. jejuni		Campylobacter spp., unspecified	
Isolates out of a monitoring program (yes/no)	yes		yes			
Number of isolates available in the laboratory	157		174			
Antimicrobials:	N	n	N	n	N	n
Aminoglycosides - Gentamicin	157	0	174	0		
Fluoroquinolones - Ciprofloxacin	157	129	174	157		
Macrolides - Erythromycin	157	1	174	0		
Tetracyclines - Tetracycline	157	111	174	99		
Fully sensitive	22	0	14	0		
Resistant to 1 antimicrobial	18	0	61	0		
Resistant to 2 antimicrobials	73	0	66	0		
Resistant to 3 antimicrobials	43	0	33	0		
Resistant to 4 antimicrobials	1	0	0	0		
Resistant to >4 antimicrobials	0	0	0	0		
Aminoglycosides - Streptomycin	157	56	174	36		

Table Antimicrobial susceptibility testing of C. jejuni in Meat from broilers (Gallus gallus) - carcass (at slaughterhouse) - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

C. jejuni	Meat from broilers (Gallus gallus) - carcase (at slaughterhouse)																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	153																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	1	153	0					34	81	38															
Aminoglycosides - Streptomycin	2	153	34								109	10	2		32										
Fluoroquinolones - Ciprofloxacin	1	153	136				13	3	1			1	135												
Quinolones - Nalidixic acid		153	153									6	10	2		17	118								
Tetracyclines - Tetracycline	2	153	89						51	11	1	1	1	2	86										
Macrolides - Erythromycin	4	153	0							128	23	2													

Footnote:

fully sensitive 5
resistant to 1 antimicrobials 14
resistant to 2 antimicrobials 4
resistant to 3 antimicrobials 46
resistant to 4 antimicrobials 31
resistant to >4 antimicrobials 0

Table Antimicrobial susceptibility testing of C. coli in Meat from broilers (Gallus gallus) - fresh - at slaughterhouse - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

C. coli	Meat from broilers (Gallus gallus) - fresh - at slaughterhouse																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	112																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	112	0						8	86	17	1													
Aminoglycosides - Streptomycin	4	112	46								13	45	8	1	45										
Fluoroquinolones - Ciprofloxacin	1	112	101				7	3	1			1	100												
Quinolones - Nalidixic acid		112	112										8	3		1	100								
Tetracyclines - Tetracycline	2	112	84						21	7					84										
Macrolides - Erythromycin	16	112	1							89	14	5	3			1									

Table Antimicrobial susceptibility testing of C. jejuni in Meat from pig - at slaughterhouse - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

C. jejuni	Meat from pig - at slaughterhouse																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	4																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	1	4	0						1	3															
Aminoglycosides - Streptomycin	2	4	0								1	3													
Fluoroquinolones - Ciprofloxacin	1	4	1					2			1		1												
Quinolones - Nalidixic acid		4	4											2	1		1								
Tetracyclines - Tetracycline	2	4	1							2		1	1												
Macrolides - Erythromycin	4	4	0							4															

Footnote:

fresh meat

fully sensitive 2
resistant to 1 antimicrobials 1
resistant to 2 antimicrobials 1
resistant to 3 antimicrobials 0
resistant to 4 antimicrobials 0
resistant to >4 antimicrobials 0

Table Antimicrobial susceptibility testing of C. coli in Meat from pig - fresh - at slaughterhouse - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

C. coli	Meat from pig - fresh - at slaughterhouse																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	9																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	9	0							5	4														
Aminoglycosides - Streptomycin	4	9	7									1	1		7										
Fluoroquinolones - Ciprofloxacin	1	9	5				3	1					5												
Quinolones - Nalidixic acid		9	9										3	1			5								
Tetracyclines - Tetracycline	2	9	7						1		1				7										
Macrolides - Erythromycin	16	9	1							4	3	1				1									

Footnote:

fully sensitive 0
resistant to 1 antimicrobials 1
resistant to 2 antimicrobials 3
resistant to 3 antimicrobials 2
resistant to 4 antimicrobials 3
resistant to >4 antimicrobials 0

Table Antimicrobial susceptibility testing of C. coli in Meat from bovine animals - fresh - at slaughterhouse - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

C. coli	Meat from bovine animals - fresh - at slaughterhouse																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	2																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	2	0							1	1														
Aminoglycosides - Streptomycin	4	2	1									1			1										
Fluoroquinolones - Ciprofloxacin	1	2	2										2												
Quinolones - Nalidixic acid		2	2														2								
Tetracyclines - Tetracycline	2	2	1							1					1										
Macrolides - Erythromycin	16	2	0							2															

Footnote:

fully sensitive 0
resistant to 1 antimicrobials 0
resistant to 2 antimicrobials 0
resistant to 3 antimicrobials 2
resistant to 4 antimicrobials 0
resistant to >4 antimicrobials 0

Table Antimicrobial susceptibility testing of C. jejuni in Meat from bovine animals - fresh - at slaughterhouse - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

C. jejuni	Meat from bovine animals - fresh - at slaughterhouse																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	2																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	1	2	0					1		1															
Aminoglycosides - Streptomycin	2	2	0								2														
Fluoroquinolones - Ciprofloxacin	1	2	1				1						1												
Quinolones - Nalidixic acid		2	2										1				1								
Tetracyclines - Tetracycline	2	2	1						1						1										
Macrolides - Erythromycin	4	2	0							2															

Footnote:

fully sensitive 1
resistant to 1 antimicrobials 0
resistant to 2 antimicrobials 0
resistant to 3 antimicrobials 1
resistant to 4 antimicrobials 0
resistant to >4 antimicrobials 0

Table Antimicrobial susceptibility testing of C. jejuni in Meat from turkey - carcass - at slaughterhouse - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

C. jejuni	Meat from turkey - carcase - at slaughterhouse																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	1																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	1	1	0						1																
Aminoglycosides - Streptomycin	2	1	0								1														
Fluoroquinolones - Ciprofloxacin	1	1	1										1												
Quinolones - Nalidixic acid		1	1														1								
Tetracyclines - Tetracycline	2	1	0						1																
Macrolides - Erythromycin	4	1	0							1															

Footnote:

fully sensitive 0
resistant to 1 antimicrobials 0
resistant to 2 antimicrobials 1
resistant to 3 antimicrobials 0
resistant to 4 antimicrobials 0
resistant to >4 antimicrobials 0

Table Antimicrobial susceptibility testing of C. coli in Meat from turkey - carcass - at slaughterhouse - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

C. coli	Meat from turkey - carcase - at slaughterhouse																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	5																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	5	0							5															
Aminoglycosides - Streptomycin	4	5	2								1	1	1		2										
Fluoroquinolones - Ciprofloxacin	1	5	4				1						4												
Quinolones - Nalidixic acid		5	5										1				4								
Tetracyclines - Tetracycline	2	5	2						3						2										

Footnote:

fully sensitive 1
resistant to 1 antimicrobials 0
resistant to 2 antimicrobials 2
resistant to 3 antimicrobials 0
resistant to 4 antimicrobials 1
resistant to >4 antimicrobials 1

Table Antimicrobial susceptibility testing of C. coli in Meat from broilers (Gallus gallus) - fresh - at retail - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

C. coli	Meat from broilers (Gallus gallus) - fresh - at retail																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	45																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	45	0						7	33	3	2													
Aminoglycosides - Streptomycin	4	45	10								7	25	3		10										
Fluoroquinolones - Ciprofloxacin	1	45	28				16		1				28												
Quinolones - Nalidixic acid		45	45									1	13	3		1	27								
Tetracyclines - Tetracycline	2	45	27						16	1	1				27										
Macrolides - Erythromycin	16	45	0							39	4	1			1										

Footnote:

fully sensitive 17
resistant to 1 antimicrobials 0
resistant to 2 antimicrobials 1
resistant to 3 antimicrobials 18
resistant to 4 antimicrobials 9
resistant to >4 antimicrobials 0

Table Antimicrobial susceptibility testing of C. coli in Meat from geese - carcass - at slaughterhouse - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

C. coli	Meat from geese - carcase - at slaughterhouse																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	1																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	1	0							1															
Aminoglycosides - Streptomycin	4	1	0									1													
Fluoroquinolones - Ciprofloxacin	1	1	0					1																	
Quinolones - Nalidixic acid		1	1										1												
Tetracyclines - Tetracycline	2	1	0						1																
Macrolides - Erythromycin	16	1	0							1															

Footnote:

fully sensitive 1
resistant to 1 antimicrobials 0
resistant to 2 antimicrobials 0
resistant to 3 antimicrobials 0
resistant to 4 antimicrobials 0
resistant to >4 antimicrobials 0

Table Antimicrobial susceptibility testing of C. jejuni in Meat from broilers (Gallus gallus) - fresh - at retail - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

C. jejuni	Meat from broilers (Gallus gallus) - fresh - at retail																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	21																							
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	1	21	0					10	10	1														
Aminoglycosides - Streptomycin	2	21	2								19				2									
Fluoroquinolones - Ciprofloxacin	1	21	21									1	7	13										
Quinolones - Nalidixic acid		21	21													3	18							
Tetracyclines - Tetracycline	2	21	10						9	1		1	3		7									
Macrolides - Erythromycin	4	21	0							19	2													
Resistant to 2 antimicrobials		21	21							19	2													

Footnote:

fully sensitive 0
resistant to 1 antimicrobials 0
resistant to 2 antimicrobials 11
resistant to 3 antimicrobials 8
resistant to 4 antimicrobials 2
resistant to >4 antimicrobials 0

Table Cut-off values used for antimicrobial susceptibility testing of C. coli in Animals

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		2	
	Streptomycin		4	
Fluoroquinolones	Ciprofloxacin		1	
Macrolides	Erythromycin		16	
Tetracyclines	Tetracycline		2	

Table Cut-off values used for antimicrobial susceptibility testing of C. coli in Feed

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		2	
	Streptomycin		4	
Fluoroquinolones	Ciprofloxacin		1	
Macrolides	Erythromycin		16	
Tetracyclines	Tetracycline		2	

Table Cut-off values used for antimicrobial susceptibility testing of C. coli in Food

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		2	
	Streptomycin		4	
Fluoroquinolones	Ciprofloxacin		1	
Macrolides	Erythromycin		16	
Tetracyclines	Tetracycline		2	

Table Cut-off values used for antimicrobial susceptibility testing of C. jejuni in Animals

Test Method Used	Standard methods used for testing

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

Table Cut-off values used for antimicrobial susceptibility testing of C. jejuni in Feed

Test Method Used	Standard methods used for testing

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

Table Cut-off values used for antimicrobial susceptibility testing of C. jejuni in Food

Test Method Used	Standard methods used for testing

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

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

Listeriosis is obligatory registrated disease as well as appears on the list zoonoses and zoonotic agents subject to monitoring according to the Act from 11 March 2004 on animal health protection and control of animal diseases.
The detailed scope of the method and date of the occurrence of information about listeriosis sets the regulation on the scope, method and timing ofto provide information on the occurrence of infectious diseases subject to control and registration , and the results of the monitoring of zoonoses and zoonotic agents and related antimicrobial resistance.

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

There is no monitoring programme for Listeria spp. realized in Poland. In previuos years the samplings were carried out as a part of the official controls and at the initiative of the operators mostly in food. Positive samples were detected in various categories of meat, and dairy products.
In 2008 Listeria monocytogenes was tested in milk and dairy products and also in other food.
6206 samples of milk and dairy products were tested, and L. monocytogenes was found in 275 samples. Most of Listeria was detected in cheeses made from sheep pasteurised milk (100 cases).
Besides in other food L.monocytogenes was detected in 1234 samples from 18 314 tested. Most contamination were meat products from broiler meat cooked and ready-to-eat (18,5%) as well as meat products from pig cooked and ready-to-eat (7,78%). In meat from bovines and products thereof, Listeria was found only in 8 samples from 282 tested.
In 2009, has been tested 2418 samples of milk and dairy products, and only 29 samples were positive. So prevalence of Listeria in this products took away 1,2%. Besides, from poducts from other food 160 289 samples were tested. Animals are very rare examined for Listeria. In 2009 was confirmed only 1 cases in fallow deer.
In 2010 listeriosis were in cattle, goats, horse & fallow deer and chinchillas.

Additional information

In addition in 2009 Listeria was tested in:
- flavouring- processing plant- official sampling- 25g - 8 tested units, there was no positive results,

2.3.2 Listeriosis in humans

A. Listeriosis in humans

Reporting system in place for the human cases

Information was direct to ECDC.

2.3.3 Listeria in foodstuffs

Table Listeria monocytogenes in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance	RVL	Objective sampling	Industry sampling	food sample > milk		Single	25ml	2	0	2	
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample > milk		Single	10g	7	0	3	
Milk, cows' - pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > meat		Single	10ml	119	0	63	
Milk, goats' - pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample > milk		Single	25ml	5	0	5	
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	10g	64	0	64	
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	806	0	615	
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance	NRL	Unspecified	Not applicable	food sample		Single	25g	10	0	10	
Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	22	0	7	
Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - at retail - Surveillance	NRL	Unspecified	Not applicable	food sample		Single	25g	25	0	25	

Table Listeria monocytogenes in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	50	0		
Cheeses made from goats' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	25g	15	0	15	
Cheeses made from goats' milk - hard - made from pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	25g	5	0	5	
Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance	NRL	Unspecified	Not applicable	food sample		Single	25g	36	0	36	
Cheeses made from sheep's milk - hard - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	25g	10	1	10	1
Cheeses made from sheep's milk - hard - made from pasteurised milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	25g	6	0	6	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	125g	10	0	10	
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	10g	161	0	101	0
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at retail - Surveillance	NRL	Unspecified	Not applicable	food sample		Single	25g	20	0	20	

Table Listeria monocytogenes in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	125g	17	0	17	
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	10g	154	0	48	
Cheeses made from cows' milk - fresh	private lab	Unspecified	Official and industry sampling	food sample		Single	25g	194	0	159	
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	172	0	172	
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	2548	0	2508	
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	25g	134	0	134	
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	RVL	Suspect sampling	Official sampling	food sample		Single	125g	3	1	3	1
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	395	3	365	3
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	125g	18	0	18	

Table Listeria monocytogenes in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	private lab	Census	Not applicable	food sample		Single	25g	5	0		
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	10g	665	0	498	
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	10g	2	0		
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance [1)]	RVL	Unspecified	Industry sampling	food sample		Single	25g	10	0	10	
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	private lab	Objective sampling	Industry sampling	food sample		Single	250g	89	0	80	
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	RVL	Suspect sampling	Official sampling	food sample		Single	125g	3	0	3	
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	25g	150	0	80	
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	private lab	Census	HACCP and owns check	food sample		Single	10g	12	0		
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	61	0	51	

Table Listeria monocytogenes in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	10g	36	0	25	
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	25g	70	0	70	
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	125g	33	0	33	
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	10g	195	0		
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance [2)]	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	55	0	55	
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance [3)]	RVL	Unspecified	Industry sampling	food sample		Single	25g	5	0	5	
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	1	0	1	
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	5	0	5	
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	164	0	134	

Table Listeria monocytogenes in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Cheeses made from goats' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	5	0	5	
Cheeses made from goats' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	2	0	2	
Cheeses made from sheep's milk - fresh	private lab	Unspecified	Official and industry sampling	food sample		Single	25g	5	0	5	
Cheeses made from sheep's milk - hard - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Batch	125g	7	0	7	
Cheeses made from sheep's milk - hard - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Batch	125g	2	0	2	
Cheeses made from sheep's milk - hard - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Suspect sampling	Official sampling	food sample		Single	25g	1	0	1	
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	NRL	Unspecified	Official and industry sampling	food sample		Single	25g	16	0	16	
Cheeses, made from unspecified milk or other animal milk - spreadable	private lab	Unspecified	Official and industry sampling	food sample		Single	25g	98	0	83	
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	369	0	324	
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	491	0	255	

Table Listeria monocytogenes in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance	private lab	Objective sampling	Industry sampling	food sample		Single	250g	1	0	1	
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	91	0	91	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	69	0	59	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	15	0	15	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	15	0	10	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	52	0	52	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample		Single	25g	10	0	10	
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance [4)]	RVL	Unspecified	Industry sampling	food sample		Single	25g	5	0	5	
Dairy products (excluding cheeses) - cream - made from pasteurised milk (cream 30%)	RVL	Census	Official sampling	food sample		Single	25ml	5	0	5	
Dairy products (excluding cheeses) - cream - made from pasteurised milk (cream 30%)	private lab	Unspecified	Official and industry sampling	food sample		Single	25ml	35	0	35	

Table Listeria monocytogenes in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Dairy products (excluding cheeses) - cream - made from pasteurised milk (cream 30%)	RVL	Objective sampling	Official and industry sampling	food sample		Single	25ml	52	0	52	
Dairy products (excluding cheeses) - cream - made from pasteurised milk (cream 30%)	RVL	Unspecified	Official and industry sampling	food sample		Single	25ml	45	0	45	
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	55	0	40	
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample		Single	10g	5	0		
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	155	0	120	
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance [5)]	RVL	Unspecified	Industry sampling	food sample		Single	25g	5	0	5	
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	25g	1	0	1	
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	private lab	Objective sampling	Industry sampling	food sample		Single	200g	75	0	75	
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	252	0	215	
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance [6)]	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	31	0	31	

Table Listeria monocytogenes in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	10	0	10	
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	10g	10	0		
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Suspect sampling	Official sampling	food sample		Single	125g	1	0	1	
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVI	Unspecified	HACCP and owns check	food sample		Single	25ml	10	0	10	
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	62	0	47	
Dairy products (excluding cheeses) - dairy desserts [7)]	RVL	Objective sampling	Official sampling	food sample		Single	25g	5	0	5	
Dairy products (excluding cheeses) - dairy desserts	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	129	0	122	
Dairy products (excluding cheeses) - dairy desserts	RVL	Objective sampling	Industry sampling	food sample		Single	10g	5	0		
Dairy products (excluding cheeses) - dairy products, not specified [8)]	RVL	Objective sampling	Industry sampling	food sample		Single	25g	20	0	20	
Dairy products (excluding cheeses) - dairy products, not specified	RVL	Objective sampling	Official and industry sampling	food sample		Single	10g	369	0	283	
Dairy products (excluding cheeses) - dairy products, not specified	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	35	0	35	

Table Listeria monocytogenes in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Dairy products (excluding cheeses) - dairy products, not specified	RVL	Census	Official and industry sampling	food sample		Single	25g	25	0	25	
Dairy products (excluding cheeses) - dairy products, not specified	private lab	Unspecified	Official and industry sampling	food sample		Single	25g	71	0	71	
Dairy products (excluding cheeses) - dairy products, not specified	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	160	0	155	
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	private lab	Unspecified	Official and industry sampling	food sample		Single	25g	634	0	399	
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	125g	14	0	14	
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Batch	125g	4	0	4	
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	10g	71	0		
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	111	0	111	
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	375	0	313	
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance [9)]	RVL	Objective sampling	Industry sampling	food sample		Single	25g	5	0	5	

Table Listeria monocytogenes in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	49	0	45	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	176	0	176	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	10g	5	0	5	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	125g	3	0	3	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	35	0	10	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	private lab	Census	HACCP and owns check	food sample		Single	25g	780	0	780	
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	119	0		
Dairy products (excluding cheeses) - milk powder and whey powder - at retail - Surveillance	NRL	Unspecified	Not applicable	food sample		Single	25g	11	0	11	
Milk from other animal species or unspecified - UHT milk	RVL	Unspecified	Official sampling	food sample > milk		Single	10ml	5	0		
Milk from other animal species or unspecified - UHT milk	RVL	Objective sampling	Official and industry sampling	food sample > milk		Single	25ml	29	0	29	

Table Listeria monocytogenes in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Milk from other animal species or unspecified - UHT milk	RVL	Objective sampling	Official and industry sampling	food sample > milk		Single	25ml	80	0	80	
Milk, cows' - pasteurised milk - at processing plant - Surveillance	private lab	Objective sampling	Industry sampling	food sample > milk		Single	25ml	10	0		
Milk, cows' - pasteurised milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample > milk		Single	125ml	15	0	15	
Milk, cows' - pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample > milk		Single	25ml	60	0	60	
Milk, cows' - pasteurised milk - at processing plant - Surveillance	private lab	Census	HACCP and owns check	food sample > milk		Single	25ml	20	0	15	
Milk, cows' - pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > milk		Single	25ml	222	0	202	
Milk, cows' - pasteurised milk - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample > milk		Single	25ml	40	0	40	
Milk, cows' - pasteurised milk - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample > milk		Single	25ml	140	0	140	
Milk, cows' - pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample > milk		Single	10ml	156	0		
Milk, cows' - pasteurised milk - at processing plant - Surveillance [10)]	RVL	Objective sampling	Official and industry sampling	food sample > milk		Single	25ml	20	0	20	
Milk, cows' - pasteurised milk - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample > milk		Single	25ml	50	0	30	
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance [11)]	RVL	Objective sampling	Industry sampling	food sample > milk		Single	25ml	3	0	3	

Table Listeria monocytogenes in milk and dairy products

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance	RVL	Census	Official sampling	food sample > milk		Single	25g	5	0	5	
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance	RVL	Unspecified	Industry sampling	food sample > milk		Single	25ml	5	0	5	
Milk, cows' - raw milk - intended for direct human consumption - at retail - Surveillance	NRL	Unspecified	Not applicable	food sample > milk		Single	25ml	2	0	2	
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample > milk		Single	25ml	27	0	27	
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample > milk		Single	25ml	5	0	2	
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > milk		Single	25ml	16	0	16	
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample > milk		Single	25ml	136	0	121	
Milk, goats' - pasteurised milk - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample > milk		Single	25ml	1	0	1	

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance			

Table Listeria monocytogenes in milk and dairy products

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	4		
Milk, cows' - pasteurised milk - at processing plant - Surveillance	56		
Milk, goats' - pasteurised milk - at processing plant - Surveillance			
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance			
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	191		
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance			
Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - at processing plant - Surveillance	15		
Cheeses made from cows' milk - hard - made from raw or low heat-treated milk - at retail - Surveillance			
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	50		
Cheeses made from goats' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance			

Table Listeria monocytogenes in milk and dairy products

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Cheeses made from goats' milk - hard - made from pasteurised milk - at processing plant - Surveillance			
Cheeses made from sheep's milk - soft and semi-soft - made from pasteurised milk - at retail - Surveillance			
Cheeses made from sheep's milk - hard - made from raw or low heat-treated milk - at processing plant - Surveillance			
Cheeses made from sheep's milk - hard - made from pasteurised milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance	60	0	0
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at retail - Surveillance			
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	106		
Cheeses made from cows' milk - fresh	35		

Table Listeria monocytogenes in milk and dairy products

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance			
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	40		
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance			
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance			
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	30		
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance			
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	5		
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	167		
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	2		

Table Listeria monocytogenes in milk and dairy products

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance [1)]			
Cheeses made from cows' milk - hard - made from pasteurised milk - at processing plant - Surveillance	9		
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance			
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	70		
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	12		
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	10		
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	11		
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance			
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance			

Table Listeria monocytogenes in milk and dairy products

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	195		
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance [2)]			
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance [3)]			
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance			
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance			
Cheeses made from cows' milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance	30		
Cheeses made from goats' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance			
Cheeses made from goats' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance			
Cheeses made from sheep's milk - fresh			
Cheeses made from sheep's milk - hard - made from raw or low heat-treated milk - at processing plant - Surveillance			

Table Listeria monocytogenes in milk and dairy products

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Cheeses made from sheep's milk - hard - made from raw or low heat-treated milk - at processing plant - Surveillance			
Cheeses made from sheep's milk - hard - made from raw or low heat-treated milk - at processing plant - Surveillance			
Cheeses made from sheep's milk - soft and semi-soft - made from raw or low heat-treated milk - at processing plant - Surveillance			
Cheeses, made from unspecified milk or other animal milk - spreadable	15		
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance	45		
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance	236		
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - butter - made from pasteurised milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	10		

Table Listeria monocytogenes in milk and dairy products

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance	5		
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - butter - made from raw or low heat-treated milk - at processing plant - Surveillance [4)]			
Dairy products (excluding cheeses) - cream - made from pasteurised milk (cream 30%)			
Dairy products (excluding cheeses) - cream - made from pasteurised milk (cream 30%)			
Dairy products (excluding cheeses) - cream - made from pasteurised milk (cream 30%)			
Dairy products (excluding cheeses) - cream - made from pasteurised milk (cream 30%)			
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	15		

Table Listeria monocytogenes in milk and dairy products

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	5		
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	35		
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance [5)]			
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance	37		
Dairy products (excluding cheeses) - cream - made from pasteurised milk - at processing plant - Surveillance [6)]			
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	10		

Table Listeria monocytogenes in milk and dairy products

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - cream - made from raw or low heat-treated milk - at processing plant - Surveillance	15		
Dairy products (excluding cheeses) - dairy desserts [7)]			
Dairy products (excluding cheeses) - dairy desserts	7		
Dairy products (excluding cheeses) - dairy desserts	5		
Dairy products (excluding cheeses) - dairy products, not specified [8)]			
Dairy products (excluding cheeses) - dairy products, not specified	86		
Dairy products (excluding cheeses) - dairy products, not specified			
Dairy products (excluding cheeses) - dairy products, not specified			
Dairy products (excluding cheeses) - dairy products, not specified			

Table Listeria monocytogenes in milk and dairy products

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Dairy products (excluding cheeses) - dairy products, not specified	5		
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	235		
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance			
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance			
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	71		
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance			
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance	62		
Dairy products (excluding cheeses) - fermented dairy products - at processing plant - Surveillance [9)]			
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	4		

Table Listeria monocytogenes in milk and dairy products

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	25		
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance			
Dairy products (excluding cheeses) - ice-cream - made from raw or low heat-treated milk - at processing plant - Surveillance	119		
Dairy products (excluding cheeses) - milk powder and whey powder - at retail - Surveillance			
Milk from other animal species or unspecified - UHT milk	5		
Milk from other animal species or unspecified - UHT milk			
Milk from other animal species or unspecified - UHT milk			

Table Listeria monocytogenes in milk and dairy products

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Milk, cows' - pasteurised milk - at processing plant - Surveillance	10		
Milk, cows' - pasteurised milk - at processing plant - Surveillance			
Milk, cows' - pasteurised milk - at processing plant - Surveillance			
Milk, cows' - pasteurised milk - at processing plant - Surveillance	5		
Milk, cows' - pasteurised milk - at processing plant - Surveillance	21		
Milk, cows' - pasteurised milk - at processing plant - Surveillance			
Milk, cows' - pasteurised milk - at processing plant - Surveillance			
Milk, cows' - pasteurised milk - at processing plant - Surveillance	156		
Milk, cows' - pasteurised milk - at processing plant - Surveillance [10)]			
Milk, cows' - pasteurised milk - at processing plant - Surveillance	20		
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance [11)]			
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance			

Table Listeria monocytogenes in milk and dairy products

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Milk, cows' - raw milk - intended for direct human consumption - at farm - Surveillance			
Milk, cows' - raw milk - intended for direct human consumption - at retail - Surveillance			
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance			
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	3		
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance			
Milk, cows' - raw milk for manufacture - intended for manufacture of raw or low heat-treated products - at processing plant - Surveillance	15		
Milk, goats' - pasteurised milk - at processing plant - Surveillance			

Comments:

[1)] RT-PCR

[2)] PCR

[3)] RT-PCR

[4)] RT-PCR

[5)] PCR

Table Listeria monocytogenes in milk and dairy products

Comments:

[6)] PCR

[7)] PCR

[8)] PCR

[9)] PCR

[10)] PCR

[11)] PCR

Table Listeria monocytogenes in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > meat		Single	10g	15	0		
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample		Single	25g	84	0	41	0
Meat from pig - fresh - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample > blood		Single	25g	457	4	447	4
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	private lab	Census	Industry sampling	food sample		Single	25g	307	1	129	1
Meat from pig - meat products - cooked, ready-to-eat - at retail - Surveillance	RVL	Unspecified	Official sampling	food sample		Single	20g	1	0	0	0
Meat from bovine animals - fresh - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample		Single	25g	23	0	13	0
Meat from bovine animals - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample		Single	25g	51	1	51	1
Fish - smoked - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	10176	688	7863	640
Crustaceans - unspecified - cooked - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	264	0	264	0
Crustaceans - unspecified - cooked - at retail - Surveillance						---					
Molluscan shellfish - cooked - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	5	0	5	0

Table Listeria monocytogenes in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Crustaceans - unspecified - cooked - at processing plant - Surveillance	private lab	Unspecified	Not applicable	food sample		Single	25g	268	1	268	1
Crustaceans - unspecified - cooked - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	6	0	6	0
Crustaceans - unspecified - cooked - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample > meat		Single	25g	10	0	10	0
Egg products - at processing plant - Surveillance	private lab	Census	Industry sampling	food sample		Single	25g	15	0	3	
Egg products - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	10/25g	20	0	10	
Egg products - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample		Single	20g	5	0		
Fish - smoked - at processing plant - Surveillance	RVL	Census	Official and industry sampling	food sample		Single	25g	159	2	159	2
Fish - smoked - at processing plant - Surveillance [1)]	private lab	Census	Not applicable	food sample		Single	25g	1076	135	631	132
Fish - smoked - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	125	9	55	9
Fish - smoked - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample		Single	25g	116	0	20	
Fish - smoked - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	289	35	234	35
Fish - smoked - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	10g	83	0	22	
Fish - smoked - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	10	5	0		

Table Listeria monocytogenes in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Fish - smoked - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	125g	5	0	5	
Fishery products, unspecified - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	10g	5	0	5	0
Fishery products, unspecified - at processing plant - Surveillance [2)]	RVL	Census	Official sampling	food sample		Single	25g	5	0	5	0
Fishery products, unspecified - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	55	0	55	0
Fishery products, unspecified - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	5	0	5	0
Fishery products, unspecified - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	114	15	45	14
Fishery products, unspecified - at processing plant - Surveillance [3)]	RVL	Unspecified	Industry sampling	food sample		Single	25g	115	14	115	14
Meat from bovine animals - fresh - at processing plant - Surveillance [4)]	RVL	Unspecified	Industry sampling	food sample > meat		Single	25g	10	0	10	
Meat from bovine animals - fresh - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > meat		Single	10g	14	0	14	
Meat from bovine animals - fresh - at processing plant - Surveillance	private lab	Census	Industry sampling	food sample > meat		Single	25g	95	6	90	3
Meat from bovine animals - fresh - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > meat		Single	25g	40	1	5	0
Meat from bovine animals - fresh - at processing plant - Surveillance	private lab	Unspecified	Not applicable	food sample > meat		Single	25g	117	37	117	37

Table Listeria monocytogenes in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Meat from bovine animals - fresh - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	10	0	5	0
Meat from bovine animals - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	5	0	0	0
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > meat		Single	25g	20	2	20	2
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample > meat		Single	25g	10	0	10	
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance [5)]	RVL	Objective sampling	Official sampling	food sample > meat		Single	25g	20	12	20	12
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample > meat		Single	25g	15	0	15	
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample > meat		Single	10g	15	0		
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	private lab	Census	HACCP and owns check	food sample > meat		Single	25g	185	0	101	0
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	private lab	Census	Industry sampling	food sample		Single	25g	64	6	55	5
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	private lab	Objective sampling	Industry sampling	food sample > meat		Single	25g	402	72	402	72
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample > milk		Single	10g	121	0	26	0

Table Listeria monocytogenes in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	10	0	10	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	125g	23	2	23	2
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	25g	3	0	3	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	35	0	35	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Census	Official sampling	food sample > milk		Single	10g	1	0	0	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	10g	256	0	55	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	10g	43	5	35	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	10g	10	0	0	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance [6)]	RVL	Objective sampling	Official sampling	food sample		Single	25g	35	0	35	0

Table Listeria monocytogenes in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	77	0	11	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample		Single	25g	25	0	25	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	25	0	0	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample > carcass swabs		Single	10g	60	0	0	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Batch	125g	3	0	3	0
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	70	38	70	38
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance [7)]	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	30	22	30	22
Meat from pig - fresh - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample > meat		Single	25g	213	0	213	0
Meat from pig - fresh - at processing plant - Surveillance	private lab	Objective sampling	Industry sampling	food sample > meat		Single	25g	159	21	117	21
Meat from pig - fresh - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample > meat		Single	25g	95	11	95	11

Table Listeria monocytogenes in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Meat from pig - fresh - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > meat		Single	10g	1	1	1	1
Meat from pig - fresh - at processing plant - Surveillance [8)]	RVL	Objective sampling	Official sampling	food sample > meat		Single	25g	25	0	25	0
Meat from pig - fresh - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample > meat		Single	25g	10	2	10	2
Meat from pig - fresh - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > meat		Single	25g	5	0	5	0
Meat from pig - fresh - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample > neck skin		Single	10g	8	0	0	0
Meat from pig - fresh - at processing plant - Surveillance	private lab	Objective sampling	HACCP and owns check	food sample > meat		Single	25g	832	0	832	0
Meat from pig - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	10g	15	0	0	0
Meat from pig - meat products - cooked ham - at processing plant - Surveillance	RVL	Suspect sampling	Official sampling	food sample		Single	10g	5	0	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	125g	56	7	56	7
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	10g	308	0	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	100g	1	0	1	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	25g	827	17	696	15

Table Listeria monocytogenes in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	25g	3720	108	2772	84
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	125g	505	41	505	41
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample		Single	25g	1778	42	1117	42
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	25g	528	28	528	28
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample > carcass swabs		Single	25g	2049	38	27	33
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	75g	43	0	37	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance [9)]	RVL	Objective sampling	Industry sampling	food sample		Single	25g	95	0	95	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	75g	1	0	1	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	583	27	568	27
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	10g	1890	0	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	820	47	507	47
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Suspect sampling	Official sampling	food sample		Single	125g	19	5	19	5

Table Listeria monocytogenes in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	10g	342	0	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	1888	39	1678	39
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	Official sampling	food sample		Single	10g	140	0	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	125g	30	1	30	1
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	10g	465	8	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance [10)]	RVL	Objective sampling	Official sampling	food sample		Single	25g	130	10	130	10
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Objective sampling	Industry sampling	food sample		Single	25g	66	5	34	5
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	10g	476	0	0	0
Meat from pig - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	RVL	Objective sampling	Official and industry sampling	food sample		Single	10g	10	0	0	0
Meat from turkey - at processing plant - Surveillance (raw meat)	RVL	Census	Industry sampling	food sample		Single	10g	7	0	0	0
Meat from turkey - at processing plant - Surveillance (raw meat)	RVL	Census	Industry sampling	food sample		Single	25g	2	0	2	0
Meat from turkey - meat products - cooked, ready-to -eat - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	10g	35	0	0	0

Table Listeria monocytogenes in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Meat from turkey - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Unspecified	HACCP and owns check	food sample		Single	25g	36	0	25	0
Meat from turkey - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Census	Industry sampling	food sample		Single	25g	20	0	20	0
Meat from turkey - meat products - cooked, ready-to-eat - at processing plant - Surveillance	RVL	Census	Official sampling	food sample		Single	25g	35	0	35	0
Meat, mixed meat - meat products - raw and intended to be eaten raw - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	10	5	10	5
Meat, mixed meat - meat products - raw and intended to be eaten raw - at processing plant - Surveillance	RVL	Unspecified	Official and industry sampling	food sample		Single	25g	101	35	101	35
Molluscan shellfish - cooked - at processing plant - Surveillance [11)]	RVL	Objective sampling	Industry sampling	food sample		Single	25g	5	0	5	0
Other food - at processing plant - Surveillance [12)]	RVL	Objective sampling	Official and industry sampling	food sample		Single	10/25g	378	45	288	45
Other food - at processing plant - Surveillance (fish gourmet)	RVL	Unspecified	Official and industry sampling	food sample		Single	10/25g	390	11	112	11
Other food - at processing plant - Surveillance (fish gourmet)	RVL	Census	Official and industry sampling	food sample		Single	10/25g	227	9	143	9
Other food - at processing plant - Surveillance (fish gourmet) [13)]	RVL	Unspecified	Industry sampling	food sample		Single	25g	27	0	27	
Other food - at processing plant - Surveillance (fish gourmet)	RVL	Suspect sampling	Official sampling	food sample		Single	10g	5	0		

Table Listeria monocytogenes in other foods

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for L. monocytogenes	Units tested with detection method	Listeria monocytogenes presence in x g
Other food - at processing plant - Surveillance (fish gourmet)	RVL	Objective sampling	Official and industry sampling	food sample		Single	10g	63	0	60	
Other food - at processing plant - Surveillance (fish gourmet)	private lab	Census	Industry sampling	food sample		Single	25g	44	0	37	
Other food - at processing plant - Surveillance (lard, animal fat)	RVL	Objective sampling	Official sampling	food sample		Single	25g	30	0	30	
Other food - at processing plant - Surveillance (lard, animal fat)	RVL	Unspecified	Official and industry sampling	food sample		Single	10/25g	382	3	367	3
Other food - at processing plant - Surveillance (lard, animal fat)	RVL	Unspecified	HACCP and owns check	food sample		Single	20g	5	0		
Other food - at processing plant - Surveillance (meat delicatessen products [14)])	RVL	Objective sampling	Official and industry sampling	food sample		Single	25g	80	10	80	10
Other food - at processing plant - Surveillance (meat delicatessen products)	RVL	Census	Official and industry sampling	food sample		Single	10/25/125 g	508	1	381	1
Other food - at processing plant - Surveillance (meat delicatessen products)	RVL	Unspecified	Official sampling	food sample		Single	25g	245	3	235	3
Other food - at processing plant - Surveillance (meat delicatessen products) [15)]	RVL	Unspecified	Official sampling	food sample		Single	25g	15	0	15	
Other food - at processing plant - Surveillance (meat delicatessen products)	private lab	Unspecified	Industry sampling	food sample		Single	25g	639	12	624	12
Other food - at processing plant - Surveillance (meat delicatessen products)	RVL	Unspecified	HACCP and owns check	food sample		Single	20g	3	1		

Table Listeria monocytogenes in other foods

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	15		
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	43	0	0
Meat from pig - fresh - at processing plant - Surveillance	10	3	
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	208		
Meat from pig - meat products - cooked, ready-to-eat - at retail - Surveillance	1	0	0
Meat from bovine animals - fresh - at processing plant - Surveillance	10	0	0
Meat from bovine animals - meat products - cooked, ready-to-eat - at processing plant - Surveillance			
Fish - smoked - at processing plant - Surveillance	2313	120	8
Crustaceans - unspecified - cooked - at processing plant - Surveillance	0	0	0
Crustaceans - unspecified - cooked - at retail - Surveillance			
Molluscan shellfish - cooked - at processing plant - Surveillance	0	0	0
Crustaceans - unspecified - cooked - at processing plant - Surveillance	0	0	0

Table Listeria monocytogenes in other foods

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Crustaceans - unspecified - cooked - at processing plant - Surveillance	0	0	0
Crustaceans - unspecified - cooked - at processing plant - Surveillance	0	0	0
Egg products - at processing plant - Surveillance	12		
Egg products - at processing plant - Surveillance	10		
Egg products - at processing plant - Surveillance	5		
Fish - smoked - at processing plant - Surveillance			
Fish - smoked - at processing plant - Surveillance [1)]	445	3	
Fish - smoked - at processing plant - Surveillance	70		
Fish - smoked - at processing plant - Surveillance	96		
Fish - smoked - at processing plant - Surveillance	85		
Fish - smoked - at processing plant - Surveillance	61		
Fish - smoked - at processing plant - Surveillance	5		
Fish - smoked - at processing plant - Surveillance			

Table Listeria monocytogenes in other foods

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Fishery products, unspecified - at processing plant - Surveillance	0	0	0
Fishery products, unspecified - at processing plant - Surveillance [2)]	0	0	0
Fishery products, unspecified - at processing plant - Surveillance	0	0	0
Fishery products, unspecified - at processing plant - Surveillance	0	0	0
Fishery products, unspecified - at processing plant - Surveillance	69	1	0
Fishery products, unspecified - at processing plant - Surveillance [3)]	0	0	0
Meat from bovine animals - fresh - at processing plant - Surveillance [4)]			
Meat from bovine animals - fresh - at processing plant - Surveillance			
Meat from bovine animals - fresh - at processing plant - Surveillance	5		3
Meat from bovine animals - fresh - at processing plant - Surveillance	35	1	
Meat from bovine animals - fresh - at processing plant - Surveillance			
Meat from bovine animals - fresh - at processing plant - Surveillance	5		

Table Listeria monocytogenes in other foods

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Meat from bovine animals - meat products - cooked, ready-to-eat - at processing plant - Surveillance	5	0	0
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance			
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance			
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance [5)]			
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance			
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	15		
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	84		
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance	9	1	
Meat from broilers (Gallus gallus) - fresh - at processing plant - Surveillance			
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	95	0	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	0	0	0

Table Listeria monocytogenes in other foods

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance			
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	0	0	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	0	0	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	1	0	
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	201	0	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	8	5	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	10	0	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance [6)]	0	0	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	66	0	0

Table Listeria monocytogenes in other foods

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	0	0	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	25	0	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	60	0	0
Meat from broilers (Gallus gallus) - meat products - cooked, ready-to-eat - at processing plant - Surveillance	0	0	0
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance			
Meat from broilers (Gallus gallus) - mechanically separated meat (MSM) - at processing plant - Surveillance [7)]			
Meat from pig - fresh - at processing plant - Surveillance	0	0	0
Meat from pig - fresh - at processing plant - Surveillance	42	0	0
Meat from pig - fresh - at processing plant - Surveillance	0	0	0
Meat from pig - fresh - at processing plant - Surveillance	0	0	0

Table Listeria monocytogenes in other foods

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Meat from pig - fresh - at processing plant - Surveillance [8)]	0	0	0
Meat from pig - fresh - at processing plant - Surveillance	0	0	0
Meat from pig - fresh - at processing plant - Surveillance	0	0	0
Meat from pig - fresh - at processing plant - Surveillance	8	0	0
Meat from pig - fresh - at processing plant - Surveillance	0	0	0
Meat from pig - meat preparation - intended to be eaten cooked - at processing plant - Surveillance	15	0	0
Meat from pig - meat products - cooked ham - at processing plant - Surveillance	5	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	0	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	308	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	0	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	131	2	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	948	24	0

Table Listeria monocytogenes in other foods

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	0	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	661	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	0	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	2022	5	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	13	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance [9)]	0	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	0	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	15	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	1890	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	313	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	0	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	342	0	0

Table Listeria monocytogenes in other foods

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	210	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	140	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	0	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	465	3	5
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance [10)]	0	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	32	0	0
Meat from pig - meat products - cooked, ready-to-eat - at processing plant - Surveillance	476	0	0
Meat from pig - meat products - raw but intended to be eaten cooked - at processing plant - Surveillance	10	0	0
Meat from turkey - at processing plant - Surveillance (raw meat)	7	0	0
Meat from turkey - at processing plant - Surveillance (raw meat)	0	0	0
Meat from turkey - meat products - cooked, ready-to-eat - at processing plant - Surveillance	35	0	0
Meat from turkey - meat products - cooked, ready-to-eat - at processing plant - Surveillance	11	0	0

Table Listeria monocytogenes in other foods

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Meat from turkey - meat products - cooked, ready-to-eat - at processing plant - Surveillance	0	0	0
Meat from turkey - meat products - cooked, ready-to-eat - at processing plant - Surveillance	0	0	0
Meat, mixed meat - meat products - raw and intended to be eaten raw - at processing plant - Surveillance			
Meat, mixed meat - meat products - raw and intended to be eaten raw - at processing plant - Surveillance			
Molluscan shellfish - cooked - at processing plant - Surveillance [11)]	0	0	0
Other food - at processing plant - Surveillance [12)]	100		
Other food - at processing plant - Surveillance (fish gourmet)	278		
Other food - at processing plant - Surveillance (fish gourmet)	84		
Other food - at processing plant - Surveillance (fish gourmet) [13)]			
Other food - at processing plant - Surveillance (fish gourmet)	5		
Other food - at processing plant - Surveillance (fish gourmet)	3		
Other food - at processing plant - Surveillance (fish gourmet)	7		

Table Listeria monocytogenes in other foods

	Units tested with enumeration method	> detection limit but <= 100 cfu/g	L. monocytogenes > 100 cfu/g
Other food - at processing plant - Surveillance (lard, animal fat)			
Other food - at processing plant - Surveillance (lard, animal fat)	15		
Other food - at processing plant - Surveillance (lard, animal fat)	5		
Other food - at processing plant - Surveillance (meat delicatessen products) [14)]			
Other food - at processing plant - Surveillance (meat delicatessen products)	127		
Other food - at processing plant - Surveillance (meat delicatessen products)	10		
Other food - at processing plant - Surveillance (meat delicatessen products) [15)]			
Other food - at processing plant - Surveillance (meat delicatessen products)	15		
Other food - at processing plant - Surveillance (meat delicatessen products)	3		1

Comments:

[1)] PCR

[2)] RT-PCR

[3)] RT-PCR

Table Listeria monocytogenes in other foods

Comments:

[4)] RT-PCR

[5)] PCR

[6)] 5 samples were tested PCR

[7)] PCR

[8)] PCR

[9)] PCR

[10)] PCR

[11)] PCR

[12)] meat delicatessen products

[13)] PCR

[14)] PCR

[15)] RT-PCR

2.3.4 Listeria in animals

Table Listeria in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Units tested	Total units positive for Listeria	L. monocytogenes	Listeria spp., unspecified
Cattle (bovine animals) [1)]	RVL	Unspecified	Official sampling	animal sample > organ/tissue		Animal	2	1		1
Chinchillas [2)]	RVL	Suspect sampling	Industry sampling	animal sample > organ/tissue		Animal	2	0		
Foxes - farmed [3)]	RVL	Suspect sampling	Industry sampling	animal sample > organ/tissue		Animal	7	0		
Sheep [4)]	RVL	Unspecified	Industry sampling	animal sample > organ/tissue		Animal	1	1		1
Sheep [5)]	RVL	Suspect sampling	Official and industry sampling	animal sample > organ/tissue		Animal	11	1	1	

Comments:

[1)] clinical investigation/ analytical method PN-EN ISO 11290-1:1999/A1:2005

[2)] clinical investigation/ microbiological method

[3)] clinical investigation/ microbiological method

[4)] clinical investigation/ analytical method PN-EN ISO 11290-1:1999/A1:2005

[5)] clinical investigation/ microbiological method

Table Listeria in animals

2.4 E. COLI INFECTIONS

2.4.1 General evaluation of the national situation

A. Verotoxigenic Escherichia coli infections general evaluation

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

In Poland no active monitoring for the presence of Verocytoxic strains of Escherichia coli in animals was conducted, nor any examinations of a wider spectrum concerning the carrier state, identification and description of threats to human health from pathogenic bacteria producing vero (shiga) toxins.
In 2009 NRL conducted survey in cattle slughterhouse as well as in foodstuff. In bovine meat-fresh 36 cases was positive.
In foodstaff 36 units were positive for VT E.coli.

Laboratory use for analyses method EN ISO166454:2002, which is able to detect only VTEC O157 (both in animals and food).

Additional information

The data concerning Verocytotoxic E. coli were obtained from Regional Veterinary Laboratories. In Poland laboratories carriyng out the examination for pathogenic agents by PCR method. But for serotyping VTEC by seroligical or molecular method. The National Veterinary Research Institute in Pulawy is the reference laboratory in Poland.

In 2008, 4474 samples of fresh meat from turkeys, bovines and pigs, minced meat as well as products from meat were tested. In addition 36 samples of raw cows milk for manufacture were taken.
In those examination only 1 sample was positive. Unspecified VTEC was detected in fresh meat from pigs.
Whereas in 2007, only 7 samples were taken from animals (poultry) - all samples were positive. Besides 133 samples were taken from food, most of the samples were taken from minced pig meat (72). 6 samples were positive: 4 from raw pig sausage and 2 from fresh bovine meat.

2.4.2 E. coli infections in humans

A. Verotoxigenic Escherichia coli infections in humans

Reporting system in place for the human cases

Information was direct to ECDC.

2.4.3 Escherichia coli, pathogenic in foodstuffs

Table VT E. coli in food

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Analytical Method	Sampling unit	Sample weight	Units tested	Total units positive for Verotoxigenic E. coli (VTEC)	Verotoxigenic E. coli (VTEC) - VTEC O157
Meat from pig - fresh - at retail - Surveillance	NRL	Census		food sample > meat		ISO 16654:2001	Single	25g	1	0	
Meat from bovine animals - carcase - at slaughterhouse - Surveillance	NRL	Census		food sample > meat		ISO 16654:2001	Single	25g	21	0	
Meat from bovine animals - fresh - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		ISO 16654:2001	Single	25g	38	1	1
Meat from bovine animals - fresh - at retail - Surveillance	NRL	Census		food sample		ISO 16654:2001	Single	25g	1	0	
Meat from bovine animals - minced meat - intended to be eaten raw - at retail - Surveillance	NRL	Census		food sample		ISO 16654:2001	Single	25g	3	0	
Vegetables - pre-cut - ready-to-eat - at retail - Surveillance	NRL	Census		food sample		EU RL method_food _2. Rev.2 - 104:H4	Single	25g	443	0	

	Verotoxigenic E. coli (VTEC) - VTEC non-O157	Verotoxigenic E. coli (VTEC) - VTEC, unspecified
Meat from pig - fresh - at retail - Surveillance		
Meat from bovine animals - carcase - at slaughterhouse - Surveillance		

Table VT E. coli in food

	Verotoxigenic E. coli (VTEC) - VTEC non-O157	Verotoxigenic E. coli (VTEC) - VTEC, unspecified
Meat from bovine animals - fresh - at processing plant - Surveillance		
Meat from bovine animals - fresh - at retail - Surveillance		
Meat from bovine animals - minced meat - intended to be eaten raw - at retail - Surveillance		
Vegetables - pre-cut - ready-to-eat - at retail - Surveillance		

2.4.4 Escherichia coli, pathogenic in animals

A. Verotoxigenic Escherichia coli in cattle (bovine animals)

Monitoring system

Sampling strategy

No control examinations are conducted.

Methods of sampling (description of sampling techniques)

Animals at farm

In Poland laboratories carriyng out the examination for pathogenic agents by PCR method. But for serotyping VTEC by seroligical or molecular method.

Additional information

In 2009, 130 carcasses of dairy cows in slaughterhouse were tested. And 63 positive cases. This survey was conducted by NRL.
In 2008 in slaughterhouse were 229 carcasses of dairy cows tested. Therein was detected 2 positive results of VTEC non O 157.

In 2010 biochemical studies were perfomed in the direction of E. coli:
- in 60 dogs, including in 2 of them were found E. coli
- in 14 cats, including in 1 cases was found E. coli
- in 37 flocks of poultry, including in 30 of them were found E. coli.

In no case was found VT E. coli.

2.5 TUBERCULOSIS, MYCOBACTERIAL DISEASES

2.5.1 General evaluation of the national situation

A. Tuberculosis general evaluation

History of the disease and/or infection in the country

Tuberculosis was identified as a disease subject to obligatory notification in Poland in 1927. Until 1936 tuberculosis was being eradicated with tuberculinisation, on a voluntary basis and without much result. Killed animals were reimbursed. The general and planned eradication of tuberculosis, with the costs borne by the state, was begun in Poland in 1959. The action of eradicating this diseases was started in the least infected Eastern voivodships. At that time the highest infection levels were noted in central and Western voivodships. As a result of the undertaken actions the number of infected cattle fell to 0,5 % and in December 1975, according to international norms in force at that time, Poland was recognized as country free from bovine tuberculosis. In the following years, the screening was conducted every 3 years in individual holdings and twice a year in big state-owned holdings
According to Commission Decision of 23 April 2009 No 2009/342/EC amending Decision 2003/467/EC as regards the declaration that certain administrative regions of Italy are officially free of bovine tuberculosis, bovine brucellosis and enzootic-bovine-leukosis, that certain administrative regions of Poland are officially free of enzootic-bovine-leukosis and that Poland and Slovenia are officially free of bovine tuberculosis the whole territory of Poland is officialy tuberculosis free.

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

Currently in Poland the control examinations and eradication of bovine tuberculosis are conducted on the basis the Act of 11 March 2004 on protection of animal health and control of infectious animal diseases, the Ordinance of the Minister of Agriculture and Rural Development of 23 November 2004 on the eradication of bovine tuberculosis and the instruction of the Chief Veterinary Officer of 28 July 2006 on the procedures related to the eradication of animal tuberculosis, draftedon the basis of the Council Directive 64/432/EEC.

Since December 2004 the matter of monitoring tests for bovine tuberculosis is regulated by the Ordinance of the Minister of Agriculture and Rural Development of 17 December 2004 defining the disease entities, the control procedure and the scope of monitoring tests for animal infections (Dz. U. No. 282, item 2813, as amended). The Ordinance provides that the monitoring tests for bovine tuberculosis using intradermal tuberculination are carried out every year on 1/3 of the bovine herds in the area of a district in such a way as to examine all herds of cattle in the area of this district in the period of three years. The monitoring tests are carried out on animals older than 6 weeks of age. As compared to the previous regulation, the modification consists in that the tests cover 1/3 of the bovine herds, instead of 1/3 of the bovine population, in each district.

The percentage of infected herds in Poland in the last 9 years (1999 â€“ 2007) has been lower than 0,2 % and was as follows: in 1999 - 0.008 %; in 2000 - 0.015 %; in 2001- 0.007 %; in 2002 - 0.019 %; in 2003 - 0.008 %; in 2004 - 0.047%; in 2005-0.054%, in 2006-0.034%, in 2007 - 0.038% and in 2008- 0,04%.

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

M. avium was detected in cassowary and kangaroo in zoo.

Additional information

It should be noted that according to the Decision of the Commission of 21 February 2006 amending the Decision 93/52/EEC in relation to declaration of Poland and some regions or provinces of Italy as brucellosis-free (B.melitensis) and to the Decision 2003/467/EC in relation to declaration of some regions or provinces of Italy as free from bovine tuberculosis and enozootic bovine leucosis, Poland has been declared as a country officially free from ovine and caprine brucellosis caused by Brucella melitensis rod.

2.5.2 Tuberculosis, mycobacterial diseases in humans

A. Tuberculosis due to Mycobacterium bovis in humans

Reporting system in place for the human cases

All information was direct to ECDC.

2.5.3 Mycobacterium in animals

A. Mycobacterium bovis in bovine animals

Status as officially free of bovine tuberculosis during the reporting year

Free regions

Poland according to Commission Decision 2009/342/EC is officially free from tuberculosis.

Monitoring system

Sampling strategy

Tuberculosis monitoring involves annual pericutaneous tuberculin injections in 1/3 of cattle herds in the area of a district, in order to examine all cattle herds in the district within a period of three years. Tuberculin injections are performed in cattle aged over 6 weeks.

Frequency of the sampling

1x pericutaneus tuberculine injection in 1/3 of herd in one year period. Tuberculin injections are performed in cattle aged over 6 weeks.

Methods of sampling (description of sampling techniques)

In case of bovine tuberculosis pericutaneus tuberculin tests are performed:
- single tuberculin tests,
- comparative tuberculin tests.

Single and comparative tuberculin tests are performed using pericutaneus injection of bovine or bovine and avian tuberculin in accordance with the testing methodology and standards for tuberculin laid down in Annex B to the Council Directive 64/432/EEC.

Case definition

An epidemiological unit is a herd.
Definitions of cases:
A positive case is an animal with a positive result of the comparative tuberculinisation test, in which M. bovis or M. tuberculosis were isolated, or an animal with a positive post mortem examination result confirmed by a laboratory (slaughter, killing, death).

Diagnostic/analytical methods used

The method of conducting official allergic test and the interpretation of the reaction is conducted on the basis of the Instruction of the Chief Veterinary Officer No GIWz.IV.401/TBC-26/2006 of 28 July 2006. Screening for tuberculosis consists in pericutaneus tests (official tests are performed using PPD bovine and avian purified protein derivative of tuberculin, obtained from growth and analysis products of Mycobacterium bovis with the simultaneous clinical examination and additional laboratory examination of samples taken after slaughter or in post mortem examination. The examination consists in microscopic, breeding and biological assay on laboratory animals.

Vaccination policy

The vaccinations against tuberculosis are not used for animals

Control program/mechanisms

The control program/strategies in place

Bovine tuberculosis is controlled since 1927. Currently in Poland runs monitoring for bovine tuberculosis.

Recent actions taken to control the zoonoses

Measures in case of the positive findings or single cases

In case of suspicion or detection of bovine tuberculosis the procedure is set out in the Ordinance of the Minister of Agriculture and Rural Development of 23 November 2004 on the control of bovine tuberculosis (OJ No. 258, item 2585).
In case of disease suspicion the District Veterinary Officer takes immediate measures in order to confirm or exclude the disease. This authority performs epizootic investigation, clinical examination of animals, a post-mortem examination or an autopsy, performs a diagnostic test or takes samples for diagnostic tests. The authority puts the herd under supervision and imposes restrictions in the form of a ban on movement of bovine animals to/from a herd, excluding any movement in order carry out immediate slaughter. Animals suspected of a disease are isolated from the rest of the herd. District Veterinary Officer also undertakes other necessary measures to prevent the spread of bovine tuberculosis.
If tuberculosis is detected (pursuant to Article 2 Subparagraph 23 of the Act on animal health protection and eradication of infectious animal diseases and Article 5 of the Ordinance on control of bovine tuberculosis) the District Veterinary Officer notifies the State Sanitary Inspector and the milk purchaser.

The District Veterinary Officer establishes the place of disease outbreak and imposes the ban on bovine animals movement to/from the sick herd (movement with the aim of immediate slaughter is permitted only). Milk of sick animals may be used to feed animals in a given holding only after suitable heat treatment . The District Veterinary Officer shall order marking and isolation of sick animals in a herd until they are killed.
The District Veterinary Officer shall also take other measures in accordance with the provisions of the Ordinance of the Minister of Agriculture and Rural Development on the control of bovine tuberculosis.
The outbreak of the disease shall be deemed eradicated if all sick animals have fallen or been killed, cleaning and disinfection operations have been performed, and the results of two subsequent comparative tuberculin tests on other animals of the herd performed in a determined time are negative. The first test is carried out no earlier than after 60 days, the second one no earlier than in the fourth and no later than in the twelfth month from the day of elimination of the last sick animal from the disease outbreak place.

Notification system in place

Suspicion or confirmation of bovine tuberculosis must be obligatory and immediately notified to the comptenet authority. Detailes are defined in Act of 11 March 2004 on animal health protection and eradication of infectious animal diseases (OJ No. 69, item 625, as amended) and Ordinance of the Minister of Agriculture and Rural Development of 25 November 2005 laying down the scope, procedure and dates of notification of the animal infectious diseases subject to control and registration obligation and on the results of monitoring of zoonoses and zoonotic agents, as well as resistance to antimicrobial agents (OJ No. 242, item 2045

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

The long-term objective for the whole territory of the Republic of Poland is to be recognised officially free from this disease.
In 2008 there was 0.04% of positive herds, which is very slight increase in comparition to 2007. In 2007 there was 0.038% of positive animals.

In 2009, 115 animals in 37 herds were found positive.

B. Mycobacterium bovis in farmed deer

Monitoring system

Sampling strategy

In Poland no official eradication of tuberculosis in species other than cattle is carried out. All slaughter animals, except poultry, are subject to routine, official post mortem examination including the examination of lymph nods.

Table Tuberculosis in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Units tested	Total units positive for Mycobacterium	M. bovis	M. tuberculosis	Mycobacterium spp., unspecified
Sheep	NRL	Unspecified	Not applicable	animal sample > lymph nodes		Animal	1	0			
Goats	LVU	Unspecified	Official sampling	animal sample		Animal	395	0			
Pigs	LVU	Unspecified	Official sampling	animal sample		Animal	648	0			
Bison	NRL	Unspecified	Not applicable	animal sample > organ/tissue		Animal	4	2	2		
Bison	LVU					Animal	2	2	2		
Cats - at farm - Unspecified	LVU/NRL	Unspecified	Not applicable	animal sample		Animal	10	0			
Deer - farmed - fallow deer - at farm - Survey - national survey	LVU	Census				Animal	300	0			
Dogs - at farm - Unspecified	LVU/NRL	Unspecified	Not applicable	animal sample		Animal	14	0			
Pigs - at AI station	LVU	Unspecified	Not applicable	animal sample		Animal	63	0			
Wolves	NRL	Unspecified		animal sample > organ/tissue		Animal	1	0			
Zoo animals, all	NRL			animal sample > organ/tissue		Animal	10	2			2
Zoo animals, all - at zoo - Clinical investigations	LVU					Animal	16	0			

Table Tuberculosis in farmed deer

If present, the row "Total -1" refers to analogous data of the previous year.

Region	Total number of existing farmed deer		Free herds		Infected herds		Routine tuberculin testing		Number of tuberculin tests carried out before the introduction into the herds	Number of animals with suspicious lesions of tuberculosis examined and submitted to histopathological and bacteriological examinations	Number of animals detected positive in bacteriological examination
	Herds	Animals	Number of herds	%	Number of herds	%	Interval between routine tuberculin tests	Number of animals tested			
Polska	62	5748	52	83.87	0	0	no routine test	0			
Total : [1)]	62	5748	52	83.87	0	0	N.A.	0	0	0	0

Comments:

[1)] N.A.

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

If present, the row "Total -1" refers to analogous data of the previous year.

Region	Total number of existing bovine		Officially free herds		Infected herds		Routine tuberculin testing		Number of tuberculin tests carried out before the introduction into the herds (Annex A(I)(2)(c) third indent (1) of Directive 64/432/EEC)	Number of animals with suspicious lesions of tuberculosis examined and submitted to histopathological and bacteriological	Number of animals detected positive in bacteriological examination
	Herds	Animals	Number of herds	%	Number of herds	%	Interval between routine tuberculin tests	Number of animals tested			
Dolnośląskie	12630	116426	12629	99.99	1	.01	tests every 5 years	25082	0	9	6
Kujawsko-Pomorskie	30834	474413	30834	100	0	0	every 5 years	109405	0	0	0
Lubelskie	75541	420946	75540	100	1	0	every 5 years	72892	1	6	1
Lubuskie	4648	80411	4648	100	0	0	every 5 years	16704	0	0	0
Mazowieckie	115371	1144157	115370	100	1	0	every 5 years	208188	0	37	9
Małopolskie	73105	234965	73102	100	3	0	every 5 years	36017	0	9	7
Opolskie	8641	131857	8641	100	0	0	every 5 years	26960	0	0	0
Podkarpackie	52739	130774	52739	100	0	0	every 5 years	19611	0	0	0
Podlaskie	51200	915431	51197	99.99	3	.01	every 5 years	176560	0	55	20
Pomorskie	16276	201094	16275	99.99	1	.01	every 5 years	45669	3	1	6
Warmińsko-Mazurskie	23724	470543	23724	100	0	0	every 5 yeras	95102	0	5	0
Wielkopolskie	50790	817193	50789	100	1	0	every 5 yeras	172550	199	4	3

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

Zachodniopomorskie	6723	101848	6723	100	0	0	every 5 yeras	25704	0	0	0
Łódzkie	58361	489868	58360	100	1	0	every 5 years	85276	0	21	2
Śląskie	18067	133953	18066	99.99	1	.01	every 5 years	29288	0	0	6
Świętokrzyskie	47366	204927	47366	100	0	0	every 5 years	29011	0	1	0
Total : [1)]	646016	6068806	646003	100	13	0	N.A.	1174019	203	148	60

Comments:

[1)] N.A.

2.6 BRUCELLOSIS

2.6.1 General evaluation of the national situation

A. Brucellosis general evaluation

History of the disease and/or infection in the country

In Poland, after the war, the largest percentage of infected farms was observed in Western and Northern regions. Between 1948 and 1956 the tests for brucellosis covered only the nationalized large-scale holdings. Serological reactions were observed in 7.2-22.8% animals.
Between 1956 and 1966, around 350,000 to 1,000,000 cattle were tested annually and brucellosis was detected on average in 2.3% to 5.7% of nationalized holdings and in 0.32-1.7% of individual holdings. At the end of 1966 almost 12% of cattle in nationalized holdings were infected with bovine brucellosis and Brucella was detected bacteriologically in 24.4% of aborted embryos .
Between 1953 and 1956, due to the high percentage of herds where brucellosis was detected, it was decided to conduct vaccinations with S-19 vaccine. The bovine animals in selected state-owned and cooperative holdings were vaccinated. Within that period 266,000 bovine animals were vaccinated. The vaccinations were continued until 1966 when the Veterinary Department prohibited to use them in the regions of Eastern and central Poland. The planned bovine brucellosis control began on those regions in 1969, on the basis of the act of 13 November 1963 on infectious disease control. The infected cattle from individual holdings were slaughtered with the full compensation provided.
Between 1965 and 1967 the serological tests of cattle were conducted in Gdanskie, Lubelskie and Olsztynskie regions and in all districts bordering with Czechoslovakia in order to determine the epizootic situation in individual holdings . The conducted tests indicated that the percentage of cattle with positive reactions did not exceed 0.5%. From 1975 the control of brucellosis was conducted on the basis of the Ordinance of the Minister of Agriculture of 16 April on the obligation to report and control animal brucellosis. Bovine, sheep, goat and swine brucellosis is a compulsorily notifiable disease.
Animals recognized as infected or suspected of being infected, both in individual and in cooperative holdings, were depopulated with the compensation provided. The cattle infected with brucellosis in nationalized holdings were either depopulated or until 1975 transferred to the isolators.
Between 1975 and 1978 the serological tests covered from 5 to 7 million cattle. In total brucellosis was detected in 31,720 cattle which were subsequently slaughtered. It amounted to 0.06% of cattle in the country and 0.5% in nationalized holdings.
In 1978 the territory of the whole country, except for Gorzowskie and Zielonogorskie regions, was declared free of bovine brucellosis.
Only 10% of depopulated cattle came from the territory of 42 regions and 90% from the territory of the following 7 regions: Gorzowskie, Olsztynskie, Poznanskie, Szczecinskie and Zielonogorskie.

In 1980 by decision of the Minister of Agriculture the whole country was declared free of bovine brucellosis. The percentage of infected animals was lower than 0.5% and the percentage of infected holdings amounted to less than 0.2%.
In order to maintain the state achieved in 1980 periodical diagnostic tests and depopulation of animals recognized as infected was introduced as well as the concurrent ban on performing protective vaccinations in the areas covered by the tests.
The tests covered annually one third of bovine population aged over 12 months on the territory of a region.

According to Commission Decision of 5 August 2009 No 2009/600/EC amending Decision 2003/467/EC as regards the declaration that certain Member States and regions thereof are officially free of bovine brucellosis, the whole territory of Poland is officialy bovine brucellosis-free

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

The obligation to test aborted embryos was introduced in accordance with Article 42 (1) of the Act of 11 March 2004 on protection of animal health and control of infectious animal diseases (Journal of Laws of 2004 No 69, item 625).
From 1 May 2004, in relation to the European Union requirements, Poland has tested blood samples in one third of cattle herds on the territory of a district so that within 3 years all cattle herds in the district were tested. On the territory of one of the regions (Opolskie) the collective milk samples coming from the cows from one herd are tested.

For many years Brucella spp. have not been isolated from blood and milk samples.

The percentage of infected herds in particular years (it was assumed that there is one herd in one holding) amounted to, respectively:

0.006 % in 1999; 0.009 % in 2000; 0.005 % in 2001; 0.006 % in 2002; 0.002 % in 2003; 0.004% in 2004; 0.005% in 2005, 0.008% in 2006 and 0.0045% in 2007, 0,0054% in 2008.

On the basis of obtained results of control tests in cattle herds it may be stated that the percentage of infected herds fluctuates between 0.002 and 0.006%.
During the tests of aborted embryos (segments of parenchymatous organs, ligated stomachs, whole embryos) in 2003-2008, no Brucella was isolated.
In 2008, there were 425 notifications of abortions. Every of them was investigated by an official veterinarian. Brucella spp. was not detected.

In 2007, from 220347 herds checked, there were 10 infected herds, out of which 4 herds were new infected. Brucella abortus was not isolated in any case, neither from the 28 animals in which the serological tests confirmed infection, nor from the aborted foetuses.
204 animal were examined microbilogically, none of the result was positive.
No suspected lesions were found in slaughterhouse.

The percentage of officially free herds at the end of the 2008 was 99,99% for herds which were tested in 2008 comparison to 2007, in 2009 number of infected herds increased but it was smaller than in 2006 and 2008.

Recent actions taken to control the zoonoses

Brucellosis eradication programme is currently conducted in Poland on the basis of the act of 11 March 2004 on protection of animal health and control of infectious animal diseases and the regulation of the Minister of Agriculture and Rural Development of 20 April 2005 on brucellosis eradication.

Additional information

Additional information concerning other animal species:
If the swine brucellosis is suspected, the animals aged over 4 months are subject to serological tests.
In the case of males of pigs (boars) for reproduction, tests for brucellosis are compulsory during quarantine and each 12 months in the case of boars

Those tests are conducted according to the Directive 90/429 and the Ordinance of the Minister of Agriculture and Rural Development of 27 April 2004 on detailed veterinary requirements applicable to pig semen (Journal of Laws of 2004 No 100, item 1017).
Serological tests of sows for reproduction and the repopulation of herds on commercial pig fattening farms have a voluntary character.
In 2004, 3938 pigs were tested with a negative result.
In 2005,there is lack of data concerning pigs.
In 2006, 4683 pigs were tested with a negative result.
In 2007, 37775 pigs were tested with negative results.
In 2008, 2421 pigs were tested with 6 positive results. All positive animals (boars) originated from Spain.

2.6.2 Brucellosis in humans

A. Brucellosis in humans

Reporting system in place for the human cases

All information was direct to ECDC.

2.6.3 Brucella in animals

A. Brucella abortus in bovine animals

Status as officially free of bovine brucellosis during the reporting year

The entire country free

According to Commission Decision of 5 August 2009 No 2009/600/EC amending Decision 2003/467/EC as regards the declaration that certain Member States and regions thereof are officially free of bovine brucellosis, the whole territory of Poland is officialy bovine brucellosis-free

Free regions

The whole territory of Poland is officialy bovine brucellosis-free

Additional information

Poland have submitted to the Commission documentation demonstrating compliance with the appropriate conditions provided for in Directive 64/432/EEC as regards their whole territory.

Monitoring system

Sampling strategy

For bovine brucellosis – annual examination of blood samples collected from 1/3 cattle herds in the area of a district, in order to conduct examination of all herds in the district within a period of three years. This examination is performed for female cattle and bulls destined for reproduction, older than 12 months.

Frequency of the sampling

Each year samples are collected from 1/3 cattle herds in the area of a district so as to check all cattle herds within 3 years.

Type of specimen taken

Other: - blood
- milk
- swabs from the vagina, cervix or uterus
- discharge from the vagina, cervix or uterus
- clippings bearing in the case of miscarriage

Methods of sampling (description of sampling techniques)

And blood is collected from the animals, except for females:

1) pregnant cow in whom delivery should be made within two weeks;

2) in which the birth occurred within 2 weeks of sampling.

In the case of females who miscarry, for serological testing within 12 to 20 days after the miscarriage, the blood:

1) with the addition of a measure to prevent clotting (anticoagulant) for the detection of bacteria in the blood (bacteremia period);

2) without the addition of a measure to prevent clotting, for the detection of antibodies to brucellosis.

Blood samples collected for testing, using a single needle, into a sterile tube or Tubo-syringe. The tube is filled with in such a way that the blood flowed freely around the inner wall, until the filling tube 2 / 3 of its capacity. Blood donation is gradually cooled.
Freezing of blood.
Blood samples with anticoagulant should be mixed.

II milk samples collected after several strzyknięciach the jug, without additives, sterile tubes.
For serological testing milk from lactating cows, with milk collected from all quarters mentioned are mixed in equal amounts.
Not collected milk:

1) from among quarters of a clinical trial showing inflammatory changes;

2) from cows, in which birth occurred within 5-7 days of sampling.
Once downloaded, the milk is cooled.
Bacteriological tests in aseptically collected milk:

1) in the final phase of the milking - with each quadrant refers to a separate tube;

2) from among quarters of showing lesions.

III swabs from the vagina, cervix or uterus collected in sterile swab and transported in sterile test tubes.
Discharge from the vagina, cervix or uterus taken pipettes disposable or reusable sterile pipettes and then transported in sterile test tubes or other sterile glass containers.
Clippings bearings in the case of abortion is taken into sterile glass containers. Clippings from fresh membranes taken from 2 or 3 cotyledons showing lesions and borderline tissues showing such changes.

IV Fetuses collected in full, and then transports the wrapped and secured in such a way that they provide to the laboratory in the same state.

V The study can be downloaded ligated stomachs of aborted fetuses, and clippings of parenchymal organs.

VI Semen for research in order to isolate the bacteria are taken into sterile glass containers and then transported them in refrigerated.

VII The dead or killed animals collected clippings parenchymal organs, lymph nodes, in particular nadwymieniowe, stretch the uterine wall and other organs showin

Case definition

Definition of a case:
-an animal in which Brucella spp. antibodies were detected during serological tests or from which Brucella spp. were isolated.
Epidemiological unit:
-the herd is an epidemiological unit.
Definition of cattle:
- bovine animals except for males for fattening.

Diagnostic/analytical methods used

In brucellosis diagnosis the following serological tests are used:
-tube agglutination tests (OA)
-buffered plate agglutination tests
-complement fixation test
-microagglutination test
-ELISA (enzyme-linked immunosorbent assay) with a single serum sample
and ring test or ELISA test for milk samples.
Official tests are performed by the regional veterinary laboratories controlled by the National Reference Laboratory.
They are three-stage tests. At first the screening tests are performed - buffered plate agglutination tests, then the basic tests - tube agglutination and complement fixation tests and subsequently the additional tests as antiglobulin and microaglutination.

Vaccination policy

According to the Annex 4 to Act of 11 March 2004 on animal health protection and eradication of infectious animal diseases (OJ No. 69, item 625, as amended), vaccination of bovine animals is forbidden.

Control program/mechanisms

The control program/strategies in place

The regulation of the Minister of Agriculture and Rural Developmenton the eradication of brucellosis determine the principles of the State Veterinary Service on suspicion and then finding of brucellosis in cattle.
District Veterinary officer, after receiving notice of the suspicion of brucellosis, or for obtaining a positive or uncertain result, a study by the screening of animal infections, shall take immediate steps to confirm or rule out brucellosis, in particular:
1) shall:
a) an epidemiological investigation
b) a clinical examination of animals
c) an autopsy or post mortem inspection of animals, if necessary;
2) In any case, take samples for testing or laboratory tests

District veterinary officer at the time of waiting for test results or laboratory tests:
1) includes stock surveillance;
2) prohibits the movement of the herd and the herd, except for shipments for immediate slaughter;
3) requires the isolation of a herd of animals suspected of being infected with brucellosis;
4) inform the purchaser of milk to suspend recognition of the herd officially free of brucellosis.

Measures in case of the positive findings or single cases

District veterinary officer in case of brucellosis in cattle brucellosis outbreak sets and take steps to prevent further spread of this disease, in particular:
1) requires:
a) isolation of animals:
- suffer from brucellosis, until they are killed,
- suspected of being infected with brucellosis,
b) immediate killing of animals infected with brucellosis, no later than 30 days from the date on which the owner of the animal has been notified of the appointment of an outbreak of brucellosis,

c) removal and disposal of aborted fetuses and bearings, still-born animals and dead animals for brucellosis,
d) removal and decontamination of straw, bedding, furniture and other items that may carry brucellosis, which have been in contact with the animals sick or infectious materials derived from these animals,
e) the decontamination of manure and slurry
f) performance of laboratory tests for brucellosis;
2) prohibits:
a) the movement of animals to the herd and the herd, except for shipments for immediate slaughter,
b) re-use of pastures, which were housed animals infected with brucellosis, within 60 days from the date on which the animals were removed from the pasture;
3) immediately notify:
a) the state district sanitary inspector of the confirmation of brucellosis,
b) the purchaser of milk to withdraw recognition of herds officially free of brucellosis;
4) take samples from dead animals and send them to a reference laboratory.

Notification system in place

According to Annex 2 to the Act of 11 March 2004 on animal health protection and eradication of infectious animal diseases, bovine brucellosis must be obligatory notified after suspicion or confirmation. Detailes concerning notification are set out in Ordinance of the Minister of Agriculture and Rural Development of 25 November 2005 laying down the scope, procedure and dates of notification of about animal infectious diseases subject to control and registration obligation and on the results of the monitoring of zoonoses and zoonotic agents, as well as related resistance to antimicrobial agents (OJ 242, item 2045).

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

At present, situation is stable. In 2009, number of infected herd took away 13. the number of positive herds is smaller than in 2008 but we observed slight increased in comparison to 2007. In 2006, 12 new positive herds were notified, in 2007 - 9, whereas in 2008-16 infected herds.

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

Additional information

B. Brucella melitensis in goats

Status as officially free of caprine brucellosis during the reporting year

The entire country free

Poland is officialy free from B.melitensis, according to Decision 2006/169/EC.

Free regions

Whole teritory of Poland was officialy free from caprine brucellosis during the reporting year.

Monitoring system

Sampling strategy

For ovine and caprine brucellosis – annual examination of blood samples collected from roe-bucks and rams older than 6 months and 25% of goats and sheep in reproductive age; in case of a herd of less than 50 goats and sheep in reproductive age blood samples collected from all animals in reproductive age are examined.
In a region recognised as officially free from ovine and caprine brucellosis, in the first year after recognition of the region as free from the disease, blood samples collected from at least 10% of goats and sheep aged over 6 months are examined. After that time the annual examination is conducted for at least 5% of goats and sheep aged over 6 months.

Frequency of the sampling

The annual examination is conducted for at least 5% of goats aged over 6 months.

Methods of sampling (description of sampling techniques)

Methods of sampling the same like in cattle.

Case definition

An animal is considered positive in case of two-time positive results of blood samples' tests. These tests are carried out by complement fixation test as a confirmation of a prior positive result which was obtained by buffered plate agglutination test.

Diagnostic/analytical methods used

The blood samples are tested by means of a buffered plate agglutination test and confirmed by means of complement fixation test.

Vaccination policy

Vaccination is prohibited, according to annex 4 of The Act of 11 March 2004 on protection of animal health and control of infectious animal diseases (Journal of Laws of 2004 No 69, item 625).

Control program/mechanisms

The control program/strategies in place

The regulation of the Minister of Agriculture and Rural Developmenton the eradication of brucellosis determine the principles of the State Veterinary Service on suspicion and then finding of brucellosis in goats.

District Veterinary officer, after receiving notice of the suspicion of brucellosis, or for obtaining a positive or uncertain result, a study by the screening of animal infections, shall take immediate steps to confirm or rule out brucellosis, in particular:

1) shall:

a) an epidemiological investigation

b) a clinical examination of animals

c) an autopsy or post mortem inspection of animals, if necessary;

2) In any case, take samples for testing or laboratory tests

District veterinary officer at the time of waiting for test results or laboratory tests:

1) includes stock surveillance;

2) prohibits the movement of the herd and the herd, except for shipments for immediate slaughter;

3) requires the isolation of a herd of animals suspected of being infected with brucellosis;

4) inform the purchaser of milk to suspend recognition of the herd officially free of brucellosis.

Measures in case of the positive findings or single cases

Proceedings and measures in case of positive findings are described in Act of 11 March 2004 on protection of animal health and control of infectious animal diseases (Journal of Laws of 2004 No 69, item 625) and in regulation of the Minister of Agriculture and Rural Development of 20 April 2005 on the eradication brucellosis.

Notification system in place

According to Annex 2 to the Act of 11 March 2004 on animal health protection and eradication of infectious animal diseases. caprine brucellosis must be obligatory notified after suspicion or confirmation. Detailes concerning notification are set out in Ordinance of the Minister of Agriculture and Rural Development of 25 November 2005 laying down the scope, procedure and dates of notification of about animal infectious diseases subject to control and registration obligation and on the results of the monitoring of zoonoses and zoonotic agents, as well as related resistance to antimicrobial agents (Dz. U. No. 242, item 2045).

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

Whole teritory of Poland is free from caprine brucellosis and for several previous years no positive case of brucellosis in goats was neither suspected nor confirmed.

In 2010 and 2009 there was no positive results for B. melitensis.

C. Brucella melitensis in sheep

Status as officially free of ovine brucellosis during the reporting year

The entire country free

Poland is officialy free from B.melitensis, according to Decision 2006/169/EC

Free regions

Whole teritory of Poland was officially free from ovine brucellosis during the reporting year.

Monitoring system

Sampling strategy

For ovine and caprine brucellosis – annual examination of blood samples collected from roe-bucks and rams older than 6 months and 25% of goats and sheep in reproductive age; in case of a herd of less than 50 goats and sheep in reproductive age blood samples collected from all animals in reproductive age are examined.
In a region recognised as officially free from ovine and caprine brucellosis, in the first year after recognition of the region as free from the disease, blood samples collected from at least 10% of goats and sheep aged over 6 months are examined. After that time the annual examination is conducted for at least 5% of goats and sheep aged over 6 months.

Frequency of the sampling

The annual examination is conducted for at least 5% of sheep aged over 6 months.

Methods of sampling (description of sampling techniques)

Blood samples taken in accordance with Community legislation (Decision 90/242/EEC and Directive 91/68/EEC)

Case definition

An animal is considered positive in case of two-time positive results of blood samplesâ€™ tests.These tests are carried out by complement fixation test as a confirmation of a prior positive result which was obtained by buffered plate agglutination test.

Diagnostic/analytical methods used

The blood samples are tested by means of a buffered plate agglutination test and confirmed by means of complement fixation test.

Vaccination policy

Vaccination is prohibited according to annex 4 of The Act of 11 March 2004 on protection of animal health and control of infectious animal diseases (Journal of Laws of 2004 No 69, item 625).

Control program/mechanisms

The control program/strategies in place

The regulation of the Minister of Agriculture and Rural Developmenton the eradication of brucellosis determine the principles of the State Veterinary Service on suspicion and then finding of brucellosis in sheep.
District Veterinary officer, after receiving notice of the suspicion of brucellosis, or for obtaining a positive or uncertain result, a study by the screening of animal infections, shall take immediate steps to confirm or rule out brucellosis, in particular:
1) shall:
a) an epidemiological investigation
b) a clinical examination of animals
c) an autopsy or post mortem inspection of animals, if necessary;
2) In any case, take samples for testing or laboratory tests

District veterinary officer at the time of waiting for test results or laboratory tests:
1) includes stock surveillance;
2) prohibits the movement of the herd and the herd, except for shipments for immediate slaughter;
3) requires the isolation of a herd of animals suspected of being infected with brucellosis;
4) inform the purchaser of milk to suspend recognition of the herd officially free of brucellosis.

Measures in case of the positive findings or single cases

Overall measures to be taken after positive findings are described The Act of 11 March 2004 on protection of animal health and control of infectious animal diseases (Journal of Laws of 2004 No 69, item 625)

Notification system in place

According to Annex 2 to the Act of 11 March 2004 on animal health protection and eradication of infectious animal diseases. caprine brucellosis must be obligatory notified after suspicion or confirmation. Detailes concerning notification are set out in Ordinance of the Minister of Agriculture and Rural Development of 25 November 2005 laying down the scope, procedure and dates of notification of about animal infectious diseases subject to control and registration obligation and on the results of the monitoring of zoonoses and zoonotic agents, as well as related resistance to antimicrobial agents (Dz. U. No. 242, item 2045).

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

Whole teritory of Poland is free from ovine brucellosis and for several previous years no positive case of brucellosis in sheep was neither suspected nor confirmed.

In 2010 and 2009 there was no positive results for B. melitensis.

Table Brucellosis in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Units tested	Total units positive for Brucella	B. abortus	B. melitensis	B. suis
Pigs	RVL	Suspect sampling	Official sampling	animal sample > foetus/stillbirth		Animal	3	0			
Bison	NRL	Unspecified	Industry sampling	animal sample > blood		Animal	6	0			
Deer	NRL	Unspecified	Industry sampling	animal sample > blood		Animal	436	0			
Deer - farmed - fallow deer	NRL	Unspecified	Industry sampling	animal sample > blood		Animal	131	0			
Dogs	NRL	Unspecified	Industry sampling	animal sample > blood		Animal	24	0			
Other animals (horse)	NRL	Unspecified	Industry sampling	animal sample > blood		Animal	19	0			
Pigs	NRL	Unspecified	Industry sampling	animal sample > blood		Animal	8836	0			
Pigs	RVL	Selective sampling	Industry sampling	animal sample > blood		Animal	5	0			
Pigs - unspecified	RVL	Objective sampling	Official and industry sampling	animal sample > blood		Animal	11	0			
Pigs - unspecified	RVL	Suspect sampling	Official sampling	animal sample > blood		Animal	1	0			
Pigs - unspecified	RVL	Unspecified	Industry sampling	animal sample > blood		Animal	661	0			

Table Brucellosis in other animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Units tested	Total units positive for Brucella	B. abortus	B. melitensis	B. suis
Pigs - unspecified	RVL	Census	Official sampling	animal sample > blood		Animal	592	0			
Zoo animals, all	RVL	Objective sampling	Industry sampling	animal sample > blood		Animal	2	0			
Zoo animals, all	RVL	Suspect sampling	Industry sampling	animal sample > foetus/stillbirth		Animal	1	0			

	Brucella spp., unspecified
Pigs	
Bison	
Deer	
Deer - farmed - fallow deer	
Dogs	
Other animals (horse)	
Pigs	
Pigs	
Pigs - unspecified	
Pigs - unspecified	

Table Brucellosis in other animals

	Brucella spp., unspecified
Pigs - unspecified	
Pigs - unspecified	
Zoo animals, all	
Zoo animals, all	

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

If present, the row "Total -1" refers to analogous data of the previous year.

Region	Total number of existing		Officially free herds		Infected herds		Surveillance			Investigations of suspect cases				
	Herds	Animals	Number of herds	%	Number of herds	%	Number of herds tested	Number of animals tested	Number of infected herds	Number of animals tested with serological blood tests	Number of animals positive serologically	Number of animals examined microbio logically	Number of animals positive microbio logically	Number of suspended herds
Dolnośląskie	1194	15525	1194	100	0	0	205	1122	0	0	0	0	0	0
Kujawsko-Pomorskie	859	16725	859	100	0	0	116	1166	0	0	0	0	0	0
Lubelskie	1547	17899	1547	100	0	0	152	1050	0	0	0	0	0	0
Lubuskie	447	6167	447	100	0	0	105	309	0	0	0	0	0	0
Mazowieckie	1067	10812	1067	100	0	0	183	804	0	0	0	0	0	0
Małopolskie	3007	64268	3007	100	0	0	2058	4144	0	0	0	0	0	0
Opolskie	466	3355	466	100	0	0	62	184	0	0	0	0	0	0
Podkarpackie	1574	18389	1574	100	0	0	148	947	0	0	0	0	0	0
Podlaskie	913	20346	913	100	0	0	186	903	0	0	0	0	0	0
Pomorskie	747	14574	747	100	0	0	178	1765	0	0	0	0	0	0
Warmińsko-Mazurskie	673	13762	673	100	0	0	289	795	0	0	0	0	0	0
Wielkopolskie	1164	31686	1164	100	0	0	233	3029	0	0	0	0	0	0
Zachodniopomorskie	512	10517	512	100	0	0	132	1362	0	0	0	0	0	0

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

Łódzkie	1113	16145	1113	100	0	0	233	1306	0	0	0	0	0	0
Śląskie	1136	12143	1136	100	0	0	128	651	0	0	0	0	0	0
Świętokrzyskie	1165	6377	1165	100	0	0	150	631	0	0	0	0	0	0
Total : [1)]	17584	278690	17584	100	0	0	4558	20168	0	0	0	0	0	0

Comments:

[1)] N.A.

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

If present, the row "Total -1" refers to analogous data of the previous year.

Region	Total number of existing bovine		Officially free herds		Infected herds		Surveillance						Investigations of suspect cases								
							Serological tests			Examination of bulk milk			Information about			Epidemiological investigation					
	Herds	Animals	Number of herds	%	Number of herds	%	Number of bovine herds tested	Number of animals tested	Number of infected herds	Number of bovine herds tested	Number of animals or pools tested	Number of infected herds	Number of notified abortions whatever cause	Number of isolations of Brucella infection	Number of abortions due to Brucella abortus	Number of animals tested with serological blood tests	Number of suspended herds	Number of positive animals		Number of animals examined microbio logically	Number of animals positive microbio logically
																		Sero logically	BST		
Dolnośląskie	12630	116426	12630	100	0	0	2526	12103	0	0	0	0	14	0	0	10	0	0	0	0	0
Kujawsko-Pomorskie	30834	474413	30834	100	0	0	6167	41387	2	0	0	0	6	0	0	21	0	2	0	2	0
Lubelskie	75541	420946	75541	100	0	0	15109	40896	0	0	0	0	4	0	0	5	0	0	0	0	0
Lubuskie	4648	80411	4648	100	0	0	930	8760	0	0	0	0	1	0	0	0	0	0	0	0	0
Mazowieckie	115371	1144157	115371	100	0	0	23075	123335	1	0	0	0	11	0	0	6	0	1	0	1	0
Małopolskie	73105	234965	73105	100	0	0	14621	23957	1	0	0	0	6	0	0	36	0	1	0	1	0
Opolskie	8641	131857	8641	100	0	0	1729	10309	0	0	0	0	35	0	0	24	0	0	0	0	0
Podkarpackie	52739	130774	52739	100	0	0	10547	14219	1	0	0	0	9	0	0	22	0	1	0	1	0
Podlaskie	51200	915431	51200	100	0	0	10240	102638	0	0	0	0	5	0	0	0	0	0	0	0	0
Pomorskie	16276	201094	16276	100	0	0	3256	23522	0	0	0	0	34	0	0	51	0	0	0	0	0
Warmińsko-Mazurskie	23724	470543	23724	100	0	0	4745	49758	0	0	0	0	6	0	0	5	0	0	0	0	0
Wielkopolskie	50790	817193	50790	100	0	0	10158	71596	3	0	0	0	57	0	0	80	0	3	0	3	0

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

Zachodniopomorskie	6723	101848	6723	100	0	0	1345	12339	1	0	0	0	34	0	0	30	0	1	0	1	0
Łódzkie	58361	489868	58361	100	0	0	11673	48330	29	0	0	0	4	0	0	45	0	29	0	29	0
Śląskie	18067	133953	18067	100	0	0	3614	12259	0	0	0	0	27	0	0	22	0	0	0	0	0
Świętokrzyskie	47366	204927	47366	100	0	0	9474	14673	1	0	0	0	3	0	0	2	0	1	0	1	0
Total : [1)]	646016	6068806	646016	100	0	0	129209	610081	39	0	0	0	256	0	0	359	0	39	0	39	0

Comments:

[1)] N.A.

2.7 YERSINIOSIS

2.7.1 General evaluation of the national situation

A. Yersinia enterocolitica general evaluation

History of the disease and/or infection in the country

There is no system of registration of cases of yersiniosis in animals, therefore it is not possible to carry out historical analisis of the disease.

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

There was no monitoring programme of Yersinia enterocolitica carried out in Poland. In 2009 no animal was tested for yersinosa.

In 2008 only 15 samples taken from animals were tested. Therein 2 samples from hares and 13 from chinchillas. 3 samples was positive, 2 from hares and 1 from chinchillas. Only sample taken from chinchillas was determined as Yersinia enterocolitica, others were unspecified.

There was significant decreased of positive samples for Yersinia spp. comparing to 2007. In 2007, 16 samples taken from animals were examined and therein 9 samples was positive.

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

In Poland no official control examinations were carried out for detection of Yersinia enterocolitica in the foodstuffs of animal origin.

In 2008 only 6 samples were taken from meat products from pig meat. The Yersinia spp. wasn't found. Whereas in 2007, 5 samples were taken by the operator from bovine meat products and none of them were positive.

In 2010 the food has not be examinated in direction Yersinia.

2.7.2 Yersiniosis in humans

A. Yersinosis in humans

Reporting system in place for the human cases

Information was direct to ECDC.

2.7.3 Yersinia in animals

A. Yersinia enterocolitica in pigs

Monitoring system

Sampling strategy

Animals at farm

There is no monitoring system in pigs existing for Y.enterocolitica in Poland.

Animals at slaughter (herd based approach)

There is no monitoring system in pigs existing for Y.enterocolitica in Poland.

Control program/mechanisms

The control program/strategies in place

There was no active monitoring of yersiniosis of pigs carried out in Poland in reporting year.

Table Yersinia in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Units tested	Total units positive for Yersinia	Y. enterocolitica	Y. pseudotuberculosis	Yersinia spp., unspecified
Solipeds, domestic	RVL	Unspecified	Industry sampling	animal sample > faeces		Animal	1	0			
Dogs	RVL	Unspecified	Industry sampling	animal sample > faeces		Animal	2	0			
Cats	RVL	Unspecified	Industry sampling	animal sample > faeces		Animal	2	0			
Wild animals	RVL	Unspecified	Industry sampling	animal sample > faeces		Animal	24	0			

	Y. enterocolitica - O:3	Y. enterocolitica - O:9	Y. enterocolitica - unspecified
Solipeds, domestic			
Dogs			
Cats			
Wild animals			

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

In Poland 2 major reservoirs of Trichinella spiralis are pigs and wild boars. Meat derived from these animals is a main source of infection for people. After introducing of obligatory post mortem inspection of pigs, wild boars, horses and coypus for Trchinella spp. number of human trichinellosis decreased considerably.

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

Trichinellosis is an obligatory registrated disease, according to Annex 3 of The Act of 11 March 2004 on animal health protection and eradication of infectious animal diseases (Dz. U. No. 69, item 625, as amended).

Currently, all slaughtered pigs, boars, horses and coypus shall be examined for the evidence of Trichinella spp.

In 2008 the number od positive results of Trichinella spp. increased and carried 524 positive findings from 103 612 carcasses wild boars tested.

In 2007, there was 52 cases of trichinellosis in pigs which means almost twofold increase in comparison to 2006. 235 positive findings of Trichinella spp. in wild boars in 2007 means significantly decrease with comparison to 2006.

In 2006 28 cases of trichinnelosis in pigs and 321 in wild boars was notified.

In 2009 was found for Trichinella only 13 positive result in pigs. It's quite significant decreased the number of trichinellosis in pigs.

However, we observed a high number of trichinellosis in wild boars population. It could results of tested all boars by pooled sample digestion, which is more sensitive.

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

In compared to 2007, in the 2008 the number of Trichinella spp. in pigs increased to 69 positive results. We observed almost twofold increase in number of trichinellosis in pigs in 2007 compared to 2006 had an effect in more than twofold increase in number of trichinellosis in human. In 2007, 292 of human trichinellosis was notified, in 2006 - 132 cases (data from "Reports on cases of infectious diseases and poisonings in Poland").

Additional information

All pigs and coypus slaughtered for domestic use as well as all wild boars hunter must be submited to examination for presense of Trichinella sp. performed by official veterinarian in the way described in Regulation 2075/2005.

Detailed proceedings is described in Ordinance of Minister of Agriculture and Rural Develeopment from 9 July 2007 on veterinary requirement for production of meat intended for domestic use.

2.8.2 Trichinellosis in humans

A. Trichinellosis in humans

Reporting system in place for the human cases

Information was direct to ECDC.

2.8.3 Trichinella in animals

A. Trichinella in horses

Monitoring system

Sampling strategy

Examination of all slaughtered horses for Trichinella at slaughterhouse in accordance with meat hygiene regulation.

Frequency of the sampling

Shall be sampled each carcass.

Type of specimen taken

According to EU legislation (Regulation 2075/2005).

Case definition

An animal is considered positive in case of detection and identification of Trichinella larvae in the muscle sample.

Results of the investigation including the origin of the positive animals

No positive findings in 2008 from 35612 carcasses examined.
In 2009 there was no positive result for Trichinella from 42 554 carcasses examined.
In 2010 there was no positive result for Trichinella in horses.

Measures in case of the positive findings or single cases

Carcass is destroyed.

Notification system in place

Each case of trichinellosis must be obligatory registered in accordance with Annex 3 of The Act of 11 March 2004 on animal health protection and eradication of infectious animal diseases (OJ No. 213, item1342, as amended).

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

No cases of trichinellosis in horses was notified in prevoius years. Also no cases was observed in 2007.
In 2010 and 2009 no cases of trichinellosis in domestic solipeds was found.

B. Trichinella in pigs

Number of officially recognised Trichinella-free holdings

None of the holding in Poland is recognised as officially Trichinella - free.

Monitoring system

Sampling strategy

General

Examination for Trichinella spp. of all slaughtered pigs at slaughterhouse under meat hygiene law (Regulation 2075/2005).
Reference method to detection is magnetic stirrer method for pooled sample digestion.

Frequency of the sampling

General

Shall be tested each pig carcass.

Type of specimen taken

General

According to EU legislation (Regulation 2075/2005).

Methods of sampling (description of sampling techniques)

General

Reference method to detection is magnetic stirrer method for pooled sample digestion.

Case definition

General

An animal is considered positive in case of detection and identification of Trichinella larvae in the muscle sample.

Diagnostic/analytical methods used

General

In all slaughterhouse is practise method for pooled sample digestion in accordance with regulation 2075/2005.

Preventive measures in place

All carcasses must be sampled and may not leave the premises, before the results for Trichinella examination is found to be negative.

Measures in case of the positive findings or single cases

Carcass is destroyed.

Notification system in place

Trichinellosis is an obligatory registrated disease.

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

In 2008 from 20 027 092 of pigs' carcasses tested, 69 were positive for Trichinella spp.
In 2009 from 17 799 002 carcasses tested only 13 were found to be positive.
In 2010 from 19 730 521 carcasses tested only 12 were found to be positive.

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

In 2008 from 20 027 092 pig's carcasses were tested, among which 69 were positive for Trichinella spp. Whereas in 2007, 23 015 105 pig carcases were tested, among which 52 were positive for Trichinella spp. In comparision to 2006 almost twofold increase in positive cases of trichinellosis was observed.
In 2009 was observed decreased trend for Trichinella. In comparison to 2008 the number of positive results was decreased. In 2010 the number of positive results in pigs were smaller then in 2009. Also, in 2010, 1 positive results was found in badger and 3 in animals that are a combination of pig and wild boar.

Additional information

BOARS - reference method to detection is magnetic stirrer method for pooled sample digestion and all boars were tested this method.

Also 4 positive results were found in other animals -świniodzik (it's mix boar and pig).

Table Trichinella in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Units tested	Total units positive for Trichinella	T. spiralis	Trichinella spp., unspecified
Pigs - fattening pigs - not raised under controlled housing conditions - at slaughterhouse - Surveillance [1)]	NRL	Unspecified	Official sampling	food sample > meat		Batch	5	5	5	
Pigs - breeding animals - not raised under controlled housing conditions - sows and boars - at slaughterhouse - Surveillance [2)]	NRL	Unspecified	Official sampling	food sample > meat		Batch	3	3	3	
Wild boars - wild - Surveillance [3)]	RVI/NRL	Unspecified	Not applicable	food sample > meat		Animal	86940	447	85	362
Foxes - Monitoring	NRL	Objective sampling	Official sampling	food sample > meat		Batch	973	32	6	26

Comments:

[1)] pooled sample digestion

[2)] pooled sample digestion

[3)] pooled sample digestion

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

In Poland there is no existing examination programme carried out among main hosts of echinococcus or obligation to eradicate or registrate cases of echinococcosis. Pursuant to Annex 5 to Act on protection of animal health and eradication of animal infectious diseases (Journal of Laws, No 213 item 1342 as amended),echinococcosis and agents thereof is under obligatory monitoring in Poland.
Testing for detection of echincoccus is a part of post-mortem inspection of slaughter animals. It is a visual inspection of the internal organs of the slaughtered animals acompanied by cuts of liver if necessary. The Echincoccus is not routinely distinguished by species.

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

In 2002 there were 867 105 cases found, and in 2003 there were 974 429 cases, which indicated that there was a rising trend in the cases found in the slaughter animals.
In 2004 from 1 280 960 cattle slaughtered there were 140 cases of echincoccus, in 29 862 sheeps 6 300 cases, in 223 goats 30, in 19 766 359 pigs 989 760 cases. There were 996 230 cases of echincoccus diagnosed in the slaughter animals.
In 2005, there were 46 cases among 1 138 273 cattle slaughtered and 484 505 cases among pigs slaughtered. There was none case of echinococcus in solipeds.
In 2006 there were only 16 cases among 1 426 765 cattle slaughtered, 1309 cases among 21 266 sheeps slaughtered and 744 260 cases among 21 985 532 pigs slaughtered.
In 2007 there were total 368 242 of positive cases out of 19 612 093 animals checked during post mortem inspection in slaughterhouses. There were 366 588 positive cases in pigs (1.97%), 1570 cases in sheep (8.86%), 58 cases in cattle (0.0064%) and 26 cases in minks(0.064%).
In 2008 there were total 409 561 positive cases out of 21 571 761 animal checked during post-mortem inspection in slaughterhouses. Certified 154 positive samples of bovine, 1426 cases in sheeps and 407 981 positive findings of Echinococcus spp. in pigs.
In addition 171 dogs, 84 cats and 15 minks were tested- none of them was positive.

In 2009, there was only information about echinococcus in pigs. From 17 799 002 examined in slaughterhouse the 84 694 were found with echinoccocus.
According to information from NRL, we observed increase prevalence of Echinococcus.
In 2010, 157081 echinococcus were found in 19 730 521 pigs tested in slughterhouse.
Veterinarians have no obligation to send the samples from the slaughterhouse in order to check the Echinococcus species. From our own research carried out by the NRL that occurs mostly in swine E. granulosus.

Additional information

In 2009, NRL prepared programme evaluation prevalence echinococcus in foxes and pigs. Samples were taken from west voivodeships in Poland. Type of samples were: foxes- small intestine and pigs -tissue. Method of sampling- sedimentation and counting technique.
In 2010 samples from red foxes were taken from małopolskie, śląskie and opolskie voivodeships. type of samples was intestine.

2.9.2 Echinococcosis in humans

A. Echinococcus spp. in humans

Reporting system in place for the human cases

Information was direct to ECDC.

2.9.3 Echinococcus in animals

Table Echinococcus in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Echinococcus	E. granulosus	E. multilocularis
Pigs - at slaughterhouse - Surveillance	NRL	Selective sampling	Not applicable	animal sample > organ/tissue		Animal	Polska	370	7	5	2
Foxes - Monitoring	NRL	Objective sampling		animal sample > organ/tissue		Animal	Polska	250	10		10
Pigs - at slaughterhouse - Surveillance	RVI	Census	Official sampling	animal sample > organ/tissue		Animal	Polska	20394971	105271		

	Echinococcus spp., unspecified
Pigs - at slaughterhouse - Surveillance	
Foxes - Monitoring	
Pigs - at slaughterhouse - Surveillance	105271

Footnote:

Foxes monitoring:

sampling strategy:objective sampling (foxes obtained by hunting)
sample type- organ/tissue= small intestines

2.10 TOXOPLASMOSIS

2.10.1 General evaluation of the national situation

A. Toxoplasmosis general evaluation

History of the disease and/or infection in the country

Toxoplasmosis is an obligatory registrated disease, according to the Act of 11 March 2004 on animal health protection and eradication of infectious animal diseases (Dz. U. No. 69, item 625, as amended). There is no active monitoring of toxoplasmosis in animals carried out in Poland. In animals, surveillance relates to the examination of the samples received for diagnostic reasons to regional veterinary laboratories by private owners or breeders.

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

The information obtained from private veterinary laboratory and regional veterinary laboratory in 2010 in direction to toxoplsmosis only one cat was tested and the results was negative.
In 2009 only positive results were found in pigs. There was no information about cases in other domestic animal or pets.
In 2008, 906 samples were tested and Toxoplasma gondii was detected in 190 cases. Certified 26 positive samples in cattle, 60 cases in sheeps, 59 positive results in pigs and 45 in cats.
There was upwards tendency in 2008 comparing to 2007 and 2006.
In 2007 only samples taken from cats were submited to examination - none of the sample was positive.
In 2006 there was 1 positive case of toxoplasmosis in cattle, 1 case in dog and 3 cases in cats.

Additional information

In 2009 National Reference Laboratory in Puławy was conducting sampling in west region of Poland. During this plan 550 pigs and 400 cattles were tested. All samples were tested serological as well as by PCR.
In 2011 the NRL, was studied in the direction of T. gondii population of pigs and cattle from selected regions of Poland (the cycle of research, which eventually will cover all over the country). Serological tests for the presence of T. gondii-specific antibody test was performed using DA. We examined 500 serum samples of pigs: 300 samples of kujawsko-pomorskie voivodeship, 105 samples from pomorskie voivodeship and 95 samples from wielkopolskie voivodeship. Overall, the results were positive in 10.2% of the pigs. We examined 400 serum samples from cattle: 134 samples from kujawsko-pomorskie voivodeship, 190 samples from pomorskie voivodeship and 95 samples from wielkopolskie voivodeship. A positive resluts were found in 14.8% of cattle tested. Higher percentages of positive results were observed among animals from small holdings than large one. The presence of specific antibodies may indicate the presence of tissue cysts of the parasite.

2.10.2 Toxoplasmosis in humans

A. Toxoplasmosis in humans

Reporting system in place for the human cases

Information was direct to ECDC.

2.10.3 Toxoplasma in animals

Table Toxoplasma in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Analytical Method	Sampling unit	Units tested	Total units positive for Toxoplasma	T. gondii	Toxoplasma spp., unspecified
Cattle (bovine animals) - at farm - Monitoring	NRL	Selective sampling		animal sample > blood		Direct agglutination (DA)	Animal	400	59	59	
Pigs - at farm - Monitoring	NRL	Selective sampling		animal sample		Direct agglutination (DA)	Animal	500	51	51	
Cats - Clinical investigations	RVL	Unspecified	Industry sampling	animal sample > blood		Latex agglutination test (LAT)	Animal	4	2	2	
Cats - Clinical investigations	RVL	Unspecified	Industry sampling	animal sample > faeces		Immunofluorescence antibody test (IFAT)	Animal	31	0		
Cats - Clinical investigations	NRL	Selective sampling		animal sample > blood		Immunofluorescence antibody test (IFAT)	Animal	107	80	80	

2.11 RABIES

2.11.1 General evaluation of the national situation

A. Rabies general evaluation

History of the disease and/or infection in the country

In the interwar period and in the first years after the World War II, urban rabies dominated on the Polish territory , and the main vector of rabies were dogs. Strict control of the population of stray dogs and the introduction (since 1949) of an obligatory vaccination against rabies caused adaptation of virus to the new host, namely red fox. Universality of a new host, as in other European countries, led to a spread of so-called forest rabies. Irrespective of the above, the vaccinations reduced this disease in Poland to a great extent. In 1946, 3600 cases of rabies in animals were found, and in 1956 this number decreased to 73 cases. In the same period from 1 to 6 cases of rabies among wild animals were notified. In the following years, the increase of infection was noticed, in particular, in foxes. At the end of the seventies, the infections exceeded the number of infections in domestic animals. After the World War II the wave of infections shifted in the south-western direction with the average speed of 30-60 km per year. The first conceptions how to limit the number of rabies cases in foxes were to decrease the density of red fox population to a level of 0.5-0.3 animal/km. Many restrictions and imperfections of this method were the reasons to look for other methods of rabies eradication. Introduction of oral immunization of foxes was a turning point. In Poland, similar to Baltic states, an increasing number of rabies cases in raccoon dogs was observed. The description of the disease in numbers does not objectively present the risks, which are associated with rabies. The small number of cases must be examined with consideration of an area on which the infections took place.

In 1990, in Poland there were 2045 cases of rabies, including 1668 cases among wild animals (1374 cases in foxes). The biggest numbers of rabies cases was noticed in poznanskie (157), opolskie (139), koszalinskie (133), szczecinskie (130), bydgoskie (123), slupskie (103) region. There were no cases in bialskopodlaskie region and there were single cases in lubelskie, lomzynskie, lodzkie and przemyskie region.
In 1991, 2287 cases of rabies were found, including 1864 in wild animals (1513 cases in foxes). Rabies was not found in lubelskie region and single cases were in przemyskie, lodzkie, lomzynskie and krosnienskie region.
In 1992, in Poland the biggest number of 3084 cases of rabies was stated, including 2549 cases among wild animals (2079 cases in foxes). Due to this fact, in 1993, on the territory of Poland, an action of oral vaccination of living foxes against rabies was initiated.

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

In 1993, 2648 cases of rabies were stated, including 2166 in wild animals (1803 cases in foxes). In the subsequent years the following was found:
-In 1994, 2238 cases of rabies in animals, including 1788 cases in wild animals (1506 cases in foxes).
- in 1995, 1973 cases of rabies in animals, including 1528 cases of wild animals (including 1280 in foxes).
-In 1996: 2527 cases in animals, including 2064 cases in wild animals (including 1779 cases in foxes).
- in 1997, 1494 cases in animals, including 1239 cases in wild animals (including 1091 cases in foxes).
The result of the vaccinations carried out in the western part of Poland was a visible decrease of cases of rabies and even more satisfactory was lack of this infection for a long time in the regions:

zachodniopomorskie, lubuskie and dolnośląskie. In 1998, 1329 cases in animals were found, including 1120 cases in wild animals (including 927 in foxes), in 1999- 1148 cases in animals, including 721 in foxes, in 2000 there were 2224 cases found, including 1583 in foxes and in 2001 there were 2964 cases found, including 2224 in foxes. In 2002 rabies was found in 1119 animals, including 1038 cases found in wild animals (884 in foxes). The list of cases of rabies in domestic animals in 1983-2000 shows that the biggest percentage was found in cattle and next in cats and dogs. Increase in the number of cases of rabies in the short time influences the increase of the number of cases in cats, which are the indicators of the disease in foxes on a given territory. Rabies in cattle is associated with putting them out in pasture. Currently, the most serious problem of rabies is the eastern border of Poland, where the transmission of rabies from the territories of Ukraine, Belarus and Russia is visible. Poland does not have detailed information on vaccination actions against rabies carried out in the above mentioned countries.
In 2008 was visible downward tendency in positive findings of rabies. In Poland made a note of 29 of rabies in animals. The most cases were in voivodeships near eastern border of Poland.
In 2009 were confimed 8 cases of rabies. All cases were found in eastern voivodeships.

In 2010, the number of rabies cases increased again. In that year 151 cases of rabies were comfirmed, including 129 cases in wild animals (117 cases in foxes). In 2010, most rabies cases occurred in małopolskie region.

In 2011 the decrease of rabies incidence in comparison with 2010 was observed in wild animals. Simultaneously, the increase was noted in domestic animals, mainly in cattle. Number of affected wild animals decreased from 129 in 2010 to 126 in 2011 and number of affected domestic animals increased from 22 cases to 34 (8 dogs, 10 cats, 14 cattle, 1 pig, 1 stray dog).

Recent actions taken to control the zoonoses

Pursuant to the Act of 11 March 2004 on animal health protection and eradication of infectious animal diseases (Journal of Laws of 2008, No 213, item 1342 as amended), rabies is an infectious animal disease subject to obligatory eradication.
Since 2002 vaccination campaigns cover whole territory of Poland.
Pursuant to the regulation of the Ministry of Agriculture and Rural Development of 2 June 2004 on detailed rules and manner of conducting preventive vaccinations of wild foxes against rabies (Journal of Laws of 2004 No. 142, item 1509), the vaccinations of wild foxes are conducted by the voivodship veterinary officers. According to the abovementioned regulation preventive vaccinations are realized twice a year in spring and autumn campains by plane or manual distribution of the vaccine at the forest areas and everywhere, where the wild foxes live. The vaccine can be administrated once a year in the territory of o voivodeship only if rabies has not been detected in the territory of the voivodeship and in the territory of adjacent voivodeships during two following years.
To check the result of performed vaccination campaigns the monitoring tests (RFFIT, TC) for the determination of effectiveness of oral vaccination of wild foxes, are carried out based on the regulation of the Minister of Agriculture and Rural Development of 17 December 2004 determining certain diseases, manner for carrying out the control and scope of control tests of animals infections (Journal of Laws of 2004 No. 282 item 2813 as amended). According to the regulation in order to control rabies, samples of cerebral tissue, serum, and mandibles shall be taken for tests per year from 8 foxes shot at each 100 km2 of the premisses of wild foxes habitat covered by preventive vaccination. To isolate and determine the strain of the rabies virus, brain tissue of the foxes living at large, in which rabies was confirmed by laboratory tests, is sent for tests.

Monitoring test of the efficiency of oral immunization of foxes is carried out while using the following methods:
- immunofluorescence of brain imprint test for rabies (FAT),
- bone polishing of the mandible - test for the presence of tetracycline (TC),

- serum neutralisation test (RFFIT)- determination of the titre of rabies virus antibodies in the blood serum (clot from the heart or liquid from the thoracic cavity),
- collection, preparation and analysis of epidemiologic data on cases of rabies diagnosed in the territory where the vaccination was placed,
- differentiation of strains in the aspect of wild-type strain/ vaccination strain
- genotyping of strains.

Additional information

Routine diagnosis of rabies in animals of all species is carried out in laboratories as referred in article 25 of the Act of 29 January 2004 on Veterinary Inspection (Journal of Laws of 2010, No 112, item 744 as amended).
Applied tests:
- direct immunofluorescence (FAT test) of the brain imprints with monovalent anti-nucleocapside conyugate
- virus isolation on mice (MIT- mouse isolation test)
- virus isolation in the neuroblastoma cells cultures
- genotyping of isolates of rabies virus

In 2008, there were total 29 positive results of rabies, therein 1 case in dog and cat, 3 cases in cattle, 19 in foxes, 2 in raccoon dogs and 3 cases in bats.
Whereas 2007, there were 42 cases of rabies in foxes.

In 2009, 22 221 wild foxes were tested in monitoring framework.
In 2009, there were total 8 positive results of rabies including 6 cases in foxes and 2 cases in bats.
In 2010, 23 178 wild foxes were tested in monitoring framework.
In 2010, there were total 151 positive results of rabies, including 6 cases in dogs, 8 cases in cats, 4 cases in cattle, 1 case in horse, 2 cases in sheeps, 1 case in stray dog, 117 cases in foxes, 1 case in raccoon dog, 1 case in badger, 3 cases in martens, 1 case in roe deer and 6 cases in bats.

2.11.2 Rabies in humans

A. Rabies in humans

Reporting system in place for the human cases

Information was direct to ECDC.

2.11.3 Lyssavirus (rabies) in animals

A. Rabies in dogs

Monitoring system

Sampling strategy

Samples are taken only post mortem after suspicion of rabies. In case when man was bitten by a dog, District Veterinary Officer orders observation this animal during 15 days.

Type of specimen taken

Organs/tissues: ___brain_

Case definition

Positive IF test.

Diagnostic/analytical methods used

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

Vaccination policy

Pursuant to the provision of Article 56 of the Act on protection of animal health and eradication of animal infectious diseases (Journal of Laws of 2008, No 213 item 1342 as amended), dogs over 3 months old, living in the territory of the whole country and free-living foxes, shall be subject to obligatory preventive vaccination against rabies.

Measures in case of the positive findings or single cases

General provisions are set out in the Act of 11 March 2004 on animal health protection and eradication of infectious animal diseases (Journal of Laws of 2008, No 213 item 1342 as amended).
Detail procedure is described in the regulation of the Minister of Agriculture and Rural Development of 7 January 2005 on the eradication of rabies (Journal of Laws of 2005, No 13, item 103).

Notification system in place

According to Annex 2 of the Act of 11 March 2004 on animal health protection and eradication of infectious animal diseases (Journal of Laws of 2008, No 213 item 1342 as amended), suspicion or confirmation of rabies must be obligatory notified to the competent authority. Besides all cases of bitten by a dog, should be reported to launch epidemiological investigation.

Results of the investigation

Investigations of the human contacts with positive cases

District Veterinary Officer informs District Sanitary Officer about all cases of rabies in dogs and all inconclusive cases that must by conformed with test on mice.

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

Preventive vaccination of dogs influenced the reduction of the number of cases of rabies in the animals of the same species. Currently, the confirmed cases are present in dogs which were not immunized against rabies. Despite a small number of infections of the same species, 50% of all exposures of humans to infection and post-exposure vaccinations in humans is connected with dogs.
There were 4 cases of rabies in dogs in 2004, 5 cases of rabies in 2005, 4 cases in 2006, 3 cases in

2007, only 1 case in 2008 and no cases in 2009.
In 2010, 709 dogs were tested and 7 positive results were found (including 1 case in stray dog).
In 2011, 531 pet dogs were tested and 8 positive results were found. In addition 138 stray dogs were tested and 1 positive result were found.

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Cattle (bovine animals)	LUV	Suspect sampling	Official sampling	animal sample > brain		Animal	Kujawsko-Pomorskie	2	0		
Sheep	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Małopolskie	8	0		
Goats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	1	0		
Pigs	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Opolskie	1	0		
Solipeds, domestic	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubelskie	1	0		
Dogs - stray dogs	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Kujawsko-Pomorskie	4	0		
Foxes - wild - Monitoring	LVU	Census	Official sampling	animal sample > brain		Animal	Dolnośląskie	1198	0		
Badgers	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Małopolskie	1	1	1	
Badgers	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	7	2		
Badgers	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Warmińsko-Mazurskie	5	0		
Badgers	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Zachodniopomorskie	5	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Badgers	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	46	4	1	
Badgers	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Opolskie	1	0		
Badgers	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Dolnośląskie	6	0		
Badgers	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Mazowieckie	1	0		
Badgers	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Łódzkie	1	0		
Badgers	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podlaskie	4	1		
Badgers	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubuskie	3	0		
Badgers	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Pomorskie	4	0		
Badgers	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Wielkopolskie	4	0		
Badgers	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubelskie	4	0		
Bats - wild [1)]	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	153	4		4
Bats - wild [2)]	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Warmińsko-Mazurskie	16	2		2

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Bats - wild [3)]	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Mazowieckie	10	1		1
Bats - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Śląskie	4	0		
Bats - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Dolnośląskie	9	0		
Bats - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Zachodniopomorskie	2	0		
Bats - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Małopolskie	3	0		
Bats - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Kujawsko-Pomorskie	1	0		
Bats - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podlaskie	4	0		
Bats - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Opolskie	2	0		
Bats - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	4	0		
Bats - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Wielkopolskie	6	0		
Bats - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubuskie	17	0		
Bats - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Łódzkie	6	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Bats - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubelskie	5	0		
Bats - wild [4)]	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Pomorskie	64	1		1
Cats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Śląskie	83	0		
Cats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubelskie	34	0		
Cats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubuskie	13	0		
Cats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Wielkopolskie	90	0		
Cats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Małopolskie	121	7	5	
Cats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Dolnośląskie	40	0		
Cats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Łódzkie	52	0		
Cats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podlaskie	16	2		
Cats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Kujawsko-Pomorskie	32	0		
Cats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Opolskie	21	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Cats	LUV	Suspect sampling	Official sampling	animal sample > brain		Animal	Zachodniopomorskie	30	0		
Cats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	1008	10	5	
Cats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Warmińsko-Mazurskie	78	0		
Cats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	77	1		
Cats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Pomorskie	88	0		
Cats	LUV	Suspect sampling	Official sampling	animal sample > brain		Animal	Mazowieckie	215	0		
Cats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Świętokrzyskie	18	0		
Cattle (bovine animals)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Warmińsko-Mazurskie	2	1		
Cattle (bovine animals)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Wielkopolskie	2	0		
Cattle (bovine animals)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Mazowieckie	3	0		
Cattle (bovine animals)	LUV	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubelskie	1	0		
Cattle (bovine animals)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podlaskie	15	8	8	

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Cattle (bovine animals)	LUV	Suspect sampling	Official sampling	animal sample > brain		Animal	Pomorskie	1	0		
Cattle (bovine animals)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Łódzkie	1	0		
Cattle (bovine animals)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	4	2	2	
Cattle (bovine animals)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Małopolskie	6	3	3	
Cattle (bovine animals)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	37	14	13	
Dogs - pet animals	LUV	Suspect sampling	Official sampling	animal sample > brain		Animal	Śląskie	36	0		
Dogs - pet animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Wielkopolskie	33	0		
Dogs - pet animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Małopolskie	62	2	1	
Dogs - pet animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Mazowieckie	66	0		
Dogs - pet animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Dolnośląskie	27	0		
Dogs - pet animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Pomorskie	53	0		
Dogs - pet animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Świętokrzyskie	30	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Dogs - pet animals	LUV	Suspect sampling	Official sampling	animal sample > brain		Animal	Podlaskie	20	0		
Dogs - pet animals	LUV	Suspect sampling	Official sampling	animal sample > brain		Animal	Warmińsko-Mazurskie	27	0		
Dogs - pet animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Zachodniopomorskie	18	0		
Dogs - pet animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubelskie	25	0		
Dogs - pet animals	LUV	Suspect sampling	Official sampling	animal sample > brain		Animal	Opolskie	16	0		
Dogs - pet animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	58	6	2	
Dogs - pet animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	531	8	3	
Dogs - pet animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubuskie	11	0		
Dogs - pet animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Łódzkie	30	0		
Dogs - pet animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Kujawsko-Pomorskie	19	0		
Dogs - stray dogs	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Łódzkie	6	0		
Dogs - stray dogs	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Warmińsko-Mazurskie	21	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Dogs - stray dogs	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Małopolskie	12	1		
Dogs - stray dogs	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubelskie	6	0		
Dogs - stray dogs	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	138	1		
Dogs - stray dogs	LUV	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubuskie	5	0		
Dogs - stray dogs	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Mazowieckie	55	0		
Dogs - stray dogs	LUV	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	1	0		
Dogs - stray dogs	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Śląskie	12	0		
Dogs - stray dogs	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podlaskie	5	0		
Dogs - stray dogs	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Wielkopolskie	8	0		
Dogs - stray dogs	LUV	Suspect sampling	Official sampling	animal sample > brain		Animal	Opolskie	1	0		
Dogs - stray dogs	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Świętokrzyskie	2	0		
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Świętokrzyskie	30	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubelskie	86	10	10	
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubuskie	64	0		
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Wielkopolskie	138	0		
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Warmińsko-Mazurskie	110	3	3	
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	1290	81	79	
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Opolskie	31	0		
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Małopolskie	122	22	22	
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Pomorskie	126	0		
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Łódzkie	42	0		
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > caecum		Animal	Mazowieckie	104	0		
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Dolnośląskie	48	0		
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Śląskie	22	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Kujawsko-Pomorskie	61	0		
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	217	44	42	
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podlaskie	47	2	2	
Foxes - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Zachodniopomorskie	42	0		
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Lubelskie	1676	2	2	
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Wielkopolskie	2099	0		
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Opolskie	634	0		
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Polska	22299	22	22	
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Mazowieckie	2635	0		
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Podkarpackie	1388	2	2	
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Kujawsko-Pomorskie	1383	0		
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Łódzkie	1355	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Zachodniopomorskie	1306	0		
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Świętokrzyskie	845	0		
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Pomorskie	1558	0		
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Lubuskie	1048	0		
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Podlaskie	1419	0		
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Małopolskie	1240	16	16	
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Śląskie	831	1	1	
Foxes - wild - Monitoring - active	LVU	Census	Official sampling	animal sample > brain		Animal	Warmińsko-Mazurskie	1684	1	1	
Goats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	2	0		
Goats	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Zachodniopomorskie	1	0		
Hares	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	1	1	1	
Hares	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Małopolskie	1	1	1	

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Zachodniopomorskie	2	0		
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Łódzkie	6	0		
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Dolnośląskie	5	0		
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Pomorskie	10	0		
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Małopolskie	32	6	4	
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Śląskie	10	0		
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Mazowieckie	13	0		
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Wielkopolskie	10	0		
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubuskie	2	0		
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	29	3	3	
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Kujawsko-Pomorskie	1	0		
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podlaskie	8	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Warmińsko-Mazurskie	6	0		
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Opolskie	3	0		
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	144	9	7	
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Świętokrzyskie	5	0		
Marten	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubelskie	2	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Wielkopolskie	10	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	13	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Warmińsko-Mazurskie	14	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Zachodniopomorskie	9	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Dolnośląskie	9	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Łódzkie	14	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Mazowieckie	50	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Śląskie	18	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Świętokrzyskie	7	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubuskie	7	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Pomorskie	19	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	243	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Kujawsko-Pomorskie	12	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Opolskie	10	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podlaskie	3	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubelskie	18	0		
Other animals	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Małopolskie	30	0		
Other animals ((fallow deer))	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	2	1	1	
Other animals ((red deer))	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	10	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Other animals ((roe deer))	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	179	2	1	
Other animals (fallow deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Zachodniopomorskie	1	0		
Other animals (fallow deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Małopolskie	1	1	1	
Other animals (red deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Małopolskie	2	0		
Other animals (red deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Pomorskie	3	0		
Other animals (red deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Mazowieckie	1	0		
Other animals (red deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Warmińsko-Mazurskie	1	0		
Other animals (red deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	3	0		
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Śląskie	8	0		
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubuskie	3	0		
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Świętokrzyskie	3	0		
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Mazowieckie	12	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Pomorskie	23	0		
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubelskie	12	0		
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Warmińsko-Mazurskie	11	0		
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Opolskie	4	0		
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Zachodniopomorskie	8	0		
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	28	2	1	
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Kujawsko-Pomorskie	6	0		
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Łódzkie	3	0		
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Małopolskie	36	0		
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Dolnośląskie	5	0		
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podlaskie	4	0		
Other animals (roe deer)	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Wielkopolskie	13	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Pigs	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	4	1	1	
Pigs	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Warmińsko-Mazurskie	2	0		
Pigs	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podlaskie	1	1	1	
Raccoon dogs - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	91	2	2	
Raccoon dogs - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Warmińsko-Mazurskie	12	1	1	
Raccoon dogs - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	1	1	1	
Raccoon dogs - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Opolskie	2	0		
Raccoon dogs - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podlaskie	2	0		
Raccoon dogs - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Wielkopolskie	3	0		
Raccoon dogs - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Łódzkie	2	0		
Raccoon dogs - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Łódzkie	2	0		
Raccoon dogs - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Pomorskie	41	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Raccoon dogs - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubuskie	2	0		
Raccoon dogs - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Dolnośląskie	2	0		
Raccoon dogs - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Śląskie	12	0		
Raccoon dogs - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Zachodniopomorskie	4	0		
Raccoon dogs - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Kujawsko-Pomorskie	3	0		
Raccoon dogs - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Mazowieckie	5	0		
Sheep	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	12	0		
Sheep	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Zachodniopomorskie	1	0		
Sheep	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podlaskie	1	0		
Sheep	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	2	0		
Solipeds, domestic	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Warmińsko-Mazurskie	1	0		
Solipeds, domestic	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	7	0		

Table Rabies in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Region	Units tested	Total units positive for Lyssavirus (rabies)	Rabies virus (RABV)	EBLV-1
Solipeds, domestic	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Mazowieckie	3	0		
Solipeds, domestic	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Wielkopolskie	2	0		
Wild boars	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Śląskie	1	0		
Wild boars	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	9	0		
Wild boars	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	1	0		
Wild boars	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Wielkopolskie	2	0		
Wild boars	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubuskie	2	0		
Wild boars	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Lubelskie	2	0		
Wild boars	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Pomorskie	1	0		
Wolves - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podlaskie	1	0		
Wolves - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Podkarpackie	1	0		
Wolves - wild	LVU	Suspect sampling	Official sampling	animal sample > brain		Animal	Polska	2	0		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Cattle (bovine animals)		
Sheep		
Goats		
Pigs		
Solipeds, domestic		
Dogs - stray dogs		
Foxes - wild - Monitoring		
Badgers		
Badgers		2
Badgers		
Badgers		
Badgers		3
Badgers		
Badgers		
Badgers		
Badgers		
Badgers		1
Badgers		
Badgers		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Badgers		
Badgers		
Bats - wild [1)]		
Bats - wild [2)]		
Bats - wild [3)]		
Bats - wild		
Bats - wild		
Bats - wild		
Bats - wild		
Bats - wild		
Bats - wild		
Bats - wild		
Bats - wild		
Bats - wild		
Bats - wild		
Bats - wild		
Bats - wild		
Bats - wild		
Bats - wild [4)]		
Cats		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Cats		
Cats		
Cats		
Cats		2
Cats		
Cats		
Cats		2
Cats		
Cats		
Cats		
Cats		5
Cats		
Cats		1
Cats		
Cats		
Cats		
Cattle (bovine animals)		1
Cattle (bovine animals)		
Cattle (bovine animals)		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Cattle (bovine animals)		
Cattle (bovine animals)		
Cattle (bovine animals)		
Cattle (bovine animals)		
Cattle (bovine animals)		
Cattle (bovine animals)		
Cattle (bovine animals)		1
Dogs - pet animals		
Dogs - pet animals		
Dogs - pet animals		1
Dogs - pet animals		
Dogs - pet animals		
Dogs - pet animals		
Dogs - pet animals		
Dogs - pet animals		
Dogs - pet animals		
Dogs - pet animals		
Dogs - pet animals		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Dogs - pet animals		4
Dogs - pet animals		5
Dogs - pet animals		
Dogs - pet animals		
Dogs - pet animals		
Dogs - stray dogs		
Dogs - stray dogs		
Dogs - stray dogs		1
Dogs - stray dogs		
Dogs - stray dogs		1
Dogs - stray dogs		
Dogs - stray dogs		
Dogs - stray dogs		
Dogs - stray dogs		
Dogs - stray dogs		
Dogs - stray dogs		
Dogs - stray dogs		
Foxes - wild		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Foxes - wild		
Foxes - wild		
Foxes - wild		
Foxes - wild		
Foxes - wild		2
Foxes - wild		
Foxes - wild		
Foxes - wild		
Foxes - wild		
Foxes - wild		
Foxes - wild		
Foxes - wild		
Foxes - wild		
Foxes - wild		2
Foxes - wild		
Foxes - wild		
Foxes - wild - Monitoring - active		
Foxes - wild - Monitoring - active		
Foxes - wild - Monitoring - active		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Foxes - wild - Monitoring - active		
Foxes - wild - Monitoring - active		
Foxes - wild - Monitoring - active		
Foxes - wild - Monitoring - active		
Foxes - wild - Monitoring - active		
Foxes - wild - Monitoring - active		
Foxes - wild - Monitoring - active		
Foxes - wild - Monitoring - active		
Foxes - wild - Monitoring - active		
Foxes - wild - Monitoring - active		
Foxes - wild - Monitoring - active		
Foxes - wild - Monitoring - active		
Foxes - wild - Monitoring - active		
Goats		
Goats		
Hares		
Hares		
Marten		
Marten		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Marten		
Marten		
Marten		2
Marten		
Marten		
Marten		
Marten		
Marten		
Marten		
Marten		
Marten		
Marten		
Marten		
Marten		2
Marten		
Marten		
Other animals		
Other animals		
Other animals		
Other animals		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Other animals		
Other animals		
Other animals		
Other animals		
Other animals		
Other animals		
Other animals		
Other animals		
Other animals		
Other animals		
Other animals		
Other animals		
Other animals		
Other animals ((fallow deer))		
Other animals ((red deer))		
Other animals ((roe deer))		1
Other animals (fallow deer)		
Other animals (fallow deer)		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Other animals (red deer)		
Other animals (red deer)		
Other animals (red deer)		
Other animals (red deer)		
Other animals (red deer)		
Other animals (roe deer)		
Other animals (roe deer)		
Other animals (roe deer)		
Other animals (roe deer)		
Other animals (roe deer)		
Other animals (roe deer)		
Other animals (roe deer)		
Other animals (roe deer)		
Other animals (roe deer)		
Other animals (roe deer)		
Other animals (roe deer)		1
Other animals (roe deer)		
Other animals (roe deer)		
Other animals (roe deer)		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Other animals (roe deer)		
Other animals (roe deer)		
Other animals (roe deer)		
Pigs		
Pigs		
Pigs		
Raccoon dogs - wild		
Raccoon dogs - wild		
Raccoon dogs - wild		
Raccoon dogs - wild		
Raccoon dogs - wild		
Raccoon dogs - wild		
Raccoon dogs - wild		
Raccoon dogs - wild		
Raccoon dogs - wild		
Raccoon dogs - wild		
Raccoon dogs - wild		
Raccoon dogs - wild		
Raccoon dogs - wild		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Raccoon dogs - wild		
Raccoon dogs - wild		
Sheep		
Sheep		
Sheep		
Sheep		
Solipeds, domestic		
Solipeds, domestic		
Solipeds, domestic		
Solipeds, domestic		
Wild boars		
Wild boars		
Wild boars		
Wild boars		
Wild boars		
Wild boars		
Wild boars		
Wolves - wild		
Wolves - wild		

Table Rabies in animals

	EBLV-2	Lyssavirus (unspecified virus)
Wolves - wild		

Comments:

[1)] surveillance

[2)] surveillance

[3)] surveillance

[4)] surveillance

Footnote:

LVU= local veterinary unit

2.12 STAPHYLOCOCCUS INFECTION

2.12.1 General evaluation of the national situation

2.12.2 Staphylococcus in animals

A. Staphylococcus in Animals

Monitoring system

Sampling strategy

From October 2011 to April 2012 from 78 pig farms 234 pooled dust samples and 234 pooled nasal swabs were collcted. From each farm with closed production cycle 5 dust samples and 5 nasal swabs were taken from each 3 sectors: reproduction unit (sows), nursery (weaners) and fattening unit (15 nasal swabs and 15 dust samples). Samples were taken by the veterinarians taking care of the farm and Department of Swine Diseases (NVRI) staff (bacteriology section).

Type of specimen taken

Other: sterile dry swabs and nasal swabs with transport medium

Methods of sampling (description of sampling techniques)

The dust samples and nasal swabs were pooled into 100 ml of Mueller-Hinton broth supplemented with 6.5% NaCl and incubated at 37ºC for 16-20 h. One milliliter of the culture was inoculated into 9 ml Tryptone Soy broth supplemented with antibiotics (3.5 mg/l cefoxitin and 75 mg/l aztreonam) and incubated for further 16-20 h at 37ºC. After incubation one loop-fool was spread onto a chromogenic agar selective to MRSA and incubated for 24-48 h at 37ºC. Based on colony morphology and color, suspected bacteria were subcultivated on 5% horse blood agar.

Diagnostic/analytical methods used

RFLP, PFGE, MLST, spa-typing, defining the type of cassette SCCmec, define of gene agr polymorphism and defining of virulence genes sea-u, tst, lukPVSF, eta, etb, etd, multiplex PCR (mecA gene) according to CRL-AR in Copenhagen, Denmark (website: www.crl-ar.eu).

Results of the investigation

Total units positive for Staphylococcus:
-dust samples - 10 for MRSA; 79 for MRCNS; 20 for MSSA
- nasal swabs- 10 for MRSA; 28 for MRCNS; 40 for MSSA

Total units positive for MRSA: 11 farms positive to MRSA out of 78 tested.

2.13 Q-FEVER

2.13.1 General evaluation of the national situation

A. Coxiella burnetii (Q-fever) general evaluation

History of the disease and/or infection in the country

In Poland the first focus of Q -fever was recognised in 1956, originated from sheeps on Romania. From that year in Poland was observed a few focus in animals and humans again. Most cases were concerned with animals (sheeps, cattle, goats) or materials originated from them (leather and wool) imported to Poland.

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

In 2008, NationaL Veterinary Research Institute in Puławy was conducted multiannual programme in which 180 cattle were tested. In connection with illness in humans in lubelskie and podkarpackie voivodeships, the 950 animals were tested additionally. Therein were 453 positive units for Coxiella burnetii.
In 2009 NRL in Puławy was tested sample from cattle. Only 20 samples were positive. All samples were tested serological test -complement fixation test (CFT).
In 2010, in frame of monitoring, 5241 cattle were tested and in confirmatory tests 34 results were positive. However, 54 cases were generally positive.
In 2011 in frame of monitoring 5366 animals were tested and 5 animals were affected. In addition in clinical investigation the 73 cattle and 91 goats were positive for C. burnetii (animal sample-blood and analytical method-CFT).

Recent actions taken to control the zoonoses

Accordance with the Minister of Agriculture and Rural Development of 17 December 2005 on determining the types of diseases, how to conduct monitoring and research of infection control animals, to control the incidence of Q fever annually examining blood samples are collected from cattle or sheep and goats in an area of the district, to be able to detect seroconversion from 95% probability, assuming that infection rates in the area of the district is 20%, to conduct tests may be used blood samples taken to control brucellosis in cattle, sheep and goats.
In the event of a miscarriage study includes all of the bovine, ovine and caprine animals in the herd if:
1. number of abortions in a herd numbering less than 100 animals was at least 2 or 3 a month each year,
2. number of abortions in a herd numbering at least 100 animals was over 4% of the population in a given year.
In the event referred to in point 2 in order to confirm the blood test is taken or a fragment bearing the female genital tract swabs, subjecting them to examination by culture or PCR.
Blood sampling is performed in cows and bulls for breeding over 12 months of age, as well as sheep and goats.

Additional information

Samples were tested using the complement fixation tests.

2.13.2 Coxiella (Q-fever) in animals

Table Coxiella burnetii (Q fever) in animals

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Analytical Method	Sampling unit	Units tested	Total units positive for Coxiella (Q-fever)	C. burnetii	No of clinically affected herds
Cattle (bovine animals) - at farm - Clinical investigations							---				
Cattle (bovine animals) - at farm - Monitoring	LVU	Census	Official sampling	animal sample > blood		Complement fixation test (CFT)	Animal	814	4	4	
Sheep - at farm - Monitoring	LVU	Census	Official sampling	animal sample > blood		Complement fixation test (CFT)	Animal	3450	0		
Goats - at farm - Monitoring	LVU	Census	Official sampling	animal sample > blood		Complement fixation test (CFT)	Animal	1102	1	1	

3. INFORMATION ON SPECIFIC INDICATORS OF ANTIMICROBIAL RESISTANCE

3.1 ESCHERICHIA COLI, NON-PATHOGENIC

3.1.1 General evaluation of the national situation

A. Escherichia coli general evaluation

History of the disease and/or infection in the country

In 2008 National Veterinary Research Institute was conducted multiannual programme for E.coli. However in Poland don't exist any permanent monitoring.
In 2007 in Poland there was no permanent monitoring of antimicrobial resistance of indicatory bacteria originating from animals an food.

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

Samples are taken in framework industry HACCP. In 2010 no information from veterinary laboratory for research in direction of antimicrobial susceptibility E. coli. In 2009, 2008 and 2007, only isolates in food originated from animals were examined.

Additional information

For the surveys the diffusion method was used. To all antimicrobials tested, zone diameter averaged from 11 to 20 mm. Besides all antimicrobials were indicated intermediate susceptibility.

In 2009 , 3786 samples were examined, and none of them was positive. Products which were tested e.g.: meat from broilers-fresh, meat from turkey- fresh, pork-fresh, meat from bovine -fresh.

3.1.2 Escherichia coli, non-pathogenic in animals

A. E.coli in animal

Monitoring system

Sampling strategy

National Veterinary Research Institute in 2008 was conducted multiannual programme for E.coli. Samples were taken from animals at slaughterhouses by the official veterinarians and subjected to the laboratory by district veterinary officers.

Methods of sampling (description of sampling techniques)

Samples were taken from animals at slaughterhouses. The official veterinarians were taken cutting of muscular tissue and subjected to the laboratory by district veterinary officers.

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

2008-A total of 354 e.coli isolates comprising of 176 isolates from cattle, 91 isolates from pigs, 45 from tyrkeys and 42 from broilers.
Cattle: 16 of the e.coli isolates were resistant to at least 1 of the antimicrobial agents tested. Overall, 2 of the isolates were multi-drug resistant.
Pigs: 13 of the e.coli isolates were resistant to at least 1 of the antimicrobial agents tested. Overall, 1 of the isolates were multi-drug resistant.
Turkeys: 7 of the e.coli isolates were resistant to at least 1 of the antimicrobial agents tested. Overall, 22 of the isolates were multi-drug resistant.
Broilers: 7 of the e.coli isolates were resistant to at least 1 of the antimicrobial agents tested. Overall, 15 of the isolates were multi-drug resistant.
Resistence was highest in the turkeys, folowed by broilers, cattle and pigs.
Resistance to tetracykline and ampicilin was significantly highest in the isolates from cattle , turkeys and broilers. Isolates from broilers and turkeys were significantly more resistance to nalidixic acid, sulfonamide and trimethoprim than those from cattle and pigs.

2009- Antimicrobial susceptibity was testingin five animal species: cattle, pigs, broiler, laying hens and turkey. E. coli the most is resistance in broiler and turkey flocks for tetracycline, ampicillin and ciprofloxacin. E. coli isolated in cattle is most susceptibility.

3.1.3 Antimicrobial resistance in Escherichia coli, non-pathogenic

Table Antimicrobial susceptibility testing of E. coli in Cattle (bovine animals)

Escherichia coli, non-pathogenic	E.coli, non-pathogenic, unspecified	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	173	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	173	0
Aminoglycosides - Streptomycin	173	10
Amphenicols - Chloramphenicol	173	1
Fluoroquinolones - Ciprofloxacin	173	4
Penicillins - Ampicillin	173	10
Quinolones - Nalidixic acid	173	2
Sulfonamides	173	23
Tetracyclines - Tetracycline	173	11
Trimethoprim	173	7
Fully sensitive	173	141
Resistant to 1 antimicrobial	173	17
Resistant to 2 antimicrobials	173	5
Resistant to 3 antimicrobials	173	3
Resistant to 4 antimicrobials	173	5
Resistant to >4 antimicrobials	173	2
Cephalosporins - Cefotaxime	173	2
Cephalosporins - Ceftazidim	173	1

Table Antimicrobial susceptibility testing of E. coli in Cattle (bovine animals)

Footnote:

sulfonamides = sulfonamide

isolates out of adult animals at slaughter

Table Antimicrobial susceptibility testing of E. coli in Pigs

Escherichia coli, non-pathogenic	E.coli, non-pathogenic, unspecified	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	172	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	172	6
Aminoglycosides - Streptomycin	172	81
Amphenicols - Chloramphenicol	172	12
Fluoroquinolones - Ciprofloxacin	172	16
Penicillins - Ampicillin	172	46
Quinolones - Nalidixic acid	172	10
Sulfonamides	172	69
Tetracyclines - Tetracycline	172	71
Trimethoprim	172	31
Fully sensitive	172	61
Resistant to 1 antimicrobial	172	27
Resistant to 2 antimicrobials	172	20
Resistant to 3 antimicrobials	172	19
Resistant to 4 antimicrobials	172	15
Resistant to >4 antimicrobials	172	30
Cephalosporins - Cefotaxime	172	6
Cephalosporins - Ceftazidim	172	2

Table Antimicrobial susceptibility testing of E. coli in Pigs

Footnote:

sulfonamides =sulfonamide
isolates out of fattening pigs at slaughter

Table Antimicrobial susceptibility testing of E. coli in Gallus gallus (fowl)

Escherichia coli, non-pathogenic	E.coli, non-pathogenic, unspecified	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	170	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	170	10
Aminoglycosides - Streptomycin	170	80
Amphenicols - Chloramphenicol	170	23
Fluoroquinolones - Ciprofloxacin	170	141
Penicillins - Ampicillin	170	124
Quinolones - Nalidixic acid	170	133
Sulfonamides	170	90
Tetracyclines - Tetracycline	170	111
Trimethoprim	170	67
Fully sensitive	170	7
Resistant to 1 antimicrobial	170	6
Resistant to 2 antimicrobials	170	20
Resistant to 3 antimicrobials	170	26
Resistant to 4 antimicrobials	170	22
Resistant to >4 antimicrobials	170	89
Cephalosporins - Cefotaxime	170	10
Cephalosporins - Ceftazidim	170	10

Table Antimicrobial susceptibility testing of E. coli in Gallus gallus (fowl)

Footnote:

tabele concerning broilers at slaughter

Table Antimicrobial susceptibility testing of E. coli in Turkeys

Escherichia coli, non-pathogenic	E.coli, non-pathogenic, unspecified	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	171	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	171	33
Aminoglycosides - Streptomycin	171	93
Amphenicols - Chloramphenicol	171	39
Fluoroquinolones - Ciprofloxacin	171	112
Penicillins - Ampicillin	171	128
Quinolones - Nalidixic acid	171	105
Sulfonamides	171	103
Tetracyclines - Tetracycline	171	127
Trimethoprim	171	68
Fully sensitive	171	19
Resistant to 1 antimicrobial	171	9
Resistant to 2 antimicrobials	171	10
Resistant to 3 antimicrobials	171	16
Resistant to 4 antimicrobials	171	23
Resistant to >4 antimicrobials	171	94
Cephalosporins - Cefotaxime	171	7
Cephalosporins - Ceftazidim	171	6

Table Antimicrobial susceptibility testing of E. coli in Turkeys

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic in Other poultry (laying flocks)

Escherichia coli, non-pathogenic	E.coli, non-pathogenic, unspecified	
Isolates out of a monitoring program (yes/no)	yes	
Number of isolates available in the laboratory	154	
Antimicrobials:	N	n
Aminoglycosides - Gentamicin	154	5
Aminoglycosides - Streptomycin	154	23
Amphenicols - Chloramphenicol	154	6
Cephalosporins - Cefotaxime	154	5
Fluoroquinolones - Ciprofloxacin	154	72
Penicillins - Ampicillin	154	50
Quinolones - Nalidixic acid	154	59
Sulfonamides	154	33
Tetracyclines - Tetracycline	154	46
Trimethoprim	154	20
Cephalosporins - Ceftazidim	154	5
Fully sensitive	154	61
Resistant to 1 antimicrobial	154	10
Resistant to 2 antimicrobials	154	28
Resistant to 3 antimicrobials	154	13
Resistant to 4 antimicrobials	154	13
Resistant to >4 antimicrobials	154	29

Table Antimicrobial susceptibility testing of Escherichia coli, non-pathogenic in Other poultry (laying flocks)

Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Cattle (bovine animals) - at slaughterhouse - Surveillance - Unspecified - Not applicable - unknown - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

E.coli, non-pathogenic, unspecified	Cattle (bovine animals) - at slaughterhouse - Surveillance																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	173																							
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	173	0						1	61	99	12												0.3	32
Aminoglycosides - Streptomycin	16	173	10									1	21	123	18		2		8					2	128
Amphenicols - Chloramphenicol	16	172	0									8	143	20	1									2	64
Amphenicols - Florfenicol		173	173									14	140	19										2	64
Cephalosporins - Cefotaxime	0.25	173	2				143	28		1		1												0.1	4
Fluoroquinolones - Ciprofloxacin	0.03	173	4	8	125	36	1							2	1									0.01	8
Penicillins - Ampicillin	8	173	10							1	25	93	44				10							0.5	32
Quinolones - Nalidixic acid	16	173	2										171					2						4	64
Sulfonamides	256	173	23											58	54	26	9		3	1	2	20		8	1024
Tetracyclines - Tetracycline	8	173	11								148	13		1		2	4	5						1	64
Trimethoprim	2	173	7							162	2	2		1	1		5							1	32
Cephalosporins - Ceftazidim		173	173						167	5		1												0.3	16

Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Pigs - fattening pigs - at slaughterhouse - Surveillance - Unspecified - Not applicable - unknown - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

E.coli, non-pathogenic, unspecified	Pigs - fattening pigs - at slaughterhouse - Surveillance																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	172																							
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	172	6						5	53	93	15	2	1		3								0.3	32
Aminoglycosides - Streptomycin	16	172	81										7	60	24	8	21	31	21					2	128
Amphenicols - Chloramphenicol	16	172	12									10	129	18	3	1	2	9						2	64
Amphenicols - Florfenicol		172	172									18	127	19		1		7						2	64
Cephalosporins - Cefotaxime	0.25	172	2				153	15	2	1				1										0.1	4
Fluoroquinolones - Ciprofloxacin	0.03	172	16	7	117	32		2	6	7	1													0.01	8
Penicillins - Ampicillin	8	172	46							1	43	67	14	1			46							0.5	32
Quinolones - Nalidixic acid	16	172	10										158	4		1	6	3						4	64
Sulfonamides	256	172	69											55	32	12	3		1	1	1	67		8	1024
Tetracyclines - Tetracycline	8	172	71								98	2	1		1	13	28	29						1	64
Trimethoprim	2	172	31							138	3						31							1	32
Cephalosporins - Ceftazidim		172	172						167	4		1												0.3	16

Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Poultry, unspecified - at slaughterhouse - Unspecified - Unspecified - Not applicable - unknown - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

E.coli, non-pathogenic, unspecified	Poultry, unspecified - at slaughterhouse - Unspecified																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	170																							
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	170	10						1	44	90	25	1		1	3	5							0.32	32
Aminoglycosides - Streptomycin	16	170	80										12	62	16	7	16	13	44					2	128
Amphenicols - Chloramphenicol	16	170	23									15	111	21		2	3	18						2	64
Amphenicols - Florfenicol		170	170									18	109	28			2	13						2	64
Cephalosporins - Cefotaxime	0.25	170	10				123	35	2					10										0.1	4
Fluoroquinolones - Ciprofloxacin	0.03	170	141	1	17	11	1	3	41	18	6	13	7	25	27									0.01	8
Penicillins - Ampicillin	8	170	124								12	26	7	1			124							0.5	32
Quinolones - Nalidixic acid	16	170	133										31	5	1	3	21	109						4	64
Sulfonamides	256	170	90										42	24	12	1	1				5	85		8	1024
Tetracyclines - Tetracycline	8	170	111								54	4		1	1	6	56	48						1	64
Trimethoprim	2	170	67							102	1					1	66							1	32
Cephalosporins - Ceftazidim		168	168							155	6	2		2	3									0.3	16

Footnote:

broilers at slaughter

Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Turkeys - unspecified - before slaughter - at slaughterhouse - Unspecified - Unspecified - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

E.coli, non-pathogenic, unspecified	Turkeys - unspecified - before slaughter - at slaughterhouse - Unspecified																								
Isolates out of a monitoring program (yes/no)	yes																								
Number of isolates available in the laboratory	171																								
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	171	33						1	41	75	21	2	1	3	11	16							0.3	32
Aminoglycosides - Streptomycin	16	171	93										16	51	11	9	14	11	59					2	128
Amphenicols - Chloramphenicol	16	171	39									14	99	16	3	5	9	25						2	64
Amphenicols - Florfenicol		171	171									25	107	24	2		1	12						2	64
Cephalosporins - Cefotaxime	0.25	171	7				125	35	4	1	1	2	1	2										0.1	4
Fluoroquinolones - Ciprofloxacin	0.03	171	112		39	20	1	7	21	15	8	2	7	24	27									0.01	8
Penicillins - Ampicillin	8	171	128								5	33	5		1		127							0.5	32
Quinolones - Nalidixic acid	16	171	105										61	5		3	16	86						4	64
Sulfonamides	256	171	103											26	22	15	5			4	5	94		8	1024
Tetracyclines - Tetracycline	8	171	127								37	7			2	11	45	69						1	64
Trimethoprim	2	171	68							96	5	2					68							1	32
Cephalosporins - Ceftazidim		171	171						157	8	1	1	3			1								0.3	16

Table Antimicrobial susceptibility testing of E.coli, non-pathogenic, unspecified in Gallus gallus (fowl) - laying hens - before slaughter - at slaughterhouse - Unspecified - Unspecified - quantitative data [Dilution method]

Concentration (µg/ml), number of isolates with a concentration of inhibition equal to

E.coli, non-pathogenic, unspecified	Gallus gallus (fowl) - laying hens - before slaughter - at slaughterhouse - Unspecified																							
Isolates out of a monitoring program (yes/no)	yes																							
Number of isolates available in the laboratory	154																							
Antimicrobials:	Cut-off value	N	n	<=0.008	0.015	0.03	0.06	0.12	0.25	0.5	1	2	4	8	16	32	64	128	256	512	1024	2048	>2048	lowest	highest
Aminoglycosides - Gentamicin	2	154	5						1	33	96	19	1	1	2		1							0.3	32
Aminoglycosides - Streptomycin	16	154	23										12	99	20	4	2	6	11					2	128
Amphenicols - Chloramphenicol	16	154	6									16	112	18	2	1		5						2	64
Amphenicols - Florfenicol		154	154									15	114	19	2			4						2	64
Cephalosporins - Cefotaxime	0.25	154	5				122	27				1		4										0.1	4
Fluoroquinolones - Ciprofloxacin	0.03	154	72	1	52	29		6	23	18	2	5	1	7	10									0.01	8
Penicillins - Ampicillin	8	154	50								15	70	19		1	1	48							0.5	32
Quinolones - Nalidixic acid	16	154	59										90	4	1	2	14	43						4	64
Sulfonamides	256	154	33											50	44	20	4	2	1	1	3	29		8	1024
Tetracyclines - Tetracycline	8	154	46								96	6	4	2	2	3	25	16						1	64
Trimethoprim	2	154	20							129	2	3	1				19							1	32
Cephalosporins - Ceftazidim		154	154						143	6	1	1	2	1										0.3	16

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

Test Method Used	Standard methods used for testing

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

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

Test Method Used	Standard methods used for testing

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

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

Test Method Used	Standard methods used for testing

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

3.2 ENTEROCOCCUS, NON-PATHOGENIC

3.2.1 General evaluation of the national situation

3.2.2 Antimicrobial resistance in Enterococcus, non-pathogenic isolates

Table Cut-off values for antibiotic resistance of E. faecalis in Animals

Test Method Used	Standard methods used for testing

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

Table Cut-off values for antibiotic resistance of E. faecalis in Animals

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Tetracyclines	Tetracycline		2	

Table Cut-off values for antibiotic resistance of E. faecalis in Feed

Test Method Used	Standard methods used for testing

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

Table Cut-off values for antibiotic resistance of E. faecalis in Food

Test Method Used	Standard methods used for testing

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

Table Cut-off values for antibiotic resistance of E. faecium in Animals

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		32	
	Streptomycin		128	
Amphenicols	Chloramphenicol		32	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin		4	
Macrolides	Erythromycin		4	
Oxazolidines	Linezolid		4	
Penicillins	Ampicillin		4	
Streptogramins	Quinupristin/Dalfopristin		1	
Tetracyclines	Tetracycline		2	

Table Cut-off values for antibiotic resistance of E. faecium in Feed

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		32	
	Streptomycin		128	
Amphenicols	Chloramphenicol		32	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin		4	
Macrolides	Erythromycin		4	
Oxazolidines	Linezolid		4	
Penicillins	Ampicillin		4	
Streptogramins	Quinupristin/Dalfopristin		1	
Tetracyclines	Tetracycline		2	

Table Cut-off values for antibiotic resistance of E. faecium in Food

Test Method Used	Standard methods used for testing

			Concentration (microg/ml)	Zone diameter (mm)
		Standard	Resistant >	Resistant <=
Aminoglycosides	Gentamicin		32	
	Streptomycin		128	
Amphenicols	Chloramphenicol		32	
Glycopeptides (Cyclic peptides, Polypeptides)	Vancomycin		4	
Macrolides	Erythromycin		4	
Oxazolidines	Linezolid		4	
Penicillins	Ampicillin		4	
Streptogramins	Quinupristin/Dalfopristin		1	
Tetracyclines	Tetracycline		2	

4. INFORMATION ON SPECIFIC MICROBIOLOGICAL AGENTS

4.1 ENTEROBACTER SAKAZAKII

4.1.1 General evaluation of the national situation

4.1.2 Cronobacter in foodstuffs

Table Enterobacter sakazakii in food

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Cronobacter	Cronobacter spp, unspecified
Infant formula - dried - at retail - Surveillance	private lab	Census	HACCP and owns check	food sample		Single	333 g	112	0	

4.2 HISTAMINE

4.2.1 General evaluation of the national situation

A. Histamine General evaluation

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

There was no monitoring programme realized in Poland. The samplings were carried out mainly at the initiative of the operators as well as during the official controls in accordance with requirement set out in Regulation 2073/2005.

4.2.2 Histamine in foodstuffs

A. Histamine in foodstuffs

Monitoring system

Sampling strategy

Samples for presence of histamine were taken from fish products-fish mainly by the operators or during official controls.
Sampling by operator take place on basis HACCP or own check by industry. In Poland official veterinarians behaved accordance with General Veterinary Officer Giudelines.

Frequency of the sampling

Frequency of the sampling was described in HACCP by operator. Freqency of the sampling for official veterinarians was described by CVO Guidelines.

Definition of positive finding

>200mg/kg for fishery products from fish species associated with high amount of histidine.
>400mg/kg for fishery products which have undergone enzyme maturation in brine.

Control program/mechanisms

The control program/strategies in place

There is no official control or monitoring programme for histamine in Poland. Samples were taken by operators within the framework of internal programmes, in accordance with provisions set out in Regulation 2073/2005.

Measures in case of the positive findings or single cases

Actions are taken case-by-case, and are based on provisions set out in Regulation 2073/2005.

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

In 2010, 57 samples were tested, all results were satisfactory.
In 2009, 186 samples were tested, only 2 results were not satisfactory.
In 2008, 540 samples were tested. All results were satisfactory.
Whereas in 2007, 175 samples from fish and fish products were taken.

Table Histamine in food

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units in non-conformity	<= 100 mg/kg	>100 - <= 200 mg/kg
Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme maturated - at processing plant - Surveillance	private lab	Unspecified	Industry sampling	food sample		Single	300g	490	0	490	
Fish - Fishery products which have undergone enzyme maturation treatment in brine - at processing plant - Surveillance	RVL	Unspecified	Industry sampling	food sample		Single	10g	27	0	27	
Fishery products, unspecified - at processing plant - Surveillance [1)]	RVL	Objective sampling	Official sampling	food sample		Single	4g	140	0	140	
Fishery products, unspecified - at processing plant - Surveillance [2)]	RVL	Objective sampling	Industry sampling	food sample		Single	4g	199	0	199	
Fishery products, unspecified - at processing plant - Surveillance [3)]	RVL	Unspecified	Official and industry sampling	food sample		Single	10g	46	0	46	
Fishery products, unspecified - at processing plant - Surveillance [4)]	RVL	Census	Official sampling	food sample		Single	1000g	252	27	225	
Fishery products, unspecified - at processing plant - Surveillance [5)]	RVL	Unspecified	Industry sampling	food sample		Single	200g	9	0	9	
Fishery products, unspecified - at processing plant - Surveillance (associated with a high amount of histidine)	RVL	Unspecified	Industry sampling	food sample		Single	200g	82	5	77	5
Fishery products, unspecified - at processing plant - Surveillance (associated with a high amount of histidine)	RVL	Unspecified	Industry sampling	food sample		Single	1000g	261	8	253	8

Table Histamine in food

	>200 - <= 400 mg/kg	> 400 mg/kg
Fish - Fishery products from fish species associated with a high amount of histidine - not enzyme maturated - at processing plant - Surveillance		
Fish - Fishery products which have undergone enzyme maturation treatment in brine - at processing plant - Surveillance		
Fishery products, unspecified - at processing plant - Surveillance [1)]		
Fishery products, unspecified - at processing plant - Surveillance [2)]		
Fishery products, unspecified - at processing plant - Surveillance [3)]		
Fishery products, unspecified - at processing plant - Surveillance [4)]	18	9
Fishery products, unspecified - at processing plant - Surveillance [5)]		
Fishery products, unspecified - at processing plant - Surveillance (associated with a high amount of histidine)		
Fishery products, unspecified - at processing plant - Surveillance (associated with a high amount of histidine)		

Comments:

[1)] associated with a high amount of histidine

Table Histamine in food

Comments:

[2)] associated with a high amount of histidine

[3)] associated with a high amount of histidine

[4)] undergone enzyme maturation treatment in brine

[5)] undergone enzyme maturation treatment in brine

4.3 STAPHYLOCOCCAL ENTEROTOXINS

4.3.1 General evaluation of the national situation

A. Staphylococcal enterotoxins general evaluation

History of the disease and/or infection in the country

There is no official monitoring in place, therefore no official reports are available from previous years.
From 2007 to 2010 none of the tested samples were positive for Sataphyloccocal enterotoxins.

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

There was no monitoring programme of Staphylococcal enterotoxins carried out in Poland. The samplings were carried out as a part of the official controls and at the initiative of the operators.
Up to this time in Poland didn't note positive results for Staphyloccocal enterotoxins.

4.3.2 Staphylococcal enterotoxins in foodstuffs

A. Staphylococcal enterotoxins in foodstuffs

Monitoring system

Sampling strategy

There is no official monitoring in place. Samples are taken during official controls and by operators.
The most of samples are taken by operators.
According to insruction of CVO, number of samples taken during official controls should amount to 10% samples which were taken by FBO.

Frequency of the sampling

Food bussines operators are taken samples according to regulation No 2073/2005.
While official samples account for 10% of FBO samples.

Control program/mechanisms

The control program/strategies in place

There is no offcial control programme in place. Sampels are taken on the basis of provision set out in Regulation 2073/2005.

Measures in case of the positive findings or single cases

Improvemets in production hygiene and selection of raw material.

Notification system in place

There is no obligation to register Staphylococcal enterotixins. However results of samples examined in Regional Veterinary Laboratories are available.

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

There was no positive results for Staphyloccocal.

Additional information

In 2010 in no case was found Stapylococcal enterotoxins in food.

In 2009, 635 samples were tested, none of them were positive.

In 2008, 613 samples were tested. Most of them originated from cows' milk. It were soft, semi-soft and hard cheeses. In addition 139 dairy products were tested. None of them were positive for Staphyloccocal enterotoxins in food.
Whereas in 2007, 79 samples were taken, most of them from soft and semi-soft cheese (59), none of them were positive for Staphylococcal enterotoxins.

Table Staphylococcal enterotoxins in food

	Source of information	Sampling strategy	Sampler	Sample type	Sample Origin	Sampling unit	Sample weight	Units tested	Total units positive for Staphylococcal enterotoxins
Cheeses made from goats' milk - soft and semi-soft - made from pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	30	0
Cheeses made from goats' milk - hard - made from pasteurised milk - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	15	0
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	NRL	Unspecified		unknown		Single	25g	6	0
Cheeses made from cows' milk - hard - made from raw or low heat-treated milk	NRL	Unspecified		food sample		Single	25g	16	0
Cheeses made from cows' milk - soft and semi-soft - made from pasteurised milk - Surveillance [1)]	NRL	Unspecified		food sample		Single	25g	1	0
Cheeses made from cows' milk - unspecified (cheese half-products sampled from production line)	NRL					Single	25g	29	0
Dairy products (excluding cheeses) - milk powder and whey powder - at processing plant - Surveillance	RVL	Objective sampling	Official sampling	food sample		Single	25g	10	0
Dairy products (excluding cheeses) - milk powder and whey powder - at retail - Surveillance	NRL	Unspecified		unknown		Single	25g	9	0
Milk, cows' - raw milk	NRL	Unspecified		animal sample > milk		Single	25 ml	7	0

Comments:

Table Staphylococcal enterotoxins in food

Comments:

[1)] at retail

5. FOODBORNE

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

A. Foodborne outbreaks

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

The following legal acts create the framework for State Sanitary Inspection competencies and activity: Act of March 15th 1985 on State Sanitary Inspection (Journal of Laws. of 2006, No 122, item. 851), Act of September 6th 2001 on Contagious Diseases and Infections (Journal of Laws. No126, item 1384). According to Article 7 of Act of March 15th 1985 State Sanitary Inspection is supervised by the Ministry of Health. Chief Sanitary Inspector governs State Sanitary Inspection. Chief Sanitary Inspector (at national level) is accountable directly to the Minister of Health and the Prime Minister. Voivodeship Sanitary Inspectors (16) are accountable to the Chief Sanitary Inspector and directly to the Minister of Health. Poviat Sanitary Inspectors (318) are accountable to the Voivodeship Sanitary Inspectors.
The system of communicable diseases epidemiological surveillance at present in Poland is in line with the act of September 6th 2001. This system complies with the Community Network on communicable diseases based on Dec. 2119/ 98/ EC and the Commission decisions based on that decision. The organizational structure of surveillance is based on 318 Poviat Sanitary Epidemiological Stations at local level and 16 Voivodeship Sanitary Epidemiological Stations at Voivodeship level and 15 Border Sanitary Epidemiological Stations. The Department of Epidemiology, at the National Institute of Public Health – National Institute of Hygiene in Warsaw, performs analyses for the whole country. As the poisonings are reported at Poviat level, the State Poviat Sanitary Inspector sends the notification to State Voivodeship Sanitary Inspector on a special application form. Depending on the assessment of the level of epidemiological threat, State Voivodeship Sanitary Inspector decides, in cooperation with Veterinary Inspection bodies, on the course of action taken at Voivodeship level to control the outbreak. Then the State Voivodeship Sanitary Inspector submits a report on food poisoning/ infection cases to the Department of Epidemiology in the National Institute of Hygiene, which, pursuant to respective agreements, collects, analyzes, verifies and disseminates information regarding the outbreak in the country, and to the Department of Disease Surveillance in the Chief Sanitary Inspectorate, also on a specified application form. Reports which contain information e.g. on cases of food poisonings are systematically placed on widely accessible the National Institute of Public Health - National Institute of Hygiene Websites.

Description of the types of outbreaks covered by the reporting:

In accordance with the definition set forth in the according to Council Directive 2003/99/WE of 17 November 2003 the following shall be considered outbreaks of foodborne zoonotic diseases: at least two cases of foodborne zoonotic infection of people in specific conditions or of infection with zoonotic agent, or a situation where the number of actual disease cases exceeds the number of expected cases and is connected with one food source, or such a connection is likely.
The reporting system covered the outbreak household and general outbreaks

National evaluation of the reported outbreaks in the country:

Trends in numbers of outbreaks and numbers of human cases involved

In the year 2011 a total of 492 foodborne outbreaks were notified, involving 6,275 cases (1,363 hospitalized). Compared to 2010 the total number of outbreaks slightly increased.
A total of 108 outbreaks were reported as having ‘strong evidence’, for which detailed information was reported. In these outbreaks a total of 1,183 people were affected resulting in 399 hospitalizations. Household outbreaks constituted 67% of all outbreaks.

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

combinations

In 2011, the causative agent was unknown in 21.7% of all reported outbreaks. As in previous years the most frequently identified causative agent was Salmonella species, the predominant serotype was S. Enteritidis (comprising 33% of the all reported outbreaks and approximately 56% of those with ‘strong evidence’). The other Salmonella serotypes such as S. Thypimurium and S. Infantis caused 7% of the all reported outbreaks. As in 2010, with regard to salmonellosis the “strong evidence” outbreaks were mainly due to the consumption of products prepared using eggs (67%).

Three outbreaks of trichinellosis were registered (22 cases, 20 hospitalized).The trichinellosis outbreaks were associated with consumption of wild boar meat.

The second most common group of causative agents were viruses. Noroviruses caused over 14% of all reported outbreaks, affecting 24% of cases.

Relevance of the different type of places of food production and preparation in outbreaks

The place of origin of the problem was reported for 51% of all “strong evidence” outbreaks. The most commonly reported place of origin were “households” were linked with 67% of the “strong evidence” outbreaks. Residential institutions (nursing home, prison, boarding schools) only accounted for 2.7% of “strong evidence” outbreaks, however affected 178 people (15% of all people in the ‘strong evidence’ category).

Evaluation of the severity and clinical picture of the human cases

In 2011, approximately 33% of all ill persons with ‘strong evidence’ reported outbreaks required hospitalization. Two hundred and fifty five (21.5%) children <14 years of age were affected, 38.4% of them were hospitalized. Acute diarrhea was a dominant symptom among human cases (reported with ‘strong evidence) in outbreaks caused by Salmonella (84 % of cases). In 2011, a total of 13 fatal cases were reported caused by S. Enteritidis (1 death), norovirus (4 deaths) and C.dificile (8 deaths).

Control measures or other actions taken to improve the situation

Eggs employed by all catering facilities are compulsorily submitted to either pasteurisation or ultra violet treatment. Due to the Polish culinary preferences of eating desserts made from raw eggs, the monitoring of the occurrence of pathogenic bacteria in food on the market in order to check the implementation of Salmonella eradication and education programms for consumers may be needed as complementary measures to limit the transmission of salmonellosis.

Additional information

Cooperation between authorities employed to take action in cases of outbreaks amongst human population in Poland was specified in: the Ordinance of the Minister of Health of 7 April 2006 on the cooperation between the State Sanitary Inspectorate, Veterinary Inspectorate and State Environmental Protection Inspectorate regarding control of infectious diseases (Journal of Laws. of 2006 no 73, item 516), which is a statutory delegation, referred to in Article 4 of the Act of 6 September 2001 on infectious diseases and infections (Journal of Laws. of 2001 No 125, item 1384, as amended). Ordinance of the Council of Ministers of 23 April 2006 on the cooperation between the Veterinary Inspectorate, State Sanitary Inspectorate, State Pharmaceutical Inspectorate, Trade Inspectorate, Road Transport Inspectorate, Inspection of Marketing Quality of Agricultural and Food Products and local administration units in control of infectious animal diseases, including zoonotic diseases (Journal of Laws. of 2006 No 83, item 575), issued on the basis of Article 62 (2) of the Act of 11 March 2004 on animal health protection and control.

Table Foodborne Outbreaks: summarised data

	Weak evidence or no vehicle outbreaks					
	Number of outbreaks	Human cases	Hospitalized	Deaths	Strong evidence Number of Outbreaks	Total number of outbreaks
Salmonella - S. Typhimurium	4	12	6	0	1	5
Salmonella - S. Enteritidis	71	677	158	0	94	165
Salmonella - Other serovars	7	25	23	0	0	7
Campylobacter	1	3	0	0	0	1
Listeria - Listeria monocytogenes	0	0	0	0	0	0
Listeria - Other Listeria	0	0	0	0	0	0
Yersinia	1	4	2	0	0	1
Escherichia coli, pathogenic - Verotoxigenic E. coli (VTEC)	0	0	0	0	0	0
Bacillus - B. cereus	0	0	0	0	0	0
Bacillus - Other Bacillus	0	0	0	0	0	0
Staphylococcal enterotoxins	2	125	0	0	2	4
Clostridium - Cl. botulinum	1	2	2	0	3	4
Clostridium - Cl. perfringens	0	0	0	0	0	0

	Weak evidence or no vehicle outbreaks					
	Number of outbreaks	Human cases	Hospitalized	Deaths	Strong evidence Number of Outbreaks	Total number of outbreaks
Clostridium - Other Clostridia	7	68	42	8	0	7
Other Bacterial agents - Brucella	0	0	0	0	0	0
Other Bacterial agents - Shigella	1	1	1	0	0	1
Other Bacterial agents - Other Bacterial agents	9	94	10	0	0	9
Parasites - Trichinella	0	0	0	0	3	3
Parasites - Giardia	0	0	0	0	0	0
Parasites - Cryptosporidium	0	0	0	0	0	0
Parasites - Anisakis	0	0	0	0	0	0
Parasites - Other Parasites	0	0	0	0	0	0
Viruses - Norovirus	71	1483	230	4	1	72
Viruses - Hepatitis viruses	2	7	7	0	0	2
Viruses - Other Viruses	102	910	227	0	0	102
Other agents - Histamine	0	0	0	0	0	0
Other agents - Marine biotoxins	0	0	0	0	0	0
Other agents - Other Agents	0	0	0	0	5	5

	Weak evidence or no vehicle outbreaks					
	Number of outbreaks	Human cases	Hospitalized	Deaths	Strong evidence Number of Outbreaks	Total number of outbreaks
Unknown agent	105	1681	265	0	0	105

Table Foodborne Outbreaks: detailed data for Clostridium

Please use CTRL for multiple selection fields

C. botulinum

	Value
FBO Code	364
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Vegetables and juices and other products thereof
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

C. botulinum

	Value
FBO Code	263
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Vegetables and juices and other products thereof
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Storage time/temperature abuse
Mixed Outbreaks (Other Agent)	
Additional information	

C. botulinum

	Value
FBO Code	269
Number of outbreaks	1
Number of human cases	4
Number of hospitalisations	4
Number of deaths	0
Food vehicle	Other, mixed or unspecified poultry meat and products thereof
More food vehicle information	pork in a jar
Nature of evidence	Analytical epidemiological evidence;Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

Table Foodborne Outbreaks: detailed data for Other agents

Please use CTRL for multiple selection fields

Mushroom toxins

	Value
FBO Code	352
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Other foods
More food vehicle information	dishes with mushrooms containing amanita phalloides toxins
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Unknown
Contributory factors	Other contributory factor
Mixed Outbreaks (Other Agent)	
Additional information	mushrooms from local forest

Mushroom toxins

	Value
FBO Code	335
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Other foods
More food vehicle information	dishes with mushrooms containing amanita phalloides toxins
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Unknown
Contributory factors	Other contributory factor
Mixed Outbreaks (Other Agent)	
Additional information	mushrooms from local forest

Mushroom toxins

	Value
FBO Code	323
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Other foods
More food vehicle information	dishes with mushrooms containing amanita phalloides toxins
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen;Unknown
Origin of food vehicle	Unknown
Contributory factors	Other contributory factor
Mixed Outbreaks (Other Agent)	
Additional information	mushrooms from local forest

Mushroom toxins

	Value
FBO Code	429
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Other foods
More food vehicle information	dishes with mushrooms containing amanita phalloides toxins
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Unknown
Contributory factors	Other contributory factor
Mixed Outbreaks (Other Agent)	
Additional information	mushrooms from local forest

Mushroom toxins

	Value
FBO Code	348
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Other foods
More food vehicle information	dishes with mushrooms containing amanita phalloides toxins
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Unknown
Contributory factors	Other contributory factor
Mixed Outbreaks (Other Agent)	
Additional information	mushrooms from local forest

Table Foodborne Outbreaks: detailed data for Parasites

Please use CTRL for multiple selection fields

Trichinella - Trichinella spp., unspecified

	Value
FBO Code	344
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	1
Number of deaths	0
Food vehicle	Other or mixed red meat and products thereof
More food vehicle information	wild boar meat
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

Trichinella - Trichinella spp., unspecified

	Value
FBO Code	483
Number of outbreaks	1
Number of human cases	8
Number of hospitalisations	8
Number of deaths	0
Food vehicle	Other or mixed red meat and products thereof
More food vehicle information	wild boar meat
Nature of evidence	Analytical epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Disseminated cases
Place of origin of problem	Other
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment;Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

Trichinella - T. spiralis

	Value
FBO Code	8
Number of outbreaks	1
Number of human cases	12
Number of hospitalisations	11
Number of deaths	0
Food vehicle	Other or mixed red meat and products thereof
More food vehicle information	wild boar meat
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Disseminated cases
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

Table Foodborne Outbreaks: detailed data for Salmonella

Please use CTRL for multiple selection fields

S. Enteritidis

	Value
FBO Code	298
Number of outbreaks	1
Number of human cases	14
Number of hospitalisations	6
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Camp, picnic
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Storage time/temperature abuse
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	334
Number of outbreaks	1
Number of human cases	1
Number of hospitalisations	1
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	299
Number of outbreaks	1
Number of human cases	4
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Mixed food
More food vehicle information	breaded pork chops
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	260
Number of outbreaks	1
Number of human cases	9
Number of hospitalisations	7
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	347
Number of outbreaks	1
Number of human cases	11
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Bovine meat and products thereof
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Restaurant, Cafe, Pub, Bar, Hotel
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	221
Number of outbreaks	1
Number of human cases	4
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Retail sale outlet
Origin of food vehicle	Domestic market
Contributory factors	Cross-contamination;Infected food handler
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	179
Number of outbreaks	1
Number of human cases	6
Number of hospitalisations	1
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	278
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	273
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	Rotavirus
Additional information	

S. Enteritidis

	Value
FBO Code	394
Number of outbreaks	1
Number of human cases	52
Number of hospitalisations	5
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	General
Setting	Restaurant, Cafe, Pub, Bar, Hotel
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	319
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	384
Number of outbreaks	1
Number of human cases	24
Number of hospitalisations	6
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Other setting
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Storage time/temperature abuse
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	405
Number of outbreaks	1
Number of human cases	6
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	General
Setting	Other setting
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Storage time/temperature abuse;Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	401
Number of outbreaks	1
Number of human cases	51
Number of hospitalisations	11
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	School, kindergarten
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Cross-contamination;Infected food handler;Storage time/temperature abuse
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	375
Number of outbreaks	1
Number of human cases	9
Number of hospitalisations	0
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	350
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	311
Number of outbreaks	1
Number of human cases	11
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	General
Setting	Canteen or workplace catering
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	Salmonella species
Additional information	

S. Enteritidis

	Value
FBO Code	233
Number of outbreaks	1
Number of human cases	19
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment;Infected food handler
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	386
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	1
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Cross-contamination
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	399
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Mixed food
More food vehicle information	sweets and cherry fruit shake
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	General
Setting	Restaurant, Cafe, Pub, Bar, Hotel
Place of origin of problem	Restaurant/Café/Pub/Bar/Hotel/Catering service
Origin of food vehicle	Domestic market
Contributory factors	Storage time/temperature abuse
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	312
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Mixed food
More food vehicle information	vegetables, eggs and minced pork
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Storage time/temperature abuse
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	204
Number of outbreaks	1
Number of human cases	6
Number of hospitalisations	1
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	224
Number of outbreaks	1
Number of human cases	13
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	418
Number of outbreaks	1
Number of human cases	7
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	220
Number of outbreaks	1
Number of human cases	6
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	General
Setting	Restaurant, Cafe, Pub, Bar, Hotel
Place of origin of problem	Retail sale outlet
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	217
Number of outbreaks	1
Number of human cases	7
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Typhimurium

	Value
FBO Code	413
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	0
Number of deaths	0
Food vehicle	Bovine meat and products thereof
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Mobile retailer, market/street vendor
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	S. Derby
Additional information	

S. Enteritidis

	Value
FBO Code	383
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Broiler meat (Gallus gallus) and products thereof
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	371
Number of outbreaks	1
Number of human cases	37
Number of hospitalisations	4
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Other setting
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	362
Number of outbreaks	1
Number of human cases	8
Number of hospitalisations	7
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate chilling
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	409
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	254
Number of outbreaks	1
Number of human cases	10
Number of hospitalisations	4
Number of deaths	0
Food vehicle	Broiler meat (Gallus gallus) and products thereof
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Hospital/medical care facility
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Cross-contamination;Inadequate heat treatment;Infected food handler
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	309
Number of outbreaks	1
Number of human cases	12
Number of hospitalisations	1
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	General
Setting	Restaurant, Cafe, Pub, Bar, Hotel
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	167
Number of outbreaks	1
Number of human cases	6
Number of hospitalisations	1
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	380
Number of outbreaks	1
Number of human cases	10
Number of hospitalisations	0
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	200
Number of outbreaks	1
Number of human cases	12
Number of hospitalisations	11
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Cross-contamination;Infected food handler
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	396
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Bovine meat and products thereof
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	449
Number of outbreaks	1
Number of human cases	29
Number of hospitalisations	1
Number of deaths	1
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	General
Setting	Other setting
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	395
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Unknown
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	268
Number of outbreaks	1
Number of human cases	8
Number of hospitalisations	7
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	408
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	322
Number of outbreaks	1
Number of human cases	9
Number of hospitalisations	4
Number of deaths	0
Food vehicle	Bakery products
More food vehicle information	
Nature of evidence	Detection of causative agent in food chain or its environment - Symptoms and onset of illness pathognomonic to causative agent;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	256
Number of outbreaks	1
Number of human cases	6
Number of hospitalisations	1
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	General
Setting	Restaurant, Cafe, Pub, Bar, Hotel
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	248
Number of outbreaks	1
Number of human cases	30
Number of hospitalisations	10
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	302
Number of outbreaks	1
Number of human cases	7
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate chilling
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	303
Number of outbreaks	1
Number of human cases	7
Number of hospitalisations	4
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	490
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	0
Number of deaths	0
Food vehicle	Other or mixed red meat and products thereof
More food vehicle information	pork, beef and chicken in jelly with vegetables
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Cross-contamination;Inadequate chilling
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	255
Number of outbreaks	1
Number of human cases	8
Number of hospitalisations	1
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	General
Setting	Canteen or workplace catering
Place of origin of problem	Transport of food
Origin of food vehicle	Domestic market
Contributory factors	Storage time/temperature abuse
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	355
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	354
Number of outbreaks	1
Number of human cases	12
Number of hospitalisations	0
Number of deaths	0
Food vehicle	Mixed food
More food vehicle information	many dishes infected by food handler
Nature of evidence	Detection of causative agent in food chain or its environment - Detection of indistinguishable causative agent in humans;Detection of causative agent in food chain or its environment - Symptoms and onset of illness pathognomonic to causative agent;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent
Outbreak type	General
Setting	Other setting
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Infected food handler
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	356
Number of outbreaks	1
Number of human cases	4
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	428
Number of outbreaks	1
Number of human cases	4
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	General
Setting	Restaurant, Cafe, Pub, Bar, Hotel
Place of origin of problem	Restaurant/Café/Pub/Bar/Hotel/Catering service
Origin of food vehicle	Domestic market
Contributory factors	Cross-contamination
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	360
Number of outbreaks	1
Number of human cases	22
Number of hospitalisations	7
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Restaurant, Cafe, Pub, Bar, Hotel
Place of origin of problem	Farm (primary production);Transport of food
Origin of food vehicle	Domestic market
Contributory factors	Cross-contamination;Storage time/temperature abuse
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	151
Number of outbreaks	1
Number of human cases	31
Number of hospitalisations	0
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	General
Setting	School, kindergarten
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	307
Number of outbreaks	1
Number of human cases	143
Number of hospitalisations	0
Number of deaths	0
Food vehicle	Mixed food
More food vehicle information	many dishes probably infected by food handler
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Residential institution (nursing home, prison, boarding school)
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Infected food handler
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	240
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	232
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	222
Number of outbreaks	1
Number of human cases	6
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	General
Setting	Residential institution (nursing home, prison, boarding school)
Place of origin of problem	Retail sale outlet
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	Salmonella spp.
Additional information	

S. Enteritidis

	Value
FBO Code	447
Number of outbreaks	1
Number of human cases	5
Number of hospitalisations	4
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment;Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	333
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	486
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	318
Number of outbreaks	1
Number of human cases	8
Number of hospitalisations	8
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Cross-contamination;Infected food handler
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	365
Number of outbreaks	1
Number of human cases	9
Number of hospitalisations	4
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Other setting
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Cross-contamination;Storage time/temperature abuse
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	292
Number of outbreaks	1
Number of human cases	5
Number of hospitalisations	4
Number of deaths	0
Food vehicle	Vegetables and juices and other products thereof
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment;Storage time/temperature abuse
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	377
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	157
Number of outbreaks	1
Number of human cases	22
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	General
Setting	School, kindergarten
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	168
Number of outbreaks	1
Number of human cases	21
Number of hospitalisations	6
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment;Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	366
Number of outbreaks	1
Number of human cases	5
Number of hospitalisations	1
Number of deaths	0
Food vehicle	Fish and fish products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	354
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	274
Number of outbreaks	1
Number of human cases	8
Number of hospitalisations	4
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	345
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	457
Number of outbreaks	1
Number of human cases	4
Number of hospitalisations	1
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	205
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	243
Number of outbreaks	1
Number of human cases	8
Number of hospitalisations	7
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Infected food handler
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	346
Number of outbreaks	1
Number of human cases	8
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	267
Number of outbreaks	1
Number of human cases	11
Number of hospitalisations	8
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	General
Setting	Hospital/medical care facility
Place of origin of problem	Restaurant/Café/Pub/Bar/Hotel/Catering service
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	315
Number of outbreaks	1
Number of human cases	18
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Mixed food
More food vehicle information	different meat dishes
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Restaurant, Cafe, Pub, Bar, Hotel
Place of origin of problem	Restaurant/Café/Pub/Bar/Hotel/Catering service
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	250
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	331
Number of outbreaks	1
Number of human cases	20
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Vegetables and juices and other products thereof
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Other setting
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	390
Number of outbreaks	1
Number of human cases	23
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Bovine meat and products thereof
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Restaurant, Cafe, Pub, Bar, Hotel
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	419
Number of outbreaks	1
Number of human cases	5
Number of hospitalisations	4
Number of deaths	0
Food vehicle	Bovine meat and products thereof
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	338
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	223
Number of outbreaks	1
Number of human cases	9
Number of hospitalisations	1
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Retail sale outlet
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	310
Number of outbreaks	1
Number of human cases	8
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Cross-contamination
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	281
Number of outbreaks	1
Number of human cases	9
Number of hospitalisations	4
Number of deaths	0
Food vehicle	Mixed food
More food vehicle information	beef with raw eggs, salad with eggs, smoked salmon
Nature of evidence	Analytical epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment;Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	359
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Bovine meat and products thereof
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	412
Number of outbreaks	1
Number of human cases	4
Number of hospitalisations	3
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	374
Number of outbreaks	1
Number of human cases	6
Number of hospitalisations	0
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Other setting
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Infected food handler
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	379
Number of outbreaks	1
Number of human cases	15
Number of hospitalisations	12
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	259
Number of outbreaks	1
Number of human cases	3
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Unknown
Contributory factors	Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	314
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment;Unprocessed contaminated ingredient
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	410
Number of outbreaks	1
Number of human cases	40
Number of hospitalisations	4
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Restaurant, Cafe, Pub, Bar, Hotel
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	330
Number of outbreaks	1
Number of human cases	4
Number of hospitalisations	0
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	351
Number of outbreaks	1
Number of human cases	31
Number of hospitalisations	5
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence
Outbreak type	General
Setting	Restaurant, Cafe, Pub, Bar, Hotel
Place of origin of problem	Restaurant/Café/Pub/Bar/Hotel/Catering service
Origin of food vehicle	Domestic market
Contributory factors	Cross-contamination
Mixed Outbreaks (Other Agent)	
Additional information	

S. Enteritidis

	Value
FBO Code	277
Number of outbreaks	1
Number of human cases	2
Number of hospitalisations	2
Number of deaths	0
Food vehicle	Eggs and egg products
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	Household / domestic kitchen
Setting	Household / domestic kitchen
Place of origin of problem	Farm (primary production)
Origin of food vehicle	Domestic market
Contributory factors	Inadequate heat treatment
Mixed Outbreaks (Other Agent)	
Additional information	

Table Foodborne Outbreaks: detailed data for Staphylococcal enterotoxins

Please use CTRL for multiple selection fields

Enterotoxin, unspecified

	Value
FBO Code	398
Number of outbreaks	1
Number of human cases	59
Number of hospitalisations	59
Number of deaths	0
Food vehicle	Broiler meat (Gallus gallus) and products thereof
More food vehicle information	
Nature of evidence	Analytical epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	Hospital/medical care facility
Place of origin of problem	Unknown
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	

Enterotoxin, unspecified

	Value
FBO Code	264
Number of outbreaks	1
Number of human cases	19
Number of hospitalisations	4
Number of deaths	0
Food vehicle	Mixed food
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence;Detection of causative agent in food vehicle or its component - Symptoms and onset of illness pathognomonic to causative agent ;Detection of causative agent in food vehicle or its component - Detection of indistinguishable causative agent in humans
Outbreak type	General
Setting	School, kindergarten
Place of origin of problem	School, kindergarten
Origin of food vehicle	Unknown
Contributory factors	Cross-contamination
Mixed Outbreaks (Other Agent)	
Additional information	

Table Foodborne Outbreaks: detailed data for Viruses

Please use CTRL for multiple selection fields

Calicivirus - norovirus (Norwalk-like virus)

	Value
FBO Code	358
Number of outbreaks	1
Number of human cases	5
Number of hospitalisations	0
Number of deaths	0
Food vehicle	Sweets and chocolate
More food vehicle information	
Nature of evidence	Descriptive epidemiological evidence
Outbreak type	General
Setting	Household / domestic kitchen
Place of origin of problem	Household / domestic kitchen
Origin of food vehicle	Domestic market
Contributory factors	Unknown
Mixed Outbreaks (Other Agent)	
Additional information	